Network Segmentation Manager

This chapter describes how to identify and resolve problems with NSM and includes the following topics:

Information About Network Segmentation Manager

See the *Cisco Nexus 1000V Network Segmentation Manager Configuration Guide* for more information.

Problems with Network Segmentation Manager

This section includes symptoms, possible causes and solutions for the following problems with Network Segmentation Manager (NSM). The system message for the majority of the problems is logged in the vShield Manager or the vCloud Director.

Table 22-1 Problems with Network Segmentation Manager

Symptom	Possible Causes	Verification and Solution
Registration failure of vShield Manager with Network Segmentation Manager A system message is logged in the vShield Manager.	vShield Manager is unable to reach Network Segmentation Manager.	Verify that the connection between Cisco Nexus 1000V and VMware vShield Manager is enabled. Check that vShield Manager is able to ping the Cisco Nexus 1000V. If not, reestablish the L2 or L3 connectivity between vShield Manger and the Cisco Nexus 1000V. See the *Cisco Nexus 1000V Network Segmentation Manager Configuration Guide* for more information.
	vShield Manager is unable to authenticate with Network Segmentation Manager.	Verify if the username and password are accurate by checking the VSM system logs. The following system log will be displayed if the username and password are inaccurate. **2012 Jan 20 00:49:59 switch %USER-3-SYSTEM_MSG: VALIDATE: user: admin, Authentication failure - validate** If not, replace the username and password on the in the networking configuration on the vShield Manager.
	The NSM feature is not enabled on the Cisco Nexus 1000V.	Verify if the NSM feature is enabled on the Cisco Nexus 1000V. **show feature** If not, enable the NSM feature. **feature network-segmentation-manager**
	HTTPS is not enabled on the Cisco Nexus 1000V.	Check if the browser can connect to https://<vsm-ip>/? If not, enable the HTTPS server on the VSM. **feature http-server**

Table 22-1 Problems with Network Segmentation Manager (continued)

Symptom	Possible Causes	Verification and Solution
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to create network segment`	vCloud Director is unable to create the VLAN associated with the network.	1. Verify that the resources are available to create a VLAN by checking the existing number of VLANS. **show vlan summary** If the number of VLANs existing exceeds the number of supported VLANs (i.e. 2048), then evaluate if there are any VLANs that can be removed from the system. 2. Verify that the VLAN pool in the vCloud Director does not contain more than 2048 available VLANs.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Template could not be inherited on port-profile`	Unable to inherit the port profile associated with the network segment policy onto the port profile created for the network.	1. Verify if the port profile exists. **show running-config port-profile** *name* To identify the name of the port profile, you will need to determine the network segment policy the network was attempting to use. You will need the information about the tenant/organization UUID and the type of network pool the network was being created from (VXLAN or VLAN) to find the corresponding network segment policy that has these values configured. If no network segment policy is configured with these values, then use the default network segment policy to identify the name of the port profile. 2. Check system logs for a port profile inheritance failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set max-ports`	Unable to set the max ports on the port profile.	Check system logs for a max port failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Network already exists`	A network with the same name already exists in the vCloud Director.	1. Delete the existing network that has the same name. **no port-profile** *network name* 2. Delete the bridge domain with the same name if it exists. **no bridge-domain** *name*

Table 22-1 Problems with Network Segmentation Manager (continued)

Symptom	Possible Causes	Verification and Solution
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to create port-profile`	Cisco Nexus 1000V is unable to create the port profile required for the network.	Check system logs for a port profile failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Template does not exist`	Unable to find the port profile associated with the network segment policy associated with the network.	1. Verify if the port profile exists. **show running-config port-profile** *name* To identify the name of the port profile, you will need to determine the network segment policy the network was attempting to use. You will need the information about the tenant/organization UUID and the type of network pool the network was being created from (VXLAN or VLAN) to find the corresponding network segment policy that has these values configured. If no network segment policy is configured with these values, then use the default network segment policy to identify the name of the port profile. 2. Check system logs for a port profile failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Alias ID not found`	Unable to retrieve the port group ID associated with the port profile created for the network	Verify that the Virtual Supervisor Module (VSM) has an active SVS connection. **show svs connection** When you enter the command, the output must display **operational status: connected**
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set port-binding`	Unable to set the port binding on the port profile associated with the network	Check system logs for a port binding failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set vlan`	Unable to set the access VLAN on the port profile associated with the network	Check system logs for a set VLAN failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.

Table 22-1 Problems with Network Segmentation Manager (continued)

Symptom	Possible Causes	Verification and Solution
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set vmware port-group`	Unable to set Vmware port group property on the port profile.	Check system logs for a port group property failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set state enabled`	Unable to set the property state on the port profile to enabled.	Check system logs for a state enabled property failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to collect svs configuration`	Unable to execute the command **show svs connection**	Verify that the Virtual Supervisor Module (VSM) has an active SVS connection. **show svs connection** When you enter the command, the output must display **operational status: connected**
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Operational status is missing`	Unable to locate the operational status in the SVS connection.	1. Verify that the Virtual Supervisor Module (VSM) has an active SVS connection. **show svs connection** When you enter the command, the output must display **operational status: connected** 2. Check system logs for a operational status failure message. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `SVS connection is disconnected`	SVS connection is disconnected.	Verify that the Virtual Supervisor Module (VSM) has an active SVS connection. **show svs connection** When you enter the command, the output must display **operational status: connected**
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to create bridge domain`	Unable to create the bridge dmain associated with the network.	Verify that the feature Segmentation is enabled. **show feature** If not, enable the segmentation feature. **feature segmentation**

Table 22-1 Problems with Network Segmentation Manager (continued)

Symptom	Possible Causes	Verification and Solution
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set segment ID`	Unable to set the segment ID associated with the network.	Verify that the segment ID is not already in use by another bridge domain. **show bridge-domain** Check the error message on the system log to retrieve the segment ID.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set group IP`	Unable to set the group IP associated with the network.	Verify that the group IP is a valid multicast IP address by checking the system logs for invalid IP address error message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network creation triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to set port-profile description`	Unable to set the description for the port profile associated with the network.	Check system logs for a port profile description failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
The network deletion triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to delete interface using the port-profile`	Unable to delete the interfaces inheriting the port profile.	1. Manually delete the interfaces. 2. In the vCenter Server ensure that the VMs associated with the vApp are powered down. 3. In the VSM execute the command **no interface vethernet** *vethernet number*
The network deletion triggered from vCloud Directors fails. A system message similar to the following is logged in the vCloud Director: `Failed to delete the port-profile`	Unable to delete the port profile associated with the network.	1. Manually delete the port profile. 2. Check system logs for a port profile deletion failure message reported by network segmentation manager. See the *Cisco NX-OS System Messages Reference* for more information.
An vEthernet interface is administratively down. The interface will be in **NoPortProfile** state.	The vEthernet interface is in quarantine state.	1. Verify the interface is quarantined. **show port-profile sync-status** 2. Bring the interface out of quarantine. **no shutdown** The interface comes back online. 3. Verify if the interface is online. **show interface vethernet**

Network Segmentation Manager Troubleshooting Commands

You can use the commands in this section to troubleshoot problems related to the Network Segmentation Manager.

Table 22-2 Network Segmentation Manager Troubleshooting Commands

Command	Purpose
show network-segment manager switch	Displays the Cisco Nexus 1000V configured with NSM.
show running-config port-profile	Displays the port profile configuration.
show running-config network-segment policy	Displays the NSM policy configuration.
show network-segment policy usage	Displays the network segmentation policy usage by networks.
show network-segment network	Displays the networks associated with a network segmentation policy.
show network-segment network id *id*	Displays the network ids associated with a network segmentation policy.
show network-segment network name *name*	Displays the name of the networks associated with a network segmentation policy.
show logging logfile | grep NSMGR	Displays the system logs from the network segmentation manager.

For detailed information about show command output, see the *Cisco Nexus 1000V Command Reference*.