About This Book

The NSX Command Line Interface Reference describes how to use the NSX for vSphere Command Line Interface (CLI) and includes examples and command overviews.

Intended Audience

This guide is intended for anyone who wants to install or use NSX in a VMware vCenter environment. The information in this guide is written for experienced system administrators who are familiar with virtual machine technology and virtual datacenter operations. This guide assumes familiarity with VMware Infrastructure, including VMware ESX, vCenter Server, and the vSphere Client.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation go to http://www.vmware.com/support/pubs.

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NSX Documentation

The following documents comprise the NSX documentation set:

- NSX Installation Guide
- NSX Cross-vCenter Installation Guide
- NSX Upgrade Guide
- NSX Administration Guide
- NSX Troubleshooting Guide
- NSX Command Line Interface Reference
- NSX API Guide
Contents

About This Book  11

1  Introduction to the NSX CLI  13
   Logging In and Out of the CLI  13
   Syntax Notation Used in this Document  14
   NSX Manager and NSX Edge CLI Command Modes  14
   NSX Manager and NSX Edge CLI Passwords  14
   Moving Around in the NSX Manager and NSX Edge CLI  15
   Getting Help within the NSX Manager and NSX Edge CLI  15

2  NSX Manager Commands  17
   cli password  17
   configure terminal  17
   copy running-config startup-config  17
   disable  18
   debug show files  18
   enable  18
   enable password  19
   exit  19
   export tech-support scp  19
   hostname  20
   interface  20
   ip address  21
   ip route  21
   list  21
   ping  22
   quit  22
   reset  22
   reboot  22
   set clock  23
   setup  23
   show arp  24
   show clock  24
   show ethernet  24
   show filesystem  25
   show log  25
   show running-config  25
   show startup-config  26
   show slots  26
   show tech-support  27
   shutdown  27
   ssh  27
   terminal length  28
   terminal no length  28
   traceroute  28
   user  29
   user userName privilege web-interface  29
   web-manager  30
write memory 30

3  NSX Central Commands 31

Central Commands Overview 31
Central Common Commands 32
  show cluster 32
  show host hostID 32
  show host hostID health-status 33
  show vm vmID 33
  show vnic vnicID 33
Central Controller Commands 34
  show controller list all 34
Central Logical Router Commands 34
  show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) 34
  show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) mac-address-table 34
  show logical-router controller controllerID dlr dlrID brief 35
  show logical-router controller controllerID dlr dlrID interface 35
  show logical-router controller controllerID dlr dlrID route 36
  show logical-router controller controllerID dlr dlrID statistics 36
  show logical-router controller controllerID host hostID connection 37
  show logical-router controller controllerID statistics 37
  show logical-router host hostID connection 37
  show logical-router host hostID dlr dlrID 38
    show logical-router host hostID dlr dlrID arp 38
    show logical-router host hostID dlr dlrID bridge bridgeName mac-address-table 39
    show logical-router host hostID dlr dlrID bridge bridgeName statistics 40
    show logical-router host hostID dlr dlrID bridge bridgeName verbose 41
    show logical-router host hostID dlr dlrID control-plane-statistics 42
    show logical-router host hostID dlr dlrID interface intName brief 43
    show logical-router host hostID dlr dlrID interface intName statistics 43
    show logical-router host hostID dlr dlrID interface intName verbose 44
    show logical-router host hostID dlr dlrID route 45
    show logical-router host hostID dlr dlrID tunable 45
  show logical-router list all 46
  show logical-router list dlr dlrID host 46
  show logical-router resolve 46
Central Logical Switch Commands 47
  show logical-switch controller controllerID host hostID arp 47
  show logical-switch controller controllerID host hostID joined-vnis 47
  show logical-switch controller controllerID host hostID mac 48
  show logical-switch controller controllerID host hostID vtep 48
  show logical-switch controller controllerID vni vni arp 48
  show logical-switch controller controllerID vni vni brief 48
  show logical-switch controller controllerID vni vni connection 49
  show logical-switch controller controllerID vni vni mac 49
  show logical-switch controller controllerID vni vni statistics 49
  show logical-switch controller controllerID vni vni vtep 50
  show logical-switch host hostID config-by-vsm 50
  show logical-switch host hostID statistics 51
  show logical-switch host hostID verbose 52
  show logical-switch host hostID vni vni arp 53
  show logical-switch host hostID vni vni mac 53
  show logical-switch host hostID vni vni port portID statistics 53
  show logical-switch host hostID vni vni statistics 54
  show logical-switch host hostID vni vni verbose 54
  show logical-switch host hostID vni vni vtep 55
show logical-switch list all 55
show logical-switch list host hostID vni 56
show logical-switch list vni vni host 56

Central Distributed Firewall Commands 56
show dfw cluster 56
show dfw host hostID 57
show dfw host hostID filter filterID addrsets 57
show dfw host hostID filter filterID discoveredips 58
show dfw host hostID filter filterID discoveredips stats 58
show dfw host hostID filter filterID flows 58
show dfw host hostID filter filterID rule ruleID 59
show dfw host hostID filter filterID rules 59
show dfw host hostID filter filterID spoofguard 59
show dfw host hostID filter filterID stats 60
show dfw host hostID summarize-dvfilter 60
show dfw vm vmiID 61
show dfw vnic vnicID 62

Central NSX Edge Commands 62
show edge (all | edgeID) 62
show edge edgeID arp 63
show edge edgeID configuration application-set 63
show edge edgeID configuration bgp 64
show edge edgeID configuration certificate-store 64
show edge edgeID configuration dhcp 64
show edge edgeID configuration dns 64
show edge edgeID configuration firewall 64
show edge edgeID configuration global 65
show edge edgeID configuration gslb 65
show edge edgeID configuration highavailability 65
show edge edgeID configuration interface 65
show edge edgeID configuration interface-set 66
show edge edgeID configuration ipsec 66
show edge edgeID configuration ipset 66
show edge edgeID configuration l2vpn 66
show edge edgeID configuration loadbalancer 67
show edge edgeID configuration nat 67
show edge edgeID configuration ospf 67
show edge edgeID configuration provider-app-set 67
show edge edgeID configuration provider-ipset 67
show edge edgeID configuration routing-global 68
show edge edgeID configuration snmp 68
show edge edgeID configuration sslvpn-plus 68
show edge edgeID configuration static-routing 68
show edge edgeID configuration syslog 69
show edge edgeID eventmgr 69
show edge edgeID firewall 69
show edge edgeID firewall flows topN n 69
show edge edgeID flowtable 70
show edge edgeID interface 70
show edge edgeID ip bgp 70
show edge edgeID ip bgp neighbors 70
show edge edgeID ip forwarding 71
show edge edgeID ip ospf 71
show edge edgeID ip ospf database 71
show edge edgeID ip ospf interface 71
show edge edgeID ip ospf neighbor 72
show edge edgeID ip route 72
show edge edgeID ipset 72
show edge edgeID log 72
show edge edgeID messagebus 73
show edge edgeID nat 73
show edge edgeID process list 73
show edge edgeID process snapshot 73
show edge edgeID service dhcp 74
show edge edgeID service dns 74
show edge edgeID service highavailability 75
show edge edgeID service ipsec 75
show edge edgeID service ipsec site 75
show edge edgeID service loadbalancer 75
show edge edgeID service loadbalancer error 76
show edge edgeID service monitor 76
show edge edgeID service monitor service 76
show edge edgeID system cpu 76
show edge edgeID system memory 77
show edge edgeID system network-stats 77
show edge edgeID system storage 77
Central NSX Packet Capture Commands 78
   Capture vNic 78
   Capture pNic 78
   Capture vdrPort 79
   Capture VMKNic 79
   Delete packet capture session 80
   Show all packet capture sessions 80
   Show packet capture session 80
   Show packet capture file content 81
   Stop packet capture session 81
   Stop packet capture session and discard 82
   Transfer packet capture file 82

4 NSX Edge Commands 85
   clear nat counters 85
   clear arp ipAddress 85
   clear service dhcp lease 85
   clear service ipsec sa 85
   debug packet capture 86
   debug packet display interface 86
   disable 86
   dnslookup serverName 87
   dnslookup serverName (hostname | ipAddress) 87
   enable 87
   export tech-support scp 87
   ping 88
   ping interface addr 88
   ping (ip | ipv6) ipAddress 88
   show arp 89
   show clock 89
   show configuration application-set 90
   show configuration bgp 91
   show configuration certificatetore 93
   show configuration dhcp 93
   show configuration dns 94
   show configuration firewall 95
   show configuration global 96
show configuration gslb 97
show configuration highavailability 98
show configuration interface 99
show configuration interface-set 100
show configuration ipsec 102
show configuration ipset 103
show configuration l2vpn 103
show configuration loadbalancer 104
show configuration loadbalancer monitor 106
show configuration loadbalancer pool 107
show configuration loadbalancer rule 108
show configuration loadbalancer virtual 108
show configuration nat 109
show configuration ospf 110
show configuration routing-global 112
show configuration snmp 112
show configuration sslvpn-plus 112
show configuration static-routing 112
show configuration syslog 113
show eventmgr 113
show firewall 114
show firewall flows 115
show firewall flows top $n$ 115
show firewall flows top $n$ sort-by-bytes 115
show firewall flows top $n$ sort-by-pkts 115
show firewall rule-id $id$ 115
show firewall rule-id $id$ flows 115
show firewall rule-id $id$ flows top $n$ 116
show firewall rule-id $id$ flows top $n$ sort-by-bytes 116
show firewall rule-id $id$ flows top $n$ sort-by-pkts 116
show flowstats 116
show flowtable 118
show flowtable expect 118
show flowtable rule-id $id$ 118
show flowtable rule-id $id$ top $n$ 118
show flowtable rule-id $id$ top $n$ sort-by-bytes 118
show flowtable rule-id $id$ top $n$ sort-by-pkts 119
show flowtable top $n$ 119
show flowtable top $n$ sort-by-bytes 119
show flowtable top $n$ sort-by-pkts 119
show flowtimeouts 119
show hostname 120
show interface 120
show ip bgp 121
show ip bgp neighbors 121
show ip forwarding 122
show ip ospf 123
show ip ospf database 123
show ip ospf database adv-router 124
show ip ospf database asbr-summary 125
show ip ospf database external 125
show ip ospf database network 125
show ip ospf database nssa-external 125
show ip ospf database opaque-area 126
show ip ospf database router 126
show ip ospf database summary 126
show ip ospf interface 127
show ip ospf neighbor 127
show ip ospf statistics 127
show ip route 128
show ip route bgp 128
show ip route ospf 129
show ipset 129
show ipv6 forwarding 130
show log 130
show log routing 131
show messagebus 131
show nat 133
show netdevice 133
show process 134
show rpfilter 134
show rpftstats 135
show service all 135
show service dhcp 136
show service dns 136
show service highavailability 136
show service highavailability connection-sync 136
show service highavailability internal 137
show service highavailability link 137
show service ipsec 138
show service ipsec cacerts 138
show service ipsec certs 138
show service ipsec crls 138
show service ipsec pubkeys 139
show service ipsec sa 139
show service ipsec site 139
show service ipsec stats 139
show service ipsec sp 139
show service l2vpn (on client) 140
show service l2vpn (on server) 140
show service l2vpn bridge 140
show service l2vpn conversion table 141
show service l2vpn trunk-table 141
show service loadbalancer 142
show service loadbalancer error 142
show service loadbalancer monitor 142
show service loadbalancer pool 142
show service loadbalancer session 143
show service loadbalancer table 143
show service loadbalancer virtual 143
show service monitor 143
show service monitor service 144
show service network-connections 145
show service sslvpn-plus 146
show service sslvpn-plus sessions 146
show service sslvpn-plus stats 146
show service sslvpn-plus tunnels 146
show system cpu 147
show system interrupt 147
show system memory 148
show system network-stats 148
show system storage 149
show system uptime 150
show tech-support 150
5 Standalone NSX Edge Commands 153

Standalone NSX Edge Overview 153
Standalone NSX Edge Commands 153

ciphers 153
commit 153
configure terminal 154
dns name-server 154
egress-optimize 154
exit 155
fips enable 155
fips disable 156
interface intName 156
ip address 156
ip route 157
l2vpn 157
mtu 157
no proxy setup 157
no proxy user 158
password 158
proxy address 158
proxy username 159
quit 159
rpfilter 159
server ipAddress [port] 160
show configuration 160
show log 161
show service dns 161
show service l2vpn 161
show sub-interface 162
ssh (start | stop) 162
sub-interface pairs 162
sub-interface range 163
trustca 163
user 164

6 NSX Host Commands 165

ESXi CLI Commands 165
esxcli network vswitch dvs vmware vxlan config stats get 165
esxcli network vswitch dvs vmware vxlan config stats set 165
esxcli network vswitch dvs vmware vxlan get 165
esxcli network vswitch dvs vmware vxlan list --vds-name value 166
esxcli network vswitch dvs vmware vxlan list --vds-name value --vxlan-id value 166
esxcli network vswitch dvs vmware vxlan network arp list --vds-name value --vxlan-id value 166
esxcli network vswitch dvs vmware vxlan network arp reset --vds-name value --vxlan-id value 166
esxcli network vswitch dvs vmware vxlan network mac list --vds-name value --vxlan-id value 167
esxcli network vswitch dvs vmware vxlan network mac reset --vxlan-id value --vdsport-id value 167
esxcli network vswitch dvs vmware vxlan network port list --vds-name value --vdsport-id value
--vxlan-id value 167
esxcli network vswitch dvs vmware vxlan network port stats list --vds-name value --vdsport-id value
--vxlan-id value 167
esxcli network vswitch dvs vmware vxlan network stats list --vdsd-name value --vxlan-id value 168
esxcli network vswitch dvs vmware vxlan network stats reset --vxlan-id value --vdsport-id value 169
esxcli network vswitch dvs vmware vxlan network vtep list --vds-name value --vxlan-id value --segment-id value --vtep-ip value 169
esxcli network vswitch dvs vmware vxlan vmknic list --vds-name value --endpoint-id value --vmknic-name value --vmknic-ip value 169
esxcli network vswitch dvs vmware vxlan multicastgroup list --vds-name value --vmknic-id value --vmknic-name value --vmknic-ip value 169
esxcli network vswitch dvs vmware vxlan stats list --vds-name value --endpoint-id value --vmknic-name value --vmknic-ip value 170
esxcli network vswitch dvs vmware vxlan stats reset --vds-name value 171

DVFilter Commands 171
summarize-dvfilter 171

7 NSX Controller Commands 173
restart controller 173
show control-cluster core connection ipAddress 173
show control-cluster core connection-stats ipAddress 173
show control-cluster core log-level 173
show control-cluster core stats 174
show control-cluster logical-routers 174
show control-cluster logical-routers bridge-mac logicalRouterID_and/or_bridgeID 174
show control-cluster logical-routers bridges logicalRouterID_and_bridgeID 174
show control-cluster logical-routers instance logicalRouterID 175
show control-cluster logical-routers interface logicalRouterID_interfaceName 175
show control-cluster logical-routers interface-summary logicalRouterID 175
show control-cluster logical-routers routes routerID 175
show control-cluster logical-routers routes routerID_and_IPaddress_and_prefixLength 176
show control-cluster logical-routers stats 176
show control-cluster logical-routers stats-sample 176
show control-cluster logical-switches arp-records ipAddress 176
show control-cluster logical-switches arp-table vni 177
show control-cluster logical-switches connection-table vni 177
show control-cluster logical-switches joined-vnis ipAddress 177
show control-cluster logical-switches mac-records ipAddress 177
show control-cluster logical-switches mac-table vni 178
show control-cluster logical-switches pkt-cap pktcap-uuid display 178
show control-cluster logical-switches pkt-cap pktcap-uuid none 179
show control-cluster logical-switches stats 179
show control-cluster logical-switches stats-sample 179
show control-cluster logical-switches vni vni 179
show control-cluster logical-switches vni-stats vni 180
show control-cluster logical-switches vni-stats-sample vni 180
show control-cluster logical-switches vtep-records ipAddress 180
show control-cluster logical-switches vtep-table vni 180
show control-cluster startup-nodes 181
show control-cluster status 181
show network interface 181
start control-cluster logical-switches ping 182
start control-cluster logical-switches pktcap 182
start control-cluster logical-switches pktcap-time 182

8 Hardware Gateway Commands 185
Hardware Gateway Query Commands 185
show hardware-gateway list 185
show hardware-gateway hsc hardwareGatewayID brief 186
show hardware-gateway hsc hardwareGatewayID certificate 186
Replicator Node Command 186
show hardware-gateway replicator-nodes 186

Bindings Commands 187
show hardware-gateway binding all 187
show hardware-gateway binding hsc hardwareGatewayID all 187
show hardware-gateway binding vni vni all 187
show hardware-gateway binding hsc hardwareGatewayID vni vni 188

Host Commands 188
show hardware-gateway host hostID vnis 188
show hardware-gateway host hostID bfd-tunnels 188

Controller Commands 189
show hardware-gateway controller controllerIP list 189
show hardware-gateway controller controllerIP hsc hardwareGatewayID certificate 189
show hardware-gateway controller controllerIP port-bindings 190
show hardware-gateway controller controllerIP control-nodes 190
show hardware-gateway controller controllerIP hsc hardwareGatewayID inventory 190

Agent Commands 190
show hardware-gateway agent agentIP status 191
show hardware-gateway agent agentIP replication-cluster 191
show hardware-gateway agent agentIP hardware-gateway [uuid] 191
show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid tunnels 192
show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid local-macs [vni] 194
show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid
  physical-inventory 194
show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid bindings 195
show hardware-gateway agent agentIP logical-switches 196
show hardware-gateway agent agentIP logging-level 196
set hardware-gateway agent agentIP logging-level hardwareGatewayAgentLogLevel 196
show hardware-gateway agent agentIP dump 197

9 Deprecated Commands 199
Introduction to the NSX CLI

IT organizations have gained significant benefits as a direct result of server virtualization. Server consolidation reduced physical complexity, increased operational efficiency and the ability to dynamically re-purpose underlying resources to quickly and optimally meet the needs of increasingly dynamic business applications.

VMware’s Software Defined Data Center (SDDC) architecture is now extending virtualization technologies across the entire physical data center infrastructure. VMware NSX®, the network virtualization platform, is a key product in the SDDC architecture. With NSX, virtualization delivers for networking what it has already delivered for compute and storage. In much the same way that server virtualization programatically creates, snapshots, deletes and restores software-based virtual machines (VMs), NSX network virtualization programatically creates, snapshots, deletes, and restores software-based virtual networks. The result is a completely transformative approach to networking that not only enables data center managers to achieve orders of magnitude better agility and economics, but also allows for a vastly simplified operational model for the underlying physical network. With the ability to be deployed on any IP network, including both existing traditional networking models and next-generation fabric architectures from any vendor, NSX is a completely non-disruptive solution. In fact, with NSX, the physical network infrastructure you already have is all you need to deploy a software-defined data center.

To use the NSX virtual appliance CLI, you must have console or ssh access to an NSX virtual appliance. Each NSX virtual appliance contains a command line interface (CLI). The viewable modes in the NSX CLI can differ based on the assigned role and rights of a user. If you are unable to access an interface mode or issue a particular command, consult your NSX administrator.

**NOTE** User account management in the CLI is separate from user account management in the NSX Manager user interface.

This chapter includes the following topics:
- “Logging In and Out of the CLI” on page 11
- “Syntax Notation Used in this Document” on page 12
- “NSX Manager and NSX Edge CLI Command Modes” on page 12
- “Moving Around in the NSX Manager and NSX Edge CLI” on page 13
- “Getting Help within the NSX Manager and NSX Edge CLI” on page 13

**Logging In and Out of the CLI**

Before you can run CLI commands, you must initiate a connection to an NSX virtual appliance.

To open a console session within the vSphere Client, select the NSX virtual appliance from the inventory panel and click the Console tab. You can log in to the CLI by using the default user name admin and the password you specified while installing NSX Manager.

If SSH is enabled, you can also use SSH to access the CLI.
To log out, type `exit` from either Basic or Privileged mode.

**Syntax Notation Used in this Document**

Run commands at the prompt as shown. Do not type the ( ), |, or [ ] symbols.

```
command [optional] value (requiredA | requiredB) [optionalA | optionalB]
```

<table>
<thead>
<tr>
<th>Format</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>command</td>
<td>Required items, enter as shown.</td>
</tr>
<tr>
<td>[optional]</td>
<td>Optional item.</td>
</tr>
<tr>
<td>value</td>
<td>Placeholder for your value.</td>
</tr>
<tr>
<td>(requiredA</td>
<td>requiredB)</td>
</tr>
<tr>
<td>[optionalA</td>
<td>optionalB]</td>
</tr>
</tbody>
</table>

**NSX Manager and NSX Edge CLI Command Modes**

The commands available to you at any given time depend on the mode you are currently in. Not all appliances have all modes available.

<table>
<thead>
<tr>
<th>Mode</th>
<th>NSX Manager</th>
<th>NSX Edge</th>
<th>Standalone NSX Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Mode (ssh or console)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Privileged Mode (enable)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Configuration Mode (configure terminal)</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Interface Configuration Mode (interface <code>intName</code>)</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>L2 VPN Configuration Mode (l2vpn)</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Save Configuration with...</td>
<td>write memory</td>
<td>write memory</td>
<td>commit</td>
</tr>
</tbody>
</table>

Command mode descriptions:

- **Basic**: Basic mode is a read-only mode. To have access to all commands, you must enter privileged mode.
- **Privileged**: Privileged mode commands allow support-level options such as debugging and system diagnostics.
- **Configuration**: Configuration mode commands allow you to change the current configuration of utilities on an NSX virtual appliance.
- **Interface Configuration**: Interface configuration mode commands allow you to change the configuration of virtual appliance interfaces. For example, you can change the IP address and IP route for an interface.
- **L2 VPN**: L2 VPN configuration mode commands allow you to change the L2 VPN configuration, including L2 VPN server, L2 VPN username, proxy configuration, and ciphers.

**NSX Manager and NSX Edge CLI Passwords**

The NSX Manager appliance uses different passwords to enter basic mode and privileged mode. When you deploy an NSX Manager appliance from an OVF file you are prompted to configure both passwords. After the NSX Manager appliance has been deployed, you can change the basic mode password with the `cli password` command, and the privileged mode password with the `enable password` command.
The NSX Edge appliance uses the same password to enter basic mode and privileged mode. When you deploy an NSX Edge appliance from NSX Manager via the vSphere Web Client, you are prompted to configure the password. After the NSX Edge appliance has been deployed, you can change the password from the vSphere Web Client (Network & Security > NSX Edges > Select an Edge > Actions > Change CLI Credentials).

The standalone NSX Edge appliance uses different passwords to enter basic mode and privileged mode. When you deploy a standalone NSX Edge appliance from an OVF file you are prompted to configure both passwords. After the standalone NSX Edge appliance has been deployed, you can change the basic and privileged mode passwords with the `password` command.

### Moving Around in the NSX Manager and NSX Edge CLI

The following commands move the pointer around on the command line.

<table>
<thead>
<tr>
<th>Keystrokes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRL+A</td>
<td>Moves the pointer to beginning of the line.</td>
</tr>
<tr>
<td>CTRL+B or the left arrow key</td>
<td>Moves the pointer back one character.</td>
</tr>
<tr>
<td>CTRL+C</td>
<td>Ends any operation that continues to propagate, such as a ping.</td>
</tr>
<tr>
<td>CTRL+D</td>
<td>Deletes the character at the pointer.</td>
</tr>
<tr>
<td>CTRL+E</td>
<td>Moves the pointer to end of the line.</td>
</tr>
<tr>
<td>CTRL+F or the right arrow key</td>
<td>Moves the pointer forward one character.</td>
</tr>
<tr>
<td>CTRL+K</td>
<td>Deletes all characters from the pointer to the end of the line.</td>
</tr>
<tr>
<td>CTRL+N or the down arrow key</td>
<td>Displays more recent commands in the history buffer after recalling commands with CTRL+P (or the up arrow key). Repeat to recall other recently run commands.</td>
</tr>
<tr>
<td>CTRL+P or the up arrow key</td>
<td>Recalls commands in the history, starting with the most recent completed command. Repeat to recall successively older commands.</td>
</tr>
<tr>
<td>CTRL+U</td>
<td>Deletes all characters from the pointer to beginning of the line.</td>
</tr>
<tr>
<td>CTRL+W</td>
<td>Deletes the word to the left of pointer.</td>
</tr>
<tr>
<td>ENTER</td>
<td>Scrolls down one line.</td>
</tr>
<tr>
<td>ESC+B</td>
<td>Moves the pointer back one word.</td>
</tr>
<tr>
<td>ESC+D</td>
<td>Deletes all characters from the pointer to the end of the word.</td>
</tr>
<tr>
<td>ESC+F</td>
<td>Moves the pointer forward one word.</td>
</tr>
<tr>
<td>SPACE</td>
<td>Scrolls down one screen.</td>
</tr>
</tbody>
</table>

### Getting Help within the NSX Manager and NSX Edge CLI

The CLI contains the following commands to assist you.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Displays a list of available commands.</td>
</tr>
<tr>
<td>sho?</td>
<td>Displays a list of commands that begin with a particular character string (NSX Manager only).</td>
</tr>
<tr>
<td>sho&lt;TAB&gt;</td>
<td>Completes a partial command name.</td>
</tr>
<tr>
<td>show ?</td>
<td>Lists the associated keywords of a command.</td>
</tr>
<tr>
<td>show log ?</td>
<td>Lists the associated arguments of a keyword.</td>
</tr>
<tr>
<td>list</td>
<td>Displays the verbose options of all commands for the current mode (NSX Manager only).</td>
</tr>
</tbody>
</table>
This chapter describes NSX Manager CLI commands. Log in as the user admin to use the NSX Manager commands.

cli password
Changes the password of the current command line user. The default command line user is admin.

**Synopsis**
cli password

**CLI Mode**
Configuration

**Example**

```
nsx-mgr(config)# cli password newpassword
```

configure terminal
Switches to Configuration mode from Privileged mode.

**Synopsis**
configure terminal

**CLI Mode**
Privileged

**Example**

```
nsx-mgr# configure terminal
nsx-mgr(config)#
```

copy running-config startup-config
Copies the current system configuration to the startup configuration.

**Synopsis**
copy running-config startup-config

**CLI Mode**
Privileged
Example
nsx-mgr# copy running-config startup-config
Building Configuration...
Configuration saved.
[OK]

Related Commands
show running-config
show startup-config

disable
Switches to Basic mode from Privileged mode.

Synopsis
disable

CLI Mode
Basic

Example
nsx-mgr# disable
nsx-mgr>

Related Commands
enable
deb}

g show files
Shows the tcpdump files that have been saved.

Synopsis
deb show files

CLI Mode
Privileged

Example
nsx-mgr# debug show files
total 0
-rw-r--r-- 1 0 Jun 23 16:04 tcpdump.d0.0

Related Commands
enable
enable
Switches to Privileged mode from Basic mode.

Synopsis
enable

CLI Mode
Basic
Example

nsx-mgr> enable
Password:
nsx-mgr#

Related Commands
disable

enable password

Changes the Privileged mode password. You should change the Privileged mode password for each NSX virtual machine. CLI user passwords and the Privileged mode password are managed separately. The Privileged mode password is the same for each CLI user account.

Synopsis

enable password password

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>password</td>
<td>The new password to use.</td>
</tr>
</tbody>
</table>

CLI Mode

Configuration

Example

nsx-mgr# configure terminal
nsx-mgr(config)# enable password abcd123

Related Commands

enable

extit

Exits from the current mode and switches to the previous mode, or exits the CLI session if run from Privileged or Basic mode.

Synopsis

exit

CLI Mode

Basic, Privileged, Configuration, and Interface Configuration

Example

nsx-mgr(config-if)# exit
nsx-mgr(config)# exit
nsx-mgr#

Related Commands

quit

export tech-support scp

Exports the system diagnostics to a specific location via Secure Copy Protocol (SCP). You can also export system diagnostics for an NSX virtual machine from the NSX Manager user interface.

Synopsis

export tech-support scp url
### export host-tech-support scp

Exports system diagnostics for the specified host ID to a specific location via Secure Copy Protocol (SCP). You can export system diagnostics for ESX command output from the NSX Manager.

**Synopsis**

```
export host-tech-support <host-Id> scp url
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>url</code></td>
<td>Enter the username and complete path of the destination. For example, userId@&lt;IpAddress&gt;/path. Standard scp/ssh syntax is used for username and machine name.</td>
</tr>
</tbody>
</table>

**CLI Mode**

Basic and Privileged

**Example**

```
nsx-mgr# export host-tech-support host-11 scp user123@host123:/file123
```

**Related Commands**

`show tech-support`

---

### hostname

Changes the host name of the machine, which is used as the CLI prompt.

**Synopsis**

```
hostname newhostname
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>newhostname</code></td>
<td>Prompt name to use.</td>
</tr>
</tbody>
</table>

**CLI Mode**

Configuration

**Example**

```
nsx-mgr(config)# hostname vs123
vs123(config)#
```
interface
Switches to Interface Configuration mode for the specified interface.
To delete the configuration of an interface, use `no` before the command.

**Synopsis**

```
[no] interface mgmt
```

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mgmt</td>
<td>The management port on an NSX virtual machine.</td>
</tr>
</tbody>
</table>

**CLI Mode**

Configuration

**Example**

```bash
nsx-mgr# configure terminal
nsx-mgr(config)# interface mgmt
nsx-mgr(config-if)#
```

or

```bash
nsx-mgr(config)# no interface mgmt
```

ip address
Assigns an IP address to an interface. On the NSX Manager appliance, you can assign an IP address to the management interface only.
To remove an IP address from an interface, use `no` before the command.

**Synopsis**

```
[no] ip address ipAddress/netmask
```

**CLI Mode**

Interface Configuration

**Example**

```bash
nsx-mgr(config)# interface mgmt
nsx-mgr(config-if)# ip address 192.168.110.200/24
```

or

```bash
nsx-mgr(config)# no ip address 192.168.110.200/24
```

ip route
Adds a static route.
To delete an IP route, use `no` before the command.

**Synopsis**

```
[no] ip route ipAddress/netmask gatewayIP
```

**CLI Mode**

Configuration
Example

nsx-mgr# configure terminal
nsx-mgr(config)# ip route 0.0.0.0/0 192.168.1.1

or

nsx-mgr(config)# no ip route 0.0.0.0/0 192.168.1.1

list

Lists all in-mode commands.

Synopsis

list

CLI Mode

Basic, Privileged, Configuration, Interface Configuration

Examples

nsx-mgr> list
   enable
   exit
   list
   ping WORD


ping

Pings a destination by its hostname or IP address.

Synopsis

ping (hostName | ipAddress)

CLI Mode

Basic, Privileged

Usage Guidelines

Enter CTRL+C to end ping replies.

Example

nsx-mgr# ping 192.168.1.1

quit

Quits Interface Configuration mode and switches to Configuration mode, or quits the CLI session if run from Privileged or Basic mode.

Synopsis

quit

CLI Mode

Basic, Privileged, and Interface Configuration

Example

nsx-mgr(config-if)# quit
nsx-mgr(config)#
Related Commands

**reset**

Resets the terminal settings to remove the current screen output and return a clean prompt.

**Synopsis**

reset

**CLI Mode**

Basic, Privileged, Configuration

**Example**

manager# reset

**Related Commands**

terminal length
terminal no length

**reboot**

Reboots an NSX virtual appliance.

**Synopsis**

reboot

**CLI Mode**

Privileged

**Related Commands**

shutdown

**set clock**

Sets the date and time if not using an NTP server.

**Synopsis**

set clock HH:MM:SS MM DD YYYY

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HH:MM:SS</td>
<td>Hours:minutes:seconds</td>
</tr>
<tr>
<td>MM</td>
<td>Month</td>
</tr>
<tr>
<td>DD</td>
<td>Day</td>
</tr>
<tr>
<td>YYYY</td>
<td>Year</td>
</tr>
</tbody>
</table>

**CLI Mode**

Privileged

**Example**

nsx-mgr# set clock 23:19:12 04 07 2015
nsx-mgr#
Related Commands

show clock

setup

Opens the CLI initialization wizard for NSX virtual machine installation. You configure multiple settings by using this command. You run the setup command during NSX Manager installation. Press ENTER to accept a default value.

Synopsis

setup

CLI Mode

Privileged

Example

manager(config)# setup
Default settings are in square brackets '[]'.
Hostname [manager]:
IP Address (A.B.C.D or A.B.C.D/MASK): 192.168.0.253
Default gateway (A.B.C.D): 192.168.0.1
Old configuration will be lost, and system needs to be rebooted
Do you want to save new configuration (y/[n]): y
Please log out and log back in again.

show arp

Shows the ARP table.

Synopsis

show arp

CLI Mode

Basic, Privileged

Example

nsx-mgr# show arp
IP address       HW type     Flags       HW address            Mask     Device
192.0.2.130      0x1         0x6         00:00:00:00:00:81     *        virteth1
192.168.110.1    0x1         0x2         00:0F:90:D5:36:C1     *        mgmt

show clock

Shows the current time and date of the virtual machine. If you use an NTP server for time synchronization, the time is based on Coordinated Universal Time (UTC).

Synopsis

show clock

CLI Mode

Basic, Privileged

Example

nsx-mgr# show clock
Tue Apr  7 23:21:10 UTC 2015
Related Commands

set clock

show ethernet

Shows Ethernet information for virtual machine interfaces.

Synopsis

show ethernet

CLI Mode

Basic, Privileged

Example

nsx-mgr# show ethernet
Settings for mgmt:
    Supported ports: [ TP ]
    Supported link modes:  10baseT/Half 10baseT/Full
                            100baseT/Half 100baseT/Full
                            1000baseT/Full
    Supports auto-negotiation: Yes
    Advertised link modes:   10baseT/Half 10baseT/Full
                            100baseT/Half 100baseT/Full
                            1000baseT/Full
    Advertised auto-negotiation: Yes
    Speed: 100Mb/s
    Duplex: Full

show filesystem

Shows the hard disk drive capacity for an NSX virtual machine. NSX Manager has two disk drives.

Synopsis

show filesystem

CLI Mode

Basic, Privileged

Example

nsx-mgr# show filesystem
Filesystem            Size  Used  Avail  Use%  Mounted on
/dev/hda3             4.9G   730M  3.9G   16%  /
/dev/hda6             985M   17M   919M    2%  /tmp
/dev/hda7              24G  1.7G   21G    8%  /common

show log

Shows the appmgmt, manager, or system log of the NSX Manager.

Synopsis

show log (appmgmt | manager | system) [follow | reverse | size | last n]

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>follow</td>
<td>Update the displayed log.</td>
</tr>
<tr>
<td>reverse</td>
<td>Show the log in reverse chronological order.</td>
</tr>
<tr>
<td>size</td>
<td>Show the log size.</td>
</tr>
<tr>
<td>last n</td>
<td>Show the last n number of events in the log.</td>
</tr>
</tbody>
</table>
**CLI Mode**

Basic, Privileged

**Example**

```bash
nsx-mgr# show log manager last 3
=======vsm.log=======
2015-04-28 23:10:00.281 GMT  INFO TaskFrameworkExecutor-24 ScheduleSynchronizer:60 - Releasing a thread to executor pool and executor pool active count 0
2015-04-28 23:10:25.869 GMT  INFO edgeVseMonitoringThread EdgeVseHealthMonitoringThread:219 - Finished Health check for 4 edge vms in 0 sec
2015-04-28 23:12:25.878 GMT  INFO edgeVseMonitoringThread EdgeVseHealthMonitoringThread:219 - Finished Health check for 4 edge vms in 0 sec
```

**show running-config**

Shows the current running configuration.

**Synopsis**

`show running-config`

**CLI Mode**

Basic, Privileged

**Example**

```bash
nsx-mgr# show running-config
Building configuration...
Current configuration:
!
ntp server 192.168.110.1
!
ip name server 192.168.110.10
!
hostname nsxmgr-01a
!
interface mgmt
  ip address 192.168.110.15/24
!
ip route 0.0.0.0/0 192.168.110.1
!
web-manager
```

**Related Commands**

`copy running-config startup-config`

`show startup-config`

**show startup-config**

Shows the startup configuration.

**Synopsis**

`show startup-config`

**CLI Mode**

Basic, Privileged

**Example**

```bash
nsx-mgr# show startup-config
```
Startup Configuration:
!
ntp server 192.168.110.1
!
ip name server 192.168.110.10
!
Configuration saved
!
hostname nsxmgr-01a
!
interface mgmt
  ip address 192.168.110.15/24
!
ip route 0.0.0.0/0 192.168.110.1
!
web-manager

Related Commands

- copy running-config startup-config
- show running-config

show slots

Shows the software images on the slots of an NSX virtual machine. Boot indicates the image that is used to boot the virtual machine.

**Synopsis**

show slots

**CLI Mode**

Basic, Privileged

**Example**

nsx?mgr# show slots
Recovery: System Recovery v0.3.2
Slot 1: 13Aug09-09.49PDT
Slot 2: * 16Aug09-23.52PDT (Boot)

show tech-support

Shows the system diagnostic log that can be sent to technical support by running the export tech-support scp command.

**Synopsis**

show tech-support

**CLI Mode**

Basic, Privileged

**Example**

nsx-mgr# show tech-support

shutdown

In Privileged mode, the shutdown command powers off the virtual machine. In Interface Configuration mode, the shutdown command disables the interface.

To enable a disabled interface, use no before the command.
**Synopsis**

[no] shutdown

**CLI Mode**
Privileged, Interface Configuration

**Example**
	nsx-mgr# shutdown

or

nsx-mgr(config)# interface mgmt
nsx-mgr(config-if)# shutdown
nsx-mgr(config-if)# no shutdown

**Related Commands**

reboot

**ssh**

Starts or stops the SSH service on an NSX virtual appliance.

**Synopsis**

ssh (start | stop)

**CLI Mode**
Privileged

**Example**

manager# ssh start

or

manager# ssh stop

**terminal length**

Sets the number of rows to display at a time in the CLI terminal.

**Synopsis**

terminal length n

**Option** | **Description**
--- | ---

n | Enter the number of rows to display, between 0 and 512. If length is 0, no display control is performed.

**CLI Mode**
Privileged

**Example**

manager# terminal length 50

**Related Commands**

terminal no length

**terminal no length**

Negates the terminal length command.
Synopsis
terminal no length

CLI Mode
Privileged

Example
manager# terminal no length

Related Commands
terminal length

traceroute
Traces the route to a destination.

Synopsis
traceroute (hostname | ip_address)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hostname</td>
<td>ip_address</td>
</tr>
</tbody>
</table>

CLI Mode
Basic, Privileged

Example
nsx-mgr# traceroute 10.16.67.118
traceroute to 10.16.67.118 (10.16.67.118), 30 hops max, 40 byte packets
1  10.115.219.253 (10.115.219.253)  128.808 ms  74.876 ms  74.554 ms
2  10.17.248.51 (10.17.248.51)  0.873 ms  0.934 ms  0.814 ms
3  10.16.101.150 (10.16.101.150)  0.890 ms  0.913 ms  0.713 ms
4  10.16.67.118 (10.16.67.118)  1.120 ms  1.054 ms  1.273 ms

user
Adds a CLI user account. The user admin is the default user account. The CLI admin account and password are separate from the NSX Manager user interface admin account and password.

IMPORTANT Each NSX virtual machine has two built-in CLI user accounts for system use: nobody and vs_comm. Do not delete or modify these accounts. If these accounts are deleted or modified, the virtual machine will not work.

To remove a CLI user account, use no before the command.

Synopsis
[no] user username password (hash | plaintext) password

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>username</td>
<td>Login name of the user.</td>
</tr>
<tr>
<td>hash</td>
<td>Masks the password by using the MD5 hash.</td>
</tr>
<tr>
<td>plaintext</td>
<td>Keeps the password unmasked.</td>
</tr>
<tr>
<td>password</td>
<td>Password to use.</td>
</tr>
</tbody>
</table>
CLI Mode
Configuration

Example
nsx-mgr(config)# user newuser1 password plaintext abcd1234
or
nsx-mgr(config) no user newuser1

Related Commands
cli password

user userName privilege web-interface
 Allows the specified CLI user to run REST API calls.

Synopsis
user userName privilege web-interface

CLI Mode
Configuration

Example
nsx-mgr(config)# user admin privilege web-interface

web-manager
 Starts the NSX Management Service. To stop the NSX Management Service, use no before the command. When starting the NSX Management Service, it can take a few minutes after getting the OK message for the NSX Management Service to reach the Running state. You can check the status in the NSX Manager Virtual Appliance web interface by clicking View Summary.

Synopsis
[no] web-manager

CLI Mode
Configuration

Example
nsx-mgr(config)# no web-manager
Stopping the web manager ...
OK
nsx-mgr(config)# web-manager
Starting the web manager ...
OK

write memory
 Writes the current configuration to memory.

Synopsis
write memory

CLI Mode
Configuration and Interface Configuration
Example

manager# write memory
The chapter includes the following topics:

- “Central Commands Overview” on page 31
- “Central Common Commands” on page 32
- “Central Controller Commands” on page 34
- “Central Logical Router Commands” on page 34
- “Central Logical Switch Commands” on page 47
- “Central Distributed Firewall Commands” on page 56
- “Central NSX Edge Commands” on page 62
- “Central NSX Packet Capture Commands” on page 80

Central Commands Overview

These commands are run from the NSX Manager and retrieve information from the NSX Manager and other devices. The commands allow you to easily compare information from different devices without having to log into each of them. These commands only retrieve information, you must log into the specific device to make configuration changes.

Log in as user admin to use the NSX central commands.

In a cross-vCenter NSX environment, there are multiple NSX Managers. When you log in to an NSX Manager you can retrieve information about objects that are local to that NSX Manager, and information about universal objects. You cannot retrieve information about objects that are local to a different NSX Manager.

You will need some information about your environment in order to use the central commands. The following commands will help you find the appropriate information.

<table>
<thead>
<tr>
<th>Command keyword</th>
<th>Commands to find valid input</th>
</tr>
</thead>
<tbody>
<tr>
<td>controller</td>
<td>show controller list all</td>
</tr>
<tr>
<td>host</td>
<td>Show all clusters:</td>
</tr>
<tr>
<td></td>
<td>show cluster all</td>
</tr>
<tr>
<td></td>
<td>Then show hosts in a specific cluster:</td>
</tr>
<tr>
<td></td>
<td>show cluster <code>clusterID</code></td>
</tr>
<tr>
<td></td>
<td>Or show all hosts associated with a specific logical router:</td>
</tr>
<tr>
<td></td>
<td>show logical-router list <code>dlr dlrID host</code></td>
</tr>
<tr>
<td>switch</td>
<td>show logical-switch list all</td>
</tr>
<tr>
<td>dlr</td>
<td>show logical-router list all</td>
</tr>
</tbody>
</table>
show cluster

Shows all clusters, or shows the hosts in the specified cluster.

**Synopsis**

`show cluster (all | clusterID)`

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show cluster all
Datacenter: ABC Medical
Cluster: Compute Cluster A
No.  Cluster Name                  Cluster Id               Datacenter Name   Firewall
     Status
1    Compute Cluster A             domain-c25               ABC Medical       Enabled
2    Management and Edge Cluster   domain-c7                ABC Medical       Enabled
3    Compute Cluster B             domain-c27               ABC Medical       Enabled

or

nsx-mgr> show cluster domain-c25
Datacenter: ABC Medical
Cluster: Compute Cluster A
No.  Host Name                Host Id                  Installation Status
     Status
1    esxcomp-01a.corp.local   host-29                  Ready
2    esxcomp-02a.corp.local   host-34                  Ready
```

**show host hostID**

Shows VMs on the specified host.

**Synopsis**

`show host hostID`

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show host host-29
Datacenter: ABC Medical
Cluster: Compute Cluster A
Host: esxcomp-01a.corp.local
No.  VM Name      VM Id     Power Status
     Status
1    br-sv-02a    vm-32     off
```
2    web-sv-01a   vm-36     on

**show host hostID health-status**

Shows health status of the specified host as HEALTHY/UNHEALTHY/Critical/WARNING.

**Synopsis**

`show host hostID health-status`

**CLI Mode**

Basic

**Example**

```
snx-mgr> show host host-29 health-status
Status: HEALTHY
nsx-mgr> show host host-32 health-status
Status: UNHEALTHY
```

**show vm vmID**

Shows information about the specified VM, including vNIC Name and ID, and filters.

**Synopsis**

```
show controller list all
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show vm vm-36
Datacenter: ABC Medical
Cluster: Compute Cluster A
Host: esxcomp-01a.corp.local
VM: web-sv-01a
Virtual Nics List:
1.
  Vnic Name      web-sv-01a - Network adapter 1
  Vnic Id        5026c7cd-b6f3-f4bc-e533-3d4b255c6277.000
  Filters        nic-54466-eth0-vmware-sfw.2
```

**show vnic vnicID**

Shows information about the specified vNIC.

**Synopsis**

```
show controller list all
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show vnic 5026c7cd-b6f3-f4bc-e533-3d4b255c6277.000
Vnic Name      web-sv-01a - Network adapter 1
Vnic Id        5026c7cd-b6f3-f4bc-e533-3d4b255c6277.000
Mac Address    00:50:56:a6:7a:a2
Port Group Id  dvportgroup-198
Filters        nic-54466-eth0-vmware-sfw.2
```
Central Controller Commands

**show controller list all**

Shows all controllers. This information is retrieved from NSX Manager.

**Synopsis**

`show controller list all`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show controller list all
NAME         IP                 State
controller-4 192.168.110.203  RUNNING
controller-3 192.168.110.202  RUNNING
controller-1 192.168.110.201  RUNNING
```

Central Logical Router Commands

**show logical-router controller controllerID dlr dlrID bridge (all | bridgeID)**

Shows information about bridges configured on a logical router. This information is retrieved from the specified controller. Use `all` to show information for all bridges, or use `bridgeID` to show information for a specific bridge.

**Synopsis**

`show logical-router controller controllerID dlr dlrID bridge (all | bridgeID)`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router controller master dlr edge-2 bridge all
LR-Id Bridge-Id Host Active
0x1388 1 192.168.110.53 true
masterControllerIp=192.168.110.203

or

nsx-mgr> show logical-router controller master dlr edge-2 bridge 1
LR-Id Bridge-Id Host Active
0x1388 1 192.168.110.53 true
masterControllerIp=192.168.110.203
```

**show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) mac-address-table**

Shows the mac address table for bridges configured on a logical router. This information is retrieved from the specified controller. Use all to show the mac address table for all bridges, or use `bridgeID` to show the mac address table for a specific bridge.

**Synopsis**

`show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) mac-address-table`

**CLI Mode**

Basic
Example

show logical-router controller master dlr edge-2 bridge 1 mac-address-table
LR-Id  Bridge-Id  Mac  Vlan-Id  Vxlan-Id  Port-Id  Source
0x1388  1  68:ef:bd:4e:98:4c  100  0  50331650 vlan
masterControllerIp=192.168.110.203

show logical-router controller controllerID dlr dlrID brief

Shows information about a logical router. This information is retrieved from the specified controller. controllerID can be specified as master to retrieve information from the master controller.

Synopsis

show logical-router controller (master | controllerID) dlr dlrID brief

CLI Mode

Basic

Example

nsx-mgr> show logical-router controller master dlr edge-1 brief
LR-Id  LR-Name  Universal  Service-Controller  Egress-Locale  In-Sync  Sync-Category
0x1388  default+edge-1  false  192.168.110.203  local  Yes  NORMAL
masterControllerIp=192.168.110.203

show logical-router controller controllerID dlr dlrID interface

Shows interface information for a logical router. Show information for a single interface by specifying the interface name. This information is retrieved from the specified controller. controllerID can be specified as master to retrieve information from the master controller.

Synopsis

show logical-router controller (master | controllerID) dlr dlrID interface [intName]

CLI Mode

Basic

Example

nsx-mgr> show logical-router controller master dlr edge-1 interface
Interface  Type  Id  IP
13880000000b  vxlan  5002(0x138a)  172.16.20.1/24
13880000000a  vxlan  5001(0x1389)  172.16.10.1/24
13880000000c  vxlan  5003(0x138b)  172.16.30.1/24
138800000002  vxlan  5000(0x1388)  192.168.10.2/29
masterControllerIp=192.168.110.203

or

nsx-mgr> show logical-router controller master dlr edge-1 interface 13880000000a
Interface-Name:  13880000000a
Logical-Router-Id:0x1388
Id:  0x1389
Type:  vxlan
IP:  172.16.10.1/24
DVS-UUID:  88eb0e50-96af-1df1-36fe-c1efa1515149
58920e50-931f-c4b2-af82-c947ae1e6250
Mac:  02:50:56:56:44:52
Mtu:  1500
Multicast-IP: 0.0.0.1
Designated-IP: 0x280
Bridge-Id:  
Bridge-Name:  
DHCP-relay-server:

masterControllerIp=192.168.110.203

Related Commands

**show logical-router host hostID dlr dlrID interface intName verbose**

**show logical-router controller controllerID dlr dlrID route**

Shows the routes configured on a logical router. Specify the IP address and netmask to see routes configured for a specific network. This information is retrieved from the specified controller. `controllerID` can be specified as master to retrieve information from the master controller.

**Synopsis**

```
show logical-router controller (master | controllerID) dlr dlrID route [ipAddress/netmask]
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router controller master dlr edge-1 route
Destination      Next-Hop[]      Preference Locale-Id                            Source
0.0.0.0/0        192.168.10.1    0          00000000-0000-0000-0000-000000000000
masterControllerIp=192.168.110.203
```

**Related Commands**

**show logical-router host hostID dlr dlrID route**

**show logical-router controller controllerID dlr dlrID statistics**

Shows statistics for a logical router. This information is retrieved from the specified controller. `controllerID` can be specified as master to retrieve information from the master controller.

**Synopsis**

```
show logical-router controller (master | controllerID) dlr dlrID statistics
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router controller master dlr edge-1 statistics
host.reports.received       6
host.reports.dropped        0
edge.routes.received       6
edge.routes.dropped        0
bridge.reports.received    0
bridge.reports.dropped     0
bridge.macs.received       0
bridge.macs.dropped        0
route.queries.received     0
interface.queries.received 0
mac.queries.received       0
clear.routes.received      1
```
clear.macs.received  0
errdecode.messages.dropped  0
memfull.messages.dropped  0
errserver.messages.dropped  0
notifications.error  0

masterControllerIp=192.168.110.203

**show logical-router controller controllerID host hostIP connection**

Shows the IP of a host’s connection to the specified controller.

**Synopsis**

show logical-router controller controllerID host hostIP connection

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router controller controller-1 host 192.168.210.51 connection
Version: 6.2
```

**show logical-router controller controllerID statistics**

Shows statistics for all logical routers. This information is retrieved from the specified controller.

**Synopsis**

show logical-router controller controllerID statistics

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router controller controller-1 statistics
messages.query  0
messages.update  0
messages.flush  0
messages.notification  0
```

**show logical-router host hostID connection**

Shows all logical router connections on the specified host.

**Synopsis**

text

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router host host-29 connection
Host locale Id:             42294beb-799b-4560-3f29-9a5eb70c884a
Connection Information:
-----------------------
DvsName           VdrPort           NumLifs  VdrVmac
-------           -------           -------  -------
```
show logical-router host *hostID* dlr *dlrID*

Shows information about a logical router. This information is retrieved from the specified host.

**Synopsis**

`show logical-router host hostID dlr dlrID (brief | verbose)`

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-router host host-29 dlr edge-1 brief

VDR Instance Information :

```
Legend: [A: Active], [D: Deleting], [X: Deleted], [I: Init]
Legend: [SF-R: Soft Flush Route], [SF-L: Soft Flush LIF]

Vdr Name             Vdr Id     #Lifs   #Routes State      Controller Ip    CP Ip
--------             -------    -----   ------- -----      -------------    ------
default+edge-1       0x1388     4       5       A          192.168.110.203
                     192.168.210.51
```

or

nsx-mgr> show logical-router host host-29 dlr edge-1 verbose

VDR Instance Information :

```
Vdr Name:                   default+edge-1
Vdr Id:                     0x00001388
Number of Lifs:             4
Number of Routes:           5
State:                      Enabled
Controller IP:              192.168.110.203
Control Plane Active:       Yes
Num unique nexthops:        1
Generation Number:          0
Edge Active:                No
```

**Related Commands**

`show logical-router controller controllerID dlr dlrID brief`

**show logical-router host *hostID* dlr *dlrID* arp**

Shows the ARP table for the logical router. This information is retrieved from the specified host.

**Synopsis**

`show logical-router host hostID dlr dlrID arp`
### CLI Mode

#### Basic

#### Example

```plaintext
nsx-mgr> show logical-router host host-29 dlr edge-1 arp

VDR default+edge-1 ARP Information:
Legend: [S: Static], [V: Valid], [P: Proxy], [I: Interface]
Legend: [N: Nascent], [L: Local], [D: Deleted]

<table>
<thead>
<tr>
<th>Network</th>
<th>Flags</th>
<th>Expiry</th>
<th>SrcPort</th>
<th>Refcnt</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.10.2</td>
<td>VI</td>
<td>permanent</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>172.16.10.1</td>
<td>VI</td>
<td>permanent</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>172.16.10.11</td>
<td>VL</td>
<td>151</td>
<td>50331657</td>
<td>2</td>
</tr>
<tr>
<td>172.16.30.1</td>
<td>VI</td>
<td>permanent</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>172.16.30.11</td>
<td>V</td>
<td>151</td>
<td>50331650</td>
<td>4</td>
</tr>
<tr>
<td>172.16.20.1</td>
<td>VI</td>
<td>permanent</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
```

#### show logical-router host `hostID` dlr `dlrID` bridge `bridgeName` mac-address-table

Shows MAC address table for a bridge configured on a logical router. This information is retrieved from the specified host.

#### Synopsis

`show logical-router host hostID dlr dlrID bridge bridgeName mac-address-table`

#### CLI Mode

Basic

#### Example

```plaintext
nsx-mgr> show logical-router host host-100 dlr edge-17 bridge VLAN3 mac-address-table

VDR 'default+edge-17' bridge 'VLAN3' mac address table:

total number of MAC addresses: 2
number of MAC addresses returned: 2

<table>
<thead>
<tr>
<th>Destination Address</th>
<th>Address Type</th>
<th>VLAN ID</th>
<th>VXLAN ID</th>
<th>Destination Port</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:50:56:9c:2a:99</td>
<td>Dynamic</td>
<td>0</td>
<td>6</td>
<td>50331653</td>
<td>1</td>
</tr>
<tr>
<td>00:50:56:9c:2a:88</td>
<td>Static</td>
<td>0</td>
<td>6</td>
<td>50331653</td>
<td>20</td>
</tr>
</tbody>
</table>

total number of MAC addresses: 1
number of MAC addresses returned: 1

<table>
<thead>
<tr>
<th>Destination Address</th>
<th>Address Type</th>
<th>VLAN ID</th>
<th>VXLAN ID</th>
<th>Destination Port</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:11:11:11:11:11</td>
<td>Static</td>
<td>8</td>
<td>0</td>
<td>9999</td>
<td>103</td>
</tr>
</tbody>
</table>
```

hostId=host-100

#### show logical-router host `hostID` dlr `dlrID` bridge `bridgeName` statistics

Shows statistics for a bridge configured on a logical-router. This information is retrieved from the specified host.
**Synopsis**

show logical-router host hostID dlr dlrID bridge bridgeName statistics

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-router host host-100 dlr edge-17 bridge VLAN3 statistics

VDR 'default+edge-17' bridge 'VLAN3' stats :

Bridge stats:

| Port Not Exist: | 0 |

Network 'vxlan-5000-type-(null)' stats:

| FDB Hit: | 0 |
| FDB Learn: | 0 |
| FDB Update: | 0 |
| FDB Table Full: | 0 |
| FDB Chain: | 0 |
| FDB Aged: | 0 |
| FDB Mac Moved: | 0 |
| FDB Mac Hit: | 0 |
| FRP Filter Leaf Tx: | 0 |
| FRP Filter Bridged: | 0 |
| FDB Uplink Filter: | 0 |

Network port ID '0x3000005' stats:

| Pkts TX: | 0 |
| Pkts TX Multicast: | 0 |
| Pkts TX Broadcast: | 0 |
| Pkts RX: | 0 |
| Pkts RX Multicast: | 0 |
| Pkts RX Broadcast: | 0 |
| Dropped TX: | 0 |
| Dropped RX: | 0 |
| Mapped Len Too Short: | 0 |
| Pkts Bridged: | 0 |
| Pkts Dropped Bridged: | 0 |
| Pkts Dropped Uplink: | 0 |
| Dropped TX Port Mismatch: | 0 |
| Dropped TX Vxlan Pkt To Vlan: | 0 |

Network 'vxlan-5000-type-(null)' stats:

| FDB Hit: | 0 |
| FDB Learn: | 0 |
| FDB Update: | 0 |
| FDB Table Full: | 0 |
| FDB Chain: | 0 |
| FDB Aged: | 0 |
| FDB Mac Moved: | 0 |
| FDB Mac Hit: | 0 |
| FRP Filter Leaf Tx: | 0 |
| FRP Filter Bridged: | 0 |
| FDB Uplink Filter: | 0 |

Network port ID '0x3000005' stats:

| Pkts TX: | 0 |
| Pkts TX Multicast: | 0 |
| Pkts TX Broadcast: | 0 |
| Pkts RX: | 0 |
| Pkts RX Multicast: | 0 |
| Pkts RX Broadcast: | 0 |
| Dropped TX: | 0 |
| Dropped RX: | 0 |
| Mapped Len Too Short: | 0 |
show logical-router host hostID dlr dlrID bridge bridgeName verbose

Shows information for a bridge configured on a logical router. This information is retrieved from the specified host. bridgeName can be all to show all configured bridges.

Synopsis

show logical-router host hostID dlr dlrID bridge (all | bridgeName) verbose

CLI Mode

Basic

Example

nsx-mgr> show logical-router host host-100 dlr edge-17 bridge VLAN3 verbose

VDR 'default+edge-17' bridge 'VLAN3' config:

Bridge config:
Name:id VLAN3:1
Portset name:
DVS name: DemoDSData
Ref count: 2
Number of networks: 2
Number of uplinks: 2

Network 'vxlan-5000-type-(null)' config:
Ref count: 2
Network type: 2
VLAN ID: 0
VXLAN ID: 5000
Ageing time: 300
Fdb entry hold time: 1

Network port ID '0x3000017' config:
Ref count: 1
Port ID: 0x3000017
VLAN ID: 4095
IOChains installed: 0

Network 'vxlan-3-type-(null)' config:
Ref count: 2
Network type: 2
VLAN ID: 3
VXLAN ID: 0
Ageing time: 300
Fdb entry hold time: 1
FRP filter enable: 1

Network port ID '0x3000017' config:
Ref count: 1
Port ID: 0x3000017
VLAN ID: 4095
IOChains installed: 0

hostId=host-100

or

nsx-mgr> show logical-router host host-100 dlr edge-17 bridge all verbose

VDR 'LDR-1' bridge 'testbridge' config:
Bridge config:
Name:id       testbridge:2
Portset name:
DVS name:    opaque-switch-1
Ref count:  1
Number of networks: 2
Number of uplinks:  0

Network 'vxlan-41992-type-bridging' config:
Ref count:  1
Network type:  1
VLAN ID:    0
VXLAN ID:  41992
Ageing time: 300
Fdb entry hold time:1
FRP filter enable: 1

Network port ID '0x3000005' config:
Ref count:  1
Port ID:  0x3000005
VLAN ID:  4095
IOChains installed: 0

Network 'vxlan-43784-type-bridging' config:
Ref count:  1
Network type:  1
VLAN ID:    0
VXLAN ID:  43784
Ageing time: 300
Fdb entry hold time:1
FRP filter enable: 1

Network port ID '0x3000005' config:
Ref count:  1
Port ID:  0x3000005
VLAN ID:  4095
IOChains installed: 0

show logical-router host hostID dlr dlrID control-plane-statistics

Shows control plane statistics for a logical router. This information is retrieved from the specified host.

Synopsis

show logical-router host hostID dlr dlrID control-plane-statistics

CLI Mode

Basic

Example

nsx-mgr> show logical-router host host-29 dlr edge-1 control-plane-statistics

VDR Instance default+edge-1 Control Plane Message Statistics:

Num Link UP RX:  1
Num Link DOWN RX: 0
Num Edge Link UP RX: 0
Num Edge Link DOWN RX: 1
Num Route ADD RX:  10
Err Route ADD:  0
Num Route DEL RX:  6
Err Route DEL:  0
Err Route DEL Match: 2
DUP Route RX:  0
Num Route EOM RX:  1
Err Route Nexthop Add:       0
Err Route Nexthop Del:       0
Num Lif ADD RX:              4
Err Lif ADD:                 0
Num Lif DEL RX:              0
Err Lif Generic:             0
DUP Lif RX:                  2
Num Lif EOM:                 1
Num Lif IP ADD RX:           0
Num Lif IP DEL RX:           0
Num Lif DI Update RX:        0
Num Lif Status Change RX:    0
Num Flush LIF RX:            1
Num Flush Route RX:          2

**show logical-router host hostID dlr dlrID interface intName brief**

Shows brief information for an interface on a logical router. This information is retrieved from the specified host.

**Synopsis**

show logical-router host hostID dlr dlrID interface intName brief

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-router host host-29 dlr edge-1 interface 13880000000a brief

VDR default+edge-1 LIF Information :

State Legend: [A:Active], [d:Deleting], [X:Deleted], [I:Init],[SF-L:Soft Flush LIF]
Modes Legend: [B:Bridging],[E: Empty], [R:Routing],[S:Sedimented],[D:Distributed]
Modes Legend: [In:Internal],[Up:Uplink],[St:Static]

<table>
<thead>
<tr>
<th>Lif Name</th>
<th>Id</th>
<th>Mode</th>
<th>State</th>
<th>Ip(Mask)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13880000000a</td>
<td>Vxlan:5001</td>
<td>R,D,In</td>
<td>A</td>
<td>172.16.10.1(255.255.255.0)</td>
</tr>
</tbody>
</table>

**Related Commands**

show logical-router controller controllerID dlr dlrID interface

**show logical-router host hostID dlr dlrID interface intName statistics**

Shows statistics for an interface on a logical router. This information is retrieved from the specified host.

**Synopsis**

show logical-router host hostID dlr dlrID interface intName statistics

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-router host host-29 dlr edge-3 interface 13880000000a statistics

VDR default+edge-1 LIF 13880000000a Statistics :

 RX Unicast Packets on the interface: 457
 RX Unicast Bytes on the interface: 0
 TX Unicast Packets on the interface: 0
 RX Broadcast Packets on the interface: 0
RX Broadcast Bytes on the interface: 0
TX Broadcast Packets on the interface: 0
TX Broadcast Bytes on the interface: 0
RX Multicast Packets on the interface: 0
RX Multicast Bytes on the interface: 0
RX Packets System Error on interface: 0
TX Ref Errors on the interface: 0
Packets Deferred Free on the interface: 0
RX Packets Dropped on interface: 0

LIF Net Statistics (approx.):

<table>
<thead>
<tr>
<th>Packets Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP &amp; ARP packets RX:</td>
<td>462</td>
</tr>
<tr>
<td>IP &amp; ARP packets TX:</td>
<td>4</td>
</tr>
<tr>
<td>IP packets Forwarded to Lif:</td>
<td>0</td>
</tr>
<tr>
<td>IP packets Consumed:</td>
<td>0</td>
</tr>
<tr>
<td>IP packets Fragmented:</td>
<td>0</td>
</tr>
<tr>
<td>IP packets Ignored:</td>
<td>0</td>
</tr>
<tr>
<td>ARP Request RX:</td>
<td>3</td>
</tr>
<tr>
<td>ARP Request TX:</td>
<td>2</td>
</tr>
<tr>
<td>ARP Response RX:</td>
<td>2</td>
</tr>
<tr>
<td>ARP Response TX:</td>
<td>1</td>
</tr>
<tr>
<td>ARP Request for Proxy RX:</td>
<td>0</td>
</tr>
<tr>
<td>ARP Request for Proxy My IP RX:</td>
<td>0</td>
</tr>
<tr>
<td>GARP RX:</td>
<td>0</td>
</tr>
<tr>
<td>GARP TX:</td>
<td>1</td>
</tr>
<tr>
<td>ARP Probes TX:</td>
<td>0</td>
</tr>
<tr>
<td>ICMP Echo Req RX:</td>
<td>0</td>
</tr>
<tr>
<td>ICMP Echo Rsp TX:</td>
<td>0</td>
</tr>
<tr>
<td>ICMP Time Exceeded TX:</td>
<td>0</td>
</tr>
<tr>
<td>TTL Zero Drops:</td>
<td>0</td>
</tr>
<tr>
<td>Bad Checksum Drops:</td>
<td>0</td>
</tr>
<tr>
<td>Arp HoldPkts Drops:</td>
<td>0</td>
</tr>
<tr>
<td>Packet Allocation Failure:</td>
<td>0</td>
</tr>
<tr>
<td>Route not found to Dest:</td>
<td>0</td>
</tr>
<tr>
<td>Neighbor not found:</td>
<td>0</td>
</tr>
</tbody>
</table>

**show logical-router host** *hostID* **dlr** *dlrID* **interface** *intName* **verbose**

Shows information for an interface on a logical router. This information is retrieved from the specified host. *intName* can be all to show verbose information for all interfaces.

**Synopsis**

```
show logical-router host hostID dlr dlrID interface (all | intName) verbose
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router host-29 dlr edge-1 interface all verbose
```

VDR default+edge-1 LIF Information :

- **Name:** 138800000002
- **Mode:** Routing, Distributed, uplink
- **Id:** vxlan:5000
- **Ip(Mask):** 192.168.10.2(255.255.255.248)
- **Connected Dvs:** Compute_VDS
- **VXLAN Control Plane:** Enabled
- **VXLAN Multicast IP:** 0.0.0.1
- **State:** Enabled
- **Flags:** 0x2208
- **DHCP Relay:** Not enabled
show logical-router host hostID dlr dlrID route

Shows the routes configured on a logical router. This information is retrieved from the specified host.

Synopsis

show logical-router host hostID dlr dlrID route

CLI Mode

Basic

Example

nsx-mgr> show logical-router host host-29 dlr edge-1 route

VDR default+edge-1 Route Table

Legend: [U: Up], [G: Gateway], [C: Connected], [I: Interface]
Legend: [H: Host], [F: Soft Flush] [!: Reject] [E: ECMP]

<table>
<thead>
<tr>
<th>Destination</th>
<th>GenMask</th>
<th>Gateway</th>
<th>Flags</th>
<th>Ref</th>
<th>Origin</th>
<th>UpTime</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0</td>
<td>0.0.0.0</td>
<td>192.168.10.1</td>
<td>UG</td>
<td>1</td>
<td>AUTO</td>
<td>272883</td>
</tr>
<tr>
<td>172.16.10.0</td>
<td>255.255.255.0</td>
<td>0.0.0.0</td>
<td>UCI</td>
<td>1</td>
<td>MANUAL</td>
<td>273214</td>
</tr>
<tr>
<td>172.16.20.0</td>
<td>255.255.255.0</td>
<td>0.0.0.0</td>
<td>UCI</td>
<td>1</td>
<td>MANUAL</td>
<td>273241</td>
</tr>
<tr>
<td>172.16.30.0</td>
<td>255.255.255.0</td>
<td>0.0.0.0</td>
<td>UCI</td>
<td>3</td>
<td>MANUAL</td>
<td>273241</td>
</tr>
<tr>
<td>192.168.10.0</td>
<td>255.255.255.248</td>
<td>0.0.0.0</td>
<td>UCI</td>
<td>1</td>
<td>MANUAL</td>
<td>273214</td>
</tr>
<tr>
<td>192.168.100.0</td>
<td>255.255.255.0</td>
<td>192.168.10.1</td>
<td>UG</td>
<td>1</td>
<td>AUTO</td>
<td>7017</td>
</tr>
</tbody>
</table>

Related Commands

show logical-router controller controllerID dlr dlrID route

show logical-router host hostID dlr dlrID tunable

Shows tunable parameters for a logical router. This information is retrieved from the specified host.

Synopsis

show logical-router host hostID dlr dlrID tunable

CLI Mode

Basic

Example

nsx-mgr> show logical-router host host-29 dlr edge-1 tunable

VDR Instance default+edge-1 Tunable Parameters:
**show logical-router list all**

Shows information about all logical routers. This information is retrieved from NSX Manager.

**Synopsis**

global show logical-router list all

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router list all
Edge Id   Vdr Name                     Vdr Id             #Lifs
edge-1    default+edge-1             0x00001388          4
```

**show logical-router list dlr dlrID host**

Shows on which hosts the specified logical router is available. This information is retrieved from NSX Manager.

**Synopsis**

global show logical-router list dlr dlrID host

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-router list dlr edge-1 host
ID       HostName
host-29   esxcomp-01a.corp.local
host-38   esxcomp-01b.corp.local
host-10   esx-01a.corp.local
host-34   esxcomp-02a.corp.local
host-15   esx-02a.corp.local
```

**show logical-router resolve**

Shows information about next destination that a logical router will choose when you have configured the logical router with ECMP.

**For example:** You have four NSX Edges. On host-28, you have a source VM 172.17.10.11 that is trying to route to destination 192.168.110.10, and you want to know which of the four NSX Edges will be the next hop for this traffic.
Chapter 3 NSX Central Commands

Synopsis

show logical-router resolve host hostID dlr show logical-router resolve host hostID dlr
   {logical router name} destip {IP of the destination resource} scrip {IP of
   the VM which generates the traffic}

CLI Mode

Basic

Example

nsx-mgr> show logical-router resolve host host-28 dlr default+edge-2 destip
   192.168.110.10 srcip 172.17.10.11

VDR default+edge-2 Route Table
Legend: [U: Up], [G: Gateway], [C: Connected], [I: Interface]
Legend: [H: Host], [F: Soft Flush] [!: Reject] [E: ECMP]

<table>
<thead>
<tr>
<th>Destination</th>
<th>GenMask</th>
<th>Gateway</th>
<th>Flags</th>
<th>Ref Origin</th>
<th>UpTime</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0</td>
<td>0.0.0.0</td>
<td>192.168.5.1</td>
<td>UG</td>
<td>1</td>
<td>AUTO</td>
<td>57</td>
</tr>
</tbody>
</table>

Central Logical Switch Commands

show logical-switch controller controllerID host hostIP arp

Shows the ARP table for a host. This information is retrieved from the specified controller.

Synopsis

show logical-switch controller controllerID host hostIP arp

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller controller-3 host 192.168.210.51 arp
VNI   IP              MAC               Connection-ID
      172.16.10.11    00:50:56:a6:7a:a2 6

show logical-switch controller controllerID host hostIP joined-vnis

Shows connected logical switches on a host. This information is retrieved from the specified controller.

Synopsis

show logical-switch controller controllerID host hostIP connection

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller controller-3 host 192.168.210.51 joined-vnis
VNI   Controller      BUM-Replication ARP-Proxy Connections
      5001    192.168.110.202 Enabled    Enabled   3

show logical-switch controller controllerID host hostIP mac

Shows the MAC address table for a host. This information is retrieved from the specified controller.
Synopsis

show logical-switch controller controllerID host hostIP mac

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller controller-3 host 192.168.210.51 mac
VNI      MAC               VTEP-IP         Connection-ID
5001     00:50:56:a6:7a:a2 192.168.250.52  6

show logical-switch controller controllerID host hostIP vtep

Shows the VTEP table for a host. This information is retrieved from the specified controller.

Synopsis

show logical-switch controller controllerID host hostIP vtep

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller controller-3 host 192.168.210.51 vtep
VNI      IP              Segment         MAC               Connection-ID
5001     192.168.250.52 192.168.250.0   00:50:56:60:bb:b6 6

show logical-switch controller controllerID vni vni arp

Shows the ARP table for a logical switch. This information is retrieved from the specified controller. controllerID can be specified as master to retrieve information from the master controller.

Synopsis

show logical-switch controller (master | controllerID) vni vni arp

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller master vni 5001 arp
VNI      IP              MAC               Connection-ID
5001     172.16.10.12    00:50:56:a6:a1:e3  7
5001     172.16.10.11    00:50:56:a6:7a:a2  6
masterControllerIp=192.168.110.202

show logical-switch controller controllerID vni vni brief

Shows information about a logical switch. This information is retrieved from the specified controller. controllerID can be specified as master to retrieve information from the master controller.

Synopsis

show logical-switch controller (master | controllerID) vni vni brief

CLI Mode

Basic

Example

nsx-mgr> show logical-switch controller master vni 5001 brief
### Related Commands

`show logical-switch host hostID vni vni verbose`

#### show logical-switch controller controllerID vni vni connection

Shows the hosts connected to a logical switch. This information is retrieved from the specified controller. `controllerID` can be specified as `master` to retrieve information from the master controller.

**Synopsis**

`show logical-switch controller (master | controllerID) vni vni connection`

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show logical-switch controller master vni 5001 connection
Host-IP        Port  ID
192.168.210.51 13335 6
192.168.210.56 35059 7
192.168.210.52 50484 8
masterControllerIp=192.168.110.202
```

#### show logical-switch controller controllerID vni vni mac

Shows the MAC address table for a logical switch. This information is retrieved from the specified controller. `controllerID` can be specified as `master` to retrieve information from the master controller.

**Synopsis**

`show logical-switch controller (master | controllerID) vni vni mac`

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show logical-switch controller master vni 5001 mac
VNI      MAC               VTEP-IP         Connection-ID
5001     00:50:56:a6:a1:e3 192.168.250.53 7
5001     00:50:56:a6:7a:a2 192.168.250.52 6
masterControllerIp=192.168.110.202
```

#### show logical-switch controller controllerID vni vni statistics

Shows statistics for a logical switch. This information is retrieved from the specified controller. `controllerID` can be specified as `master` to retrieve information from the master controller.

**Synopsis**

`show logical-switch controller (master | controllerID) vni vni statistics`

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show logical-switch controller master vni 5001 statistics
update.member         3
update.vtep           5
```
update.mac            2
update.mac.invalidate 0
update.arp            9
update.arp.duplicate  0
query.mac             1
query.mac.miss        0
query.arp             5
query.arp.miss        5

masterControllerIp=192.168.110.202

**show logical-switch controller controllerID vni vni vtep**

Shows the VTEP table for a logical switch. This information is retrieved from the specified controller. `controllerID` can be specified as `master` to retrieve information from the master controller.

**Synopsis**

```
show logical-switch controller (master | controllerID) vni vni vtep
```

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show logical-switch controller master vni 5001 vtep
```

```
VNI      IP              Segment         MAC               Connection-ID
5001     192.168.250.53  192.168.250.0   00:50:56:6c:f5:b8 7
5001     192.168.250.52  192.168.250.0   00:50:56:60:bb:b6 6
5001     192.168.250.51  192.168.250.0   00:50:56:6e:e4:27 8
masterControllerIp=192.168.110.202
```

**Related Commands**

- `show logical-switch host hostID vni vni vtep`
- `show logical-switch host`

**show logical-switch host hostID config-by-vsm**

Shows controller configuration information. This information is retrieved from the specified host.

**Synopsis**

```
show logical-switch host hostID config-by-vsm
```

**CLI Mode**

Basic

**Example**

```bash
nsx-mgr> show logical-switch host host-29 config-by-vsm
```

```
<config>
<connectionList>
<connection id="0000">
<port>1234</port>
<server>192.168.110.201</server>
<sslEnabled>true</sslEnabled>
</connection>
<connection id="0001">
<port>1234</port>
<server>192.168.110.203</server>
<sslEnabled>true</sslEnabled>
</connection>
</connectionList>
</config>
```
show logical-switch host hostID statistics

Shows statistics for a logical switch. This information is retrieved from the specified host.

Synopsis

show logical-switch host hostID statistics

CLI Mode

Basic

Example

nsx-mgr> show logical-switch host host-29 statistics

tax.passThrough: 0
tax.vxlanTotal: 0
tax.clone: 0
tax.tso: 0
tax.csum: 0
tax.drop.invalidFrame: 0
tax.drop.guestTag: 0
tax.drop.noResource: 0
tax.drop.invalidState: 3
rx.passThrough: 0
rx.vxlanTotal: 0
rx.clone: 0
rx.drop.invalidFrame: 0
rx.drop.notExist: 0
rx.drop.noResource: 0
forward.pass: 0
forward.reject: 0
forward.rpf: 0
arpProxy.reply.total: 0
arpProxy.reply.fail: 0
arpProxy.request.total: 3
arpProxy.request.fail: 0
mcastProxy.tx.total: 0
mcastProxy.tx.fail: 0
mcastProxy.rx.total: 0
mcastProxy.rx.fail: 0

show logical-switch host hostID verbose

Shows logical switch information. This information is retrieved from the specified host.

Synopsis
show logical-switch host hostID verbose

CLI Mode
Basic

Example
nsx-mgr> show logical-switch host host-29 verbose
VXLAN Global States:
  Control plane Out-Of-Sync: No
  UDP port: 8472
VXLAN VDS: Compute_VDS
  VDS ID: 88 eb 0e 50 96 af 1d f1-36 fe c1 ef a1 51 51 49
  MTU: 1600
  Segment ID: 192.168.250.0
  Gateway IP: 192.168.250.2
  Gateway MAC: 00:50:56:09:46:0f
  Vmknic count: 1
  VXLAN vmknic: vmk3
    VDS port ID: 44
    Switch port ID: 50331656
    Endpoint ID: 0
    VLAN ID: 0
    IP: 192.168.250.52
    Netmask: 255.255.255.0
    Segment ID: 192.168.250.0
    IP acquire timeout: 0
    Multicast group count: 0
  Network count: 4
  VXLAN network: 5001
    Multicast IP: N/A (headend replication)
    Control plane: Enabled (multicast proxy, ARP proxy)
    Controller: 192.168.110.202 (up)
    MAC entry count: 2
    ARP entry count: 0
    Port count: 2
  VXLAN network: 5002
    Multicast IP: N/A (headend replication)
    Control plane: Enabled (multicast proxy, ARP proxy)
    Controller: 192.168.110.201 (up)
    MAC entry count: 0
    ARP entry count: 0
    Port count: 1
  VXLAN network: 5003
    Multicast IP: N/A (headend replication)
    Control plane: Enabled (multicast proxy, ARP proxy)
    Controller: 192.168.110.203 (up)
    MAC entry count: 1
    ARP entry count: 0
    Port count: 1
show logical-switch host *hostID* vni vni arp

Shows the ARP entry count for a logical switch. This information is retrieved from the specified host.

**Synopsis**

show logical-switch host *hostID* vni vni arp

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-switch host host-29 vni 5001 arp
ARP entry count: 0

show logical-switch host *hostID* vni vni mac

Shows the MAC entry count for a logical switch. This information is retrieved from the specified host.

**Synopsis**

show logical-switch host *hostID* vni vni mac

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-switch host host-29 vni 5001 mac
MAC entry count: 2
Input MAC: 00:50:56:e1:3f:db
Outer MAC: 00:50:56:6e:e4:27
Outer IP: 192.168.250.51
Flags: 1

Input MAC: 02:50:56:56:44:52
Outer MAC: 00:50:56:6e:e4:27
Outer IP: 192.168.250.51
Flags: D

show logical-switch host *hostID* vni vni port portID statistics

Shows the packet statistics for a given VXLAN port on the specified host. You can find VXLAN port numbers with the show logical-switch host *hostID* vni vni verbose command (see VXLAN port field).

**Synopsis**

show logical-switch host *hostID* vni vni port portID statistics

**CLI Mode**

Basic

**Example**

nsx-mgr> show logical-switch host host-29 vni 5001 port 68 statistics
tx.total: 0
rx.total: 0
Related Commands
show logical-switch host hostID vni vni verbose

**show logical-switch host **hostID vni vni statistics**

Shows statistics for a logical switch. This information is retrieved from the specified host.

**Synopsis**
show logical-switch host **hostID vni vni statistics**

**CLI Mode**
Basic

**Example**
nsx-mgr> show logical-switch host host-29 vni 5001 statistics
  tx.total:   0
  tx.nonUnicast:  0
  tx.crossRouter:  0
  tx.drop.total:  1
  rx.total:   0
  rx.mcastEncap:  0
  rx.crossRouter:  0
  rx.drop.wrongDest:  0
  rx.drop.invalidEncap:   0
  rx.drop.total:  0
  mac.lookup.found:   0
  mac.lookup.flood:  0
  mac.lookup.full:    0
  mac.update.learn:   0
  mac.update.extend:  0
  mac.update.full:    0
  mac.age:    4
  mac.renew:  0
  arp.lookup.found:   0
  arp.lookup.unknown:  5
  arp.lookup.full:    0
  arp.lookup.wait:    3
  arp.lookup.timeout:  0
  arp.update.update:  0
  arp.update.unknown:  4
  arp.update.notFound:  4
  arp.age:    4
  arp.renew:  1

**show logical-switch host **hostID vni vni verbose**

Shows information about a logical switch. This information is retrieved from the specified host.

**Synopsis**
show logical-switch host **hostID vni vni verbose**

**CLI Mode**
Basic

**Example**
nsx-mgr> show logical-switch host host-29 vni 5001 verbose
VXLAN Global States:
  Control plane Out-Of-Sync:  No
  UDP port:  8472
VXLAN network:  5001
  Multicast IP:  N/A (headend replication)
Control plane: Enabled (multicast proxy, ARP proxy)
Controller: 192.168.110.202 (up)
MAC entry count: 2
ARP entry count: 0
Port count: 2
VXLAN port:  68
  Switch port ID: 50331657
  vmknic ID: 0
VXLAN port: vdrPort
  Switch port ID: 50331655
  vmknic ID: 0

Related Commands

show logical-switch controller controllerID vni vni vtep

show logical-switch host hostID vni vni vtep

Shows the VTEP count for a logical switch. This information is retrieved from the specified host.

Synopsis

show logical-switch host hostID vni vni vtep

CLI Mode

Basic

Example

nsx-mgr> show logical-switch host host-29 vni 5001 vtep
VTEP count: 2
  Segment ID: 192.168.250.0
  VTEP IP: 192.168.250.53
  Flags: 0(None)
  Segment ID: 192.168.250.0
  VTEP IP: 192.168.250.51
  Flags: 0(None)

Related Commands

show logical-switch controller controllerID vni vni vtep

show logical-switch list all

Shows all logical switches. This information is retrieved from NSX Manager.

Synopsis

show logical-switch list all

CLI Mode

Basic

Example

nsx-mgr> show logical-switch list all
NAME                UUID                                   VNI     Trans Zone Name
Transit-Network-01  1f1b49b6-0c1a-4a77-b916-9f3df3e0ff30   5000    Transport-Zone
vdnscope-1
Web-Tier-01         96c0cfaf-4ae5-43ee-950e-c64cf6d521c3   5001    Transport-Zone
vdnscope-1
App-Tier-01         d09b79f0-94b5-414e-acb9-5b6ff98e63bb   5002    Transport-Zone
vdnscope-1
show logical-switch list host *hostID* vni

Shows all logical switches that are available on a host. This information is retrieved from NSX Manager.

**Synopsis**

`show logical-switch list host hostID vni`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-switch list host host-29 vni
NAME                UUID                                   VNI     Trans Zone Name
Trans Zone ID
Transit-Network-01  1f1b49b6-0c1a-4a77-b916-9f3df3e0ff30   5000    Transport-Zone
Web-Tier-01         96c0cfaf-4ae5-43ee-950e-c64cf6d521c3   5001    Transport-Zone
App-Tier-01         d09b79f0-94b5-414e-acb9-5b6ff98e63bb   5002    Transport-Zone
DB-Tier-01          f202a4d3-a036-459d-a2b9-98d8a1cb4e9c   5003    Transport-Zone
```

show logical-switch list vni *vni* host

Shows all hosts on which a logical switch is available. This information is retrieved from NSX Manager.

**Synopsis**

`show logical-switch list vni vni host`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show logical-switch list vni 5001 host
ID                   HostName    VdsName
host-29              esxcomp-01a.corp.local     Compute_VDS
host-34              esxcomp-02a.corp.local     Compute_VDS
host-38              esxcomp-01b.corp.local     Compute_VDS
host-15              esx-02a.corp.local        Mgmt_Edge_VDS
host-10              esx-01a.corp.local        Mgmt_Edge_VDS
```

Central Distributed Firewall Commands

**show dfw cluster**

Shows clusters protected by distributed firewall.

**Synopsis**

`show dfw cluster (all | clusterID)`

**CLI Mode**

Basic
### show dfw host *hostID*

Shows the VMs protected by distributed firewall on the specified host.

**Synopsis**

```
show dfw host hostID
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw host host-29
Datacenter: ABC Medical
Cluster: Compute Cluster A
Host: esxcomp-01a.corp.local
No. VM Name     VM Id     Power Status
 1 web-sv-01a   vm-36     on
 2 br-sv-02a    vm-32     off
```

### show dfw host *hostID* filter *filterID* addrsets

Shows address sets (containers) used by the rules on the specified filter.

**Synopsis**

```
show dfw host hostID filter filterID addrsets
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw host-29 filter nic-54466-eth0-vmware-sfw.2 addrsets
addrset ip-virtualwire-2 {
 ip 172.16.10.11,
 ip 172.16.10.12,
}
```

### show dfw host *hostID* filter *filterID* discoveredips

Shows the discovered VM IPs for the virtual NIC filter as well as detection type. A maximum of 32 IPv4 and 32 IPv6 addresses could be displayed at any time on a filter for detection based on DHCP snooping and 1 IPv4 and 1 IPv6 address could be displayed on a filter for detection based on ARP snooping.

**Example**

```
nsx-mgr> show dfw host-29 filter nic-54466-eth0-vmware-sfw.2 discoveredips
```
**Synopsis**

`show dfw host hostID filter filterID discoveredips`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 discoveredips
Entries found for nic-54466-eth0-vmware-sfw.2: 1
   [1] vlan = 0  mac = 00:50:56:a6:7a:a2  IP = 172.16.10.11 (ARP snooping)
```

**show dfw host hostID filter filterID discoveredips stats**

Shows statistics for the discovered VM IPs for the virtual NIC filter including detection types enabled, and counts for additions and deletions.

**Synopsis**

`show dfw host hostID filter filterID discoveredips stats`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 discoveredips stats
Features Enabled : 0000000F : (DHCP snooping) (ARP snooping) (DHCPv6 snooping) (ND snooping)
Number of Adds so far : 1
Number of Deletes so far : 0
Last updated time : 294888
Entries found for nic-54466-eth0-vmware-sfw.2: 1
   [1] vlan = 0  mac = 00:50:56:a6:7a:a2  IP = 172.16.10.11 (ARP snooping)
```

**show dfw host hostID filter filterID flows**

Shows distributed firewall flows for the specified filter.

**Synopsis**

`show dfw host hostID filter filterID flows`

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw host host-38 filter nic-54628-eth0-vmware-sfw.2 flows
Count retrieved from kernel active(L3,L4)=2, active(L2)+inactive(L3,L4)=0, drop(L2,L3,L4)=0
55ce2a2300000003 Active tcp 0800 OUT 1001 0 0  172.16.10.12:Unknown(36768) -> 172.16.20.11:ssh(22) 2609 EST 515817 1576865 9803 9731
55ce2a2300000004 Active icmp 0800 IN 1001 0 0  172.16.30.11 -> 172.16.10.12 8 0 807744 807744 9616 9616
```

**show dfw host hostID filter filterID rule ruleID**

Shows information for a specific firewall rule on the specified filter.

**Synopsis**

`show dfw host hostID filter filterID rule ruleID`
**CLI Mode**

**Basic**

**Example**

```bash
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 rule 1005
1005 at 3 inout protocol any from addrset ip-virtualwire-2 to addrset ip-virtualwire-2
drop;
```

**show dfw host hostID filter filterID rules**

Shows firewall rules configured on the specified filter.

**Synopsis**

```
show dfw host hostID filter filterID rules
```

**CLI Mode**

**Basic**

**Example**

```bash
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 rules
ruleset domain-c25 {
  # Filter rules
  rule 1003 at 1 inout protocol ipv6-icmp icmptype 136 from any to any accept;
  rule 1003 at 2 inout protocol ipv6-icmp icmptype 135 from any to any accept;
  rule 1005 at 3 inout protocol any from addrset ip-virtualwire-2 to addrset
  ip-virtualwire-2 drop;
  rule 1002 at 4 inout protocol udp from any to any port 68 accept;
  rule 1002 at 5 inout protocol udp from any to any port 67 accept;
  rule 1001 at 6 inout protocol any from any to any accept;
}

ruleset domain-c25_L2 {
  # Filter rules
  rule 1004 at 1 inout ethertype any from any to any accept;
}
```

**show dfw host hostID filter filterID spoofguard**

Shows Spoofguard information for the specified filter.

**Synopsis**

```
show dfw host hostID filter filterID spoofguard
```

**CLI Mode**

**Basic**

**Example**

```bash
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 spoofguard
Spoofguard Enabled.
IPv4 Address : 172.16.10.11
MAC Address  : 00:50:56:a6:7a:a2
```

**show dfw host hostID filter filterID stats**

Shows packet statistics for the specified filter.

**Synopsis**

```
show dfw host hostID filter filterID stats
```
CLI Mode

Basic

Example

```
nsx-mgr> show dfw host host-29 filter nic-54466-eth0-vmware-sfw.2 stats
rule  1003: 31 evals, in 0 out 0 pkts, in 0 out 0 bytes
rule  1005: 31 evals, in 0 out 29 pkts, in 0 out 2268 bytes
rule  1002: 2 evals, in 0 out 0 pkts, in 0 out 0 bytes
rule  1001: 2 evals, in 6273 out 6273 pkts, in 526932 out 526932 bytes
rule  1004: 10 evals, in 6294 out 6321 pkts, in 527898 out 530074 bytes
```

```
show dfw host hostID summarize-dvfilter

Shows a summary of DVFilter information.

Synopsis

```
show dfw host hostID summarize-dvfilter
```

CLI Mode

Basic

Example

```
nsx-mgr> show dfw host host-29 summarize-dvfilter
Fastpaths:
agent: dvfilter-faulter, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter
agent: ESXi-Firewall, refCount: 5, rev: 0x1010000, apiRev: 0x1010000, module: esxfw
agent: dvfilter-generic-vmware, refCount: 2, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter-generic-fastpath
agent: dvfg-igmp, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: dvfg-igmp
agent: dvfilter-generic-vmware-swsec, refCount: 2, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter-switch-security
agent: bridgelearningfilter, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: vdrb
agent: vmware-sfw, refCount: 2, rev: 0x1010000, apiRev: 0x1010000, module: vsip

Slowpaths:

Filters:
world 0 <no world>
port 50331650 vmnic0
dvPort slot 0
  name: 41-sw88 eb 0e 50 96 af 1d f1-36 fe e1 ef a1 51 51 49.dvfilter-generic-vmware.0
  agentName: dvfilter-generic-vmware
  state: IOChain Attached
  vmState: Detached
  failurePolicy: failClosed
  slowPathID: none
  filter source: Invalid
port 50331652 vmk0
vNic slot 0
  name: nic-0-eth4294967295-ESXi-Firewall.0
  agentName: ESXi-Firewall
  state: IOChain Attached
  vmState: Detached
  failurePolicy: failOpen
  slowPathID: none
  filter source: Invalid
port 50331653 vmk1
vNic slot 0
  name: nic-0-eth4294967295-ESXi-Firewall.0
  agentName: ESXi-Firewall
  state: IOChain Attached
  vmState: Detached
  failurePolicy: failOpen
  slowPathID: none
```
show dfw vm vmlID

Shows the vNICs protected by distributed firewall on the specified virtual machine.

Synopsis

show dfw vm vmlID

CLI Mode

Basic

Example

nsx-mgr> show dfw vm vm-36
Datacenter: ABC Medical
Cluster: Compute Cluster A
Host: esxcomp-01a.corp.local
VM: web-sv-01a
Virtual Nics List:
  1. Vnic Name  web-sv-01a - Network adapter 1
     Vnic Id  5026b7cd-b6f3-f4bc-e533-3d4b255c6277.000
     Filters  nic-54466-eth0-vmware-sfw.2

show dfw vnic vnicID

Shows all filters configured on the specified vNIC.
**Synopsis**

```
show dfw vnic vnicID
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show dfw vnic 5026c7cd-b6f3-f4bc-e533-3d4b255c6277.000
Vnic Name       web-sv-01a - Network adapter 1
Vnic Id         5026c7cd-b6f3-f4bc-e533-3d4b255c6277.000
Mac Address     00:50:56:a6:7a:a2
Port Group Id   dvportgroup-198
Filters         nic-54466-eth0-vmware-sfw.2
```

**Central NSX Edge Commands**

The central edge commands allow you to run a subset of the available edge commands from the NSX Manager command line. The central edge commands have the format `show edge edgeID [keywords and arguments]`, which is the equivalent of running `show [keywords and arguments]` on the NSX Edge appliance, `edgeID`.

`show edge (all | edgeID)` does not have an equivalent command on the NSX Edge appliance.

**Table 3-2. Examples of Central Edge Commands and equivalent NSX Edge Appliance Commands**

<table>
<thead>
<tr>
<th>In Central CLI on NSX Manager</th>
<th>In Edge CLI on NSX Edge Appliance</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show edge edgeID arp</code></td>
<td><code>show arp</code></td>
</tr>
<tr>
<td><code>show edge edgeID configuration interface [intName]</code></td>
<td><code>show configuration interface [intName]</code></td>
</tr>
<tr>
<td><code>show edge edgeID ip ospf</code></td>
<td><code>show ip ospf</code></td>
</tr>
</tbody>
</table>

The show edge commands can be used to get information from edges in a high availability configuration. `show edge edge-1` will retrieve information from the edge appliance that is currently active. To retrieve information from a specific appliance in an high availability configuration, specify the edge by the high availability index, for example, `show edge-1.0` or `show edge-1.1`.

**show edge (all | edgeID )**

Shows information for all edges. To get information for a specific edge, specify the edge ID.

**Synopsis**

```
show edge (all | edgeID)
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show edge all
NOTE: CLI commands for Edge ServiceGateway(ESG) start with 'show edge'
    CLI commands for Distributed Logical Router(DLR) Control VM start with 'show edge'
    CLI commands for Distributed Logical Router(DLR) start with 'show logical-router'

Legend:
Edge Size: Compact - C, Large - L, X-Large - X, Quad-Large - Q
Edge ID      Name                      Size  Version  Status
edge-1       logical-router           C     6.2.0      GREEN
edge-2       perimeter-gateway        L     6.2.0      GREEN
or
nsx-mgr> show edge edge-2
```
show edge edgeID arp

Shows the Address Resolution Protocol (ARP) table. See show arp for an example.

Synopsis

show edge edgeID[.0|.1] arp

CLI Mode

Basic

Related Commands

show arp

show edge edgeID arp-filter

Displays the ARP packet filter rules that specify what to do with a packet that matches. See show arp for an example.

Synopsis

show edge edgeID arp-filter

CLI Mode

Basic

Example

nsx-mgr>show edge edge-1 arp-filter
haIndex: 0
vShield Edge ARP Filter Table:
Chain IN (policy ACCEPT 2539 packets, 71092 bytes)
  pkts bytes target  in  out source-ip    destination-ip  source-hw
destination-hw  hlen  op  hrd  pro

Chain OUT (policy ACCEPT 0 packets, 0 bytes)
pkts bytes target in out source-ip destination-ip source-hw
destination-hw hlen op hrd pro

Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)
pkts bytes target in out source-ip destination-ip source-hw
destination-hw hlen op hrd pro

Related Commands
  show arp
  show edge edgeID arp

show edge edgeID configuration application-set
  Shows the application sets (Service Groups) used in the Edge firewall configuration.

  Synopsis
  show edge edgeID[.0|.1] configuration application-set

  CLI Mode
  Basic

  Related Commands
  show configuration application-set

show edge edgeID configuration bgp
  Shows the BGP configuration.

  Synopsis
  show edge edgeID[.0|.1] configuration bgp

  CLI Mode
  Basic

  Related Commands
  show configuration bgp

show edge edgeID configuration certificatestore
  Shows the certificate store configuration.

  Synopsis
  show edge edgeID[.0|.1] configuration certificatestore

  CLI Mode
  Basic

  Related Commands
  show configuration certificatestore
show edge *edgeID* configuration dhcp

Shows NSX Edge IP address pooling and one-to-one static IP address allocation.

**Synopsis**

```
show edge *edgeID*[.0|.1] configuration dhcp
```

**CLI Mode**

Basic

**Related Commands**

```
show configuration dhcp
```

show edge *edgeID* configuration dns

Shows the DNS configuration.

**Synopsis**

```
show edge *edgeID*[.0|.1] configuration dns
```

**CLI Mode**

Basic

**Related Commands**

```
show configuration dns
```

show edge *edgeID* configuration firewall

Shows the firewall configuration.

**Synopsis**

```
show edge *edgeID*[.0|.1] configuration firewall
```

**CLI Mode**

Basic

**Related Commands**

```
show configuration firewall
```

show edge *edgeID* configuration global

Shows the configuration for all NSX Edge services.

**Synopsis**

```
show edge *edgeID*[.0|.1] configuration global
```

**CLI Mode**

Basic

**Related Commands**

```
show configuration global
```

show edge *edgeID* configuration gslb

Show the GSLB (Global Server Load Balancer) configuration.

Note: the *show configuration gslb* command on the NSX Edge device has more options available.
show edge edgeID configuration gslb

Related Commands
show configuration gslb

show edge edgeID configuration highavailability
Shows the high availability configuration.

Synopsis
show edge edgeID[.0|.1] configuration highavailability

CLI Mode
Basic

Related Commands
show configuration highavailability

show edge edgeID configuration interface
Shows the interface configuration.

Synopsis
show edge edgeID[.0|.1] configuration interface [intName]

CLI Mode
Basic

Related Commands
show configuration interface

show edge edgeID configuration interface-set
Shows the interface set configuration.

Synopsis
show edge edgeID[.0|.1] configuration interface-set

CLI Mode
Basic

Related Commands
show configuration interface-set

show edge edgeID configuration ipsec
Shows certificate configuration for IPSec VPN.

Synopsis
show edge edgeID[.0|.1] configuration ipsec

CLI Mode
Basic
Related Commands

show configuration ipsec

**show edge edgeID configuration ipset**

Shows IP address groups (IP Sets) configured on the NSX Edge.

**Synopsis**

show edge edgeID[.0|.1] configuration ipset

**CLI Mode**

Basic

**Related Commands**

show configuration ipset

**show edge edgeID configuration l2vpn**

Shows L2 VPN configuration.

**Synopsis**

show edge edgeID[.0|.1] configuration l2vpn

**CLI Mode**

Basic

**Related Commands**

show configuration l2vpn

**show edge edgeID configuration loadbalancer**

Shows external, or public, IP address mapped to internal servers for load balancing.

Note: the show configuration loadbalancer command on the NSX Edge device has more options available.

**Synopsis**

show edge edgeID[.0|.1] configuration loadbalancer

**CLI Mode**

Basic

**Related Commands**

show configuration loadbalancer

**show edge edgeID configuration nat**

Shows the NAT configuration.

**Synopsis**

show edge edgeID[.0|.1] configuration nat

**CLI Mode**

Basic

**Related Commands**

show configuration nat
show edge edgeID configuration osfp

Shows the OSPF configuration.

Synopsis
show edge edgeID[.0|.1] configuration osfp

CLI Mode
Basic

Related Commands
show configuration ospf

show edge edgeID configuration provider-appset

Shows the provider’s application sets (service groups).

Synopsis
show edge edgeID[.0|.1] configuration provider-appset

CLI Mode
Basic

Related Commands
show configuration provider-appset

show edge edgeID configuration provider-ipset

Shows the provider’s IP sets (IP address groups).

Synopsis
show edge edgeID[.0|.1] configuration provider-ipset

CLI Mode
Basic

Related Commands
show configuration provider-ipset

show edge edgeID configuration routing-global

Shows the global routing configuration.

Synopsis
show edge edgeID[.0|.1] configuration routing-global

CLI Mode
Basic

Related Commands
show configuration routing-global

show edge edgeID configuration snmp

Shows the SNMP configuration.
Synopsis
show edge edgeID[.0|.1] configuration snmp

CLI Mode
Basic

Related Commands
show configuration snmp

show edge edgeID configuration sslvpn-plus
Shows the SSL VPN configuration.

Synopsis
show edge edgeID[.0|.1] configuration sslvpn-plus

CLI Mode
Basic

Related Commands
show configuration sslvpn-plus

show edge edgeID configuration static-routing
Shows the static routes defined for the NSX Edge data packets.

Synopsis
show edge edgeID[.0|.1] configuration static-routing

CLI Mode
Basic

Related Commands
show configuration static-routing

show edge edgeID configuration syslog
Shows remote syslog servers defined for the NSX Edge.

Synopsis
show edge edgeID[.0|.1] configuration syslog

CLI Mode
Basic

Related Commands
show configuration syslog

show edge edgeID eventmgr
Shows event manager statistics.

Synopsis
show edge edgeID[.0|.1] eventmgr
CLI Mode
Basic

Related Commands
show eventmgr

**show edge edgeID firewall**
Shows firewall packet counters along with firewall rules that specify what to do with a packet that matches.
Note: the `show firewall` command on the NSX Edge device has more options available.

**Synopsis**
`show edge edgeID[.0|.1] firewall`

**CLI Mode**
Basic

**Example**
Prompt>

**Related Commands**
show firewall

**show edge edgeID firewall flows topN n**
Shows firewall packet counters along with top n number of packet flows.
Note: the `show firewall` command on the NSX Edge device has more options available.

**Synopsis**
`show edge edgeID[.0|.1] firewall flows topN n`

**CLI Mode**
Basic

**Related Commands**
show firewall flows

**show edge edgeID flowtable**
Shows flow table information.
Note: the show flowtable command on the NSX Edge device has more options available.

**Synopsis**
`show edge edgeID[.0|.1] flowtable [rule-id ruleID]`

**CLI Mode**
Basic

**Related Commands**
show flowtable

**show edge edgeID interface**
Shows interface information for all interfaces, or a specific interface.
Synopsis
show edge edgeID[.0|.1] interface [intName]

CLI Mode
Basic

Related Commands
show interface

show edge edgeID ip bgp
Shows entries in the Border Gateway Protocol (BGP) routing table.

Synopsis
show edge edgeID[.0|.1] ip bgp

CLI Mode
Basic

Related Commands
show ip bgp

show edge edgeID ip bgp neighbors
Shows BGP neighbors.

Synopsis
show edge edgeID[.0|.1] ip bgp neighbors

CLI Mode
Basic

Related Commands
show ip bgp neighbors

show edge edgeID ip forwarding
Shows forwarding table entries.

Synopsis
show edge edgeID[.0|.1] ip forwarding

CLI Mode
Basic

Related Commands
show ip forwarding

show edge edgeID ip ospf
Shows information about Open Shortest Path First (OSPF) routing process.

Synopsis
show edge edgeID[.0|.1] ip ospf
show edge edgeID ip ospf database

Shows IPv4 OSPF database.
Note: the show ip ospf database command on the NSX Edge device has more options available.

Synopsis
show edge edgeID[.0|.1] ip ospf database

CLI Mode
Basic

Related Commands
show ip ospf

show edge edgeID ip ospf interface

Shows IPv4 OSPF interface.

Synopsis
show edge edgeID[.0|.1] ip ospf interface

CLI Mode
Basic

Related Commands
show ip ospf

show edge edgeID ip ospf neighbor

Shows IP addresses of OSPF neighbors.

Synopsis
show edge edgeID[.0|.1] ip ospf neighbor

CLI Mode
Basic

Related Commands
show ip ospf

show edge edgeID ip route

Shows all routes in the routing information base (RiB).
Note: the show ip route command on the NSX Edge device has more options available.

Synopsis
show edge edgeID[.0|.1] ip route
show edge edgeID ipset

Synopsis
show edge edgeID[.0|.1] ipset

CLI Mode
Basic

Related Commands
show ipset

show edge edgeID log

Shows the system log.

Note: the show log command on the NSX Edge device has more options available.

Synopsis
show edge edgeID[.0|.1] log

CLI Mode
Basic

Related Commands
show log

show edge edgeID messagebus

Shows message bus statistics.

Synopsis
show edge edgeID[.0|.1] messagebus (forwarder | messages)

CLI Mode
Basic

Related Commands
show messagebus

show edge edgeID nat

Displays NAT packet counters along with the NAT rules that specify how to translate network addresses for a packet that matches.

Synopsis
show edge edgeID[.0|.1] nat

CLI Mode
Basic
Related Commands

show nat

show edge edgeID process list

Shows currently running processes.

Synopsis

show edge edgeID[.0|.1] process list

CLI Mode

Basic

Related Commands

show process

show edge edgeID process snapshot

Shows a snapshot of the process monitor on the specified NSX Edge.

Synopsis

show edge edgeID[.0|.1] process snapshot

CLI Mode

Basic

Example

nsx-mgr> show edge edge-2 process snapshot
haIndex: 0

```
top - 23:41:21 up 3 days, 5:36, 0 users, load average: 0.00, 0.01, 0.05
Tasks: 88 total, 1 running, 87 sleeping, 0 stopped, 0 zombie
Cpu(s): 0.9%us, 0.4%sy, 0.0%ni, 98.7%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 1020400k total, 227488k used, 792912k free, 21080k buffers
Swap: 523260k total, 0k used, 523260k free, 58656k cached
```

```
PIDs USER PR NI VIRT RES SHR %CPU %MEM TIME+ COMMAND
23546 root -2 0 50344 7388 5608 s 2 0.7 0:47.22 heartbeat
1 root 20 0 3956 696 592 s 0 0.1 0:06.32 init
2 root 20 0 0 0 0 s 0 0.0 0:00.00 kthreadd
3 root 20 0 0 0 0 s 0 0.0 0:01.82 ksoftirqd/0
4 root 20 0 0 0 0 s 0 0.0 0:00.00 kworker/0:0
5 root 20 0 0 0 0 s 0 0.0 0:12.65 kworker/u:0
6 root RT 0 0 0 0 s 0 0.0 0:02.12 migration/0
7 root RT 0 0 0 0 s 0 0.0 0:01.93 migration/1
8 root 20 0 0 0 0 s 0 0.0 0:06.58 kworker/1:0
9 root 20 0 0 0 0 s 0 0.0 0:01.13 ksoftirqd/1
10 root 20 0 0 0 0 s 0 0.0 0:25.12 kworker/0:1
```

or

nsx-mgr> show edge edge-2.1 process snapshot

```
top - 23:43:36 up 23:15, 0 users, load average: 0.04, 0.07, 0.05
Tasks: 87 total, 1 running, 86 sleeping, 0 stopped, 0 zombie
Cpu(s): 0.9%us, 0.5%sy, 0.0%ni, 98.5%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 1020400k total, 207440k used, 812960k free, 19204k buffers
Swap: 523260k total, 0k used, 523260k free, 56408k cached
```

```
PIDs USER PR NI VIRT RES SHR %CPU %MEM TIME+ COMMAND
1022 root 20 0 59640 3088 2420 s 2 0.3 2:38.12 vmtoolsd
```
show edge edgeID service dhcp

Shows whether the DHCP service is running.

Synopsis

show edge edgeID[.0|.1] service dhcp [leaseinfo]

CLI Mode

Basic

Related Commands

show service dhcp

show edge edgeID service dns

Shows whether the DNS service is running.

Note: the show service dns command on the NSX Edge device has more options available.

Synopsis

show edge edgeID[.0|.1] service dns

CLI Mode

Basic

Related Commands

show service dns

show edge edgeID service highavailability

Note: the show service highavailability command on the NSX Edge device has more options available.

Synopsis

show edge edgeID[.0|.1] service highavailability [internal]

CLI Mode

Basic

Related Commands

show service highavailability
**show edge edgeID service highavailability connection-sync**

Displays high availability (HA) connection sync-up status information. For example, statistics about current active connections of both local and peer device.

**Synopsis**

```
show edge edgeID service highavailability connection-sync
```

**CLI Mode**

Basic

**Example**

```
nsx-mgr> show edge edge-1 service highavailability connection-sync
```

```plaintext
haIndex: 0
connections local:
  current active connections: 0
  connections created: 0
  connections updated: 0
  connections destroyed: 0

connections peer:
  current active connections: 0
  connections created: 0
  connections updated: 0
  connections destroyed: 0

traffic processed:
  0 Bytes 0 Pckts

UDP traffic (active device=vNic_1):
  3432 Bytes sent 3360 Bytes recv
  221 Pckts sent 210 Pckts recv
  0 Error send 0 Error recv

message tracking:
  0 Malformed msgs 0 Lost msgs
```

**Related Commands**

- `show service highavailability`
- `show edge edgeID service highavailability`
show edge edgeID service highavailability link

Displays HA link information such as IP addresses for peer links and local links.

**Synopsis**

show edge edgeID service highavailability link

**CLI Mode**

Basic

**Example**

nsx-mgr>show edge edge-1 service highavailability link

haIndex: 0

Local IP Address: 169.254.1.1/30

Peer IP Address: 169.254.1.2/30

**Related Commands**

show service highavailability

show edge edgeID service highavailability

show edge edgeID service highavailability connection-sync

---

show edge edgeID service ipsec

Shows the VPN service status.

Note: the `show service ipsec` command on the NSX Edge device has more options available.

**Synopsis**

show edge edgeID[.0|.1] service ipsec

**CLI Mode**

Basic

**Related Commands**

show service ipsec

---

show edge edgeID service ipsec site

**Synopsis**

show edge edgeID[.0|.1] service ipsec site

**CLI Mode**

Basic

**Related Commands**

show service ipsec site

---

show edge edgeID service loadbalancer

Shows overall current loadbalancer engine state.

Note: the `show service loadbalancer` command on the NSX Edge device has more options available.
**Synopsis**
show edge edgeID[.0|.1] service loadbalancer

**CLI Mode**
Basic

**Related Commands**
show service loadbalancer

show edge edgeID service loadbalancer error

Shows the loadbalancer latest errors information.

Note: the show service loadbalancer error command on the NSX Edge device has more options available.

**Synopsis**
show edge edgeID[.0|.1] service loadbalancer error

**CLI Mode**
Basic

**Related Commands**
show service loadbalancer error

**show edge edgeID service monitor**

Shows the running status of the health monitor service.

**Synopsis**
show edge edgeID[.0|.1] service monitor

**CLI Mode**
Basic

**Related Commands**
show service monitor

**show edge edgeID service monitor service**

Shows the running status of health monitor instances.

Note: the show service monitor command on the NSX Edge device has more options available.

**Synopsis**
show edge edgeID[.0|.1] service monitor service [monitorName]

**CLI Mode**
Basic

**Related Commands**
show service monitor service

**show edge edgeID system cpu**

Shows the system CPU details.
Chapter 3 NSX Central Commands

**Synopsis**
show edge edgeID[.0|.1] system cpu

**CLI Mode**
Basic

**Related Commands**
show system cpu

**show edge edgeID system memory**
Shows the summary of memory utilization.

**Synopsis**
show edge edgeID[.0|.1] system memory

**CLI Mode**
Basic

**Related Commands**
show system memory

**show edge edgeID system network-stats**
Shows network statistics. For example, statistics for IP, ICMP, TCP and UDP.

**Synopsis**
show edge edgeID[.0|.1] system network-stats

**CLI Mode**
Basic

**Related Commands**
show system network-stats

**show edge edgeID system storage**
Shows the disk usage details for an NSX Edge.

**Synopsis**
show edge edgeID[.0|.1] system storage

**CLI Mode**
Basic

**Related Commands**
show system storage

**show edge edgeID version**
Shows the software version running on the virtual machine.

**Synopsis**
show edge edgeID[.0|.1] version
Central NSX Packet Capture Commands

The central packet capture commands allow you to issue packet capture on the NSX Manager from the NSX Manager command line. You can also stop the capture using the CLI command, and transfer the packet capture file.

Optional parameters for packet capture commands are “Filters” used for pktcap-uw on ESX host.
These filters are advanced feature for the central packet capture commands, and is only recommended to be used by users who are familiar with pktcap-uw on ESX host.

**NOTE** The packet capture central CLI commands requires vSphere 5.5U3 or higher. These commands are not supported on earlier vSphere 5.5 releases.

**Capture vNic**

Captures packets for a specific VM vNic. Direction has two options, input and output.
Input is for traffic going into vNic, and output is for traffic going out from vNic.

**Synopsis**

```
debug packet capture host < host-id > vnic <vnic-id> dir <direction> parameters [optional parameters]
```

**CLI Mode**

Privileged

**Example**

```
nsx-mgr# debug packet capture host host-32 vnic 502e71fa-1a00-759b-e40f-ce778e915f16.000
dir input parameters
Session: 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Request:  
  Capture host: host-32
  Vnic: 502e71fa-1a00-759b-e40f-ce778e915f16.000
  Capture point: vnic
  Capture direction: input
Session file: /tmp/pktcap/7cfcb12e-4245-4c08-99ff-5cda50e80b76.pcap
Session status: started
```

**Capture pNic**

Captures packets for a specific physical Nic. Direction has two options, input and output.
Input is for traffic going into pNic, and output is for traffic going out from pNic.

**Synopsis**

```
debug packet capture host <host-id> vmnic <vmnic-name> dir <direction> parameters [optional parameters]
```

**CLI Mode**

Privileged
Example

nsx-mgr# debug packet capture host host-32 vmnic vmnic1 dir input parameters
Session: 7cfc12e-4245-4c08-99ff-5cda50e80b76
Request:
  Capture host: host-32
  Vnic: vmnic1
  Capture point: vnic
  Capture direction: input
Session file: /tmp/pktcap/7cfc12e-4245-4c08-99ff-5cda50e80b76.pcap
Session status: started

Capture vDRPort

Captures packets for a specific port of virtual distributed router (vDR). Direction has two options, input and output.

Input is for traffic going into vDR, and output is for traffic going out from vDR.

Synopsis

depug packet capture host <host-id> vdrport dir <direction> parameters [optional parameters]

CLI Mode

Privileged

Example

nsx-mgr# debug packet capture host host-32 vdrport dir input parameters
Session: f3a74117-e99c-4ad0-82f4-89aa7f04af7a
Request:
  Capture host: host-32
  Capture point: vdrport
  Capture direction: input
Session file: /tmp/pktcap/f3a74117-e99c-4ad0-82f4-89aa7f04af7a.pcap
Session status: started

Capture VMKNic

Captures packets for a specific VM KNic. Direction has two options, input and output.

Input is for traffic going into VMKNic, and output is for traffic going out from VMKNic.

Synopsis

depug packet capture host <host-id> vmknic <vmknic-name> dir <direction> parameters [optional parameters]

CLI Mode

Privileged

Example

nsx-mgr# debug packet capture host host-32 vmknic vmk0 dir input parameters
Session: f0142774-54ec-4a63-9f18-49185e65480e
Request:
  Capture host: host-32
  Vmknic: vmk0
  Capture point: vmknic
  Capture direction: input
Session file: /tmp/pktcap/f0142774-54ec-4a63-9f18-49185e65480e.pcap
Session status: started
Delete packet capture session

Deletes a specific packet capture session.

**Synopsis**

`debug packet capture clear session <capture-id>`

**CLI Mode**

Privileged

**Example**

```bash
nsx-mgr# debug packet capture clear session 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Session: 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Request:
    Capture host: host-32
    Vnic: 502e71fa-1a00-759b-e40f-ce778e915f16.000
    Capture point: vnic
    Capture direction: input
Session file: /tmp/pktcap/7cfcb12e-4245-4c08-99ff-5cda50e80b76.pcap
Session status: deleted
```

Show all packet capture sessions

Shows details of all packet capture sessions.

**Synopsis**

`show packet capture sessions`

**CLI Mode**

Privileged

**Example**

```bash
nsx-mgr# show packet capture sessions
Session: 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Request:
    Capture host: host-32
    Vnic: 502e71fa-1a00-759b-e40f-ce778e915f16.000
    Capture point: vnic
    Capture direction: input
Session file: /tmp/pktcap/7cfcb12e-4245-4c08-99ff-5cda50e80b76.pcap
Session status: started
======================================================================
Started session: 1
Stopped session: 0
Finished session: 0
Error session: 0
Sessions:
```

Show packet capture session

Shows a specific packet capture session.

**Synopsis**

`show packet capture session <capture-id>`
CLI Mode
Privileged

Example

nsx-mgr# show packet capture session 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Session: 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Request:
  Capture host: host-32
  Vnic: 502e71fa-1a00-759b-e40f-ce778e915f16.000
  Capture point: vnic
  Capture direction: input
  Session file: /tmp/pktcap/7cfcb12e-4245-4c08-99ff-5cda50e80b76.pcap
  Session status: started

Show packet capture file content

Shows the packet capture file content.

Synopsis

d debug packet capture display session <capture-id> parameters [optional parameters]

CLI Mode
Privileged

Example

nsx-mgr# debug packet capture display session f3a74117-e99c-4ad0-82f4-89aa7f04af7a parameters
Session: f3a74117-e99c-4ad0-82f4-89aa7f04af7a
Request:
  Capture host: host-32
  Capture point: vdrport
  Capture direction: input
  Capture point: vdrport
  Capture direction: input
  Session file: /tmp/pktcap/2f118862-c1c2-432c-acb2-208936cd753e.pcap
  Session status: finished
  Capture packets:
    reading from file /tmp/pktcap/2f118862-c1c2-432c-acb2-208936cd753e.pcap, link-type EN10MB (Ethernet)
    11:10:13.140734 ARP, Reply 192.168.100.12 is-at 00:50:56:ac:d2:eb (oui Unknown), length 46
    11:10:13.143346 IP 192.168.100.12 > 192.168.100.11: ICMP echo reply, id 8449, seq 0, length 64
    11:10:14.130603 IP 192.168.100.12 > 192.168.100.11: ICMP echo reply, id 8449, seq 1, length 64

Stop packet capture session

Stops a specific packet capture session.

Synopsis

no debug packet capture session <capture-id>

CLI Mode
Privileged

Example

nsx-mgr# no debug packet capture session 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Stop packet capture session and discard

Stops a specific packet capture session, and also discards the session.

Synopsis

no debug packet capture session <capture-id>

CLI Mode

Privileged

Example

nsx-mgr# no debug packet capture session 7cfcb12e-4245-4c08-99ff-5cda50e80b76 discard
Session: 7cfcb12e-4245-4c08-99ff-5cda50e80b76
Request: 
  Capture host: host-32
  Vnic: 502e71fa-1a00-759b-e40f-ce778e915f16.000
  Capture point: vnic
  Capture direction: input
Session file: /tmp/pktcap/7cfcb12e-4245-4c08-99ff-5cda50e80b76.pcap
Session status: deleted

Transfer packet capture file

Transfers the packet capture file content to user’s computer. Shows the file content to user when the transfer is complete and file is ready.

Synopsis

depth packet capture scp session <capture-id> url <user@url:file>

CLI Mode

Privileged

Example

nsx-mgr# debug packet capture scp session f3a74117-e99c-4ad0-82f4-89aa7f04af7a url admin@10.162.210.4:newfile
Session: f3a74117-e99c-4ad0-82f4-89aa7f04af7a
Request: 
  Capture host: host-32
  Capture point: vdrport
  Capture direction: input
  Capture point: vdrport
  Capture direction: input
Session file: /tmp/pktcap/2f118862-c1c2-432c-acb2-208936cd753e.pcap
Session status: finished

Begin SCP:
The authenticity of host '10.162.210.4 (10.162.210.4)' can't be established.
RSA key fingerprint is SHA256:BGiCwphuw1gu97dZ83q98Zw/UEyO7GEkwCse+kfB3yA.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.162.210.4' (RSA) to the list of known hosts.
user@10.162.210.4's password:
This chapter describes NSX Edge CLI commands. Log in as the user admin to use the NSX Edge commands.

**clear nat counters**
Resets NAT counters to zeros.

**Synopsis**
clear nat counters

**CLI Mode**
Privileged

**clear arp ipAddress**
Deletes an entry from the ARP table.

**Synopsis**
clear arp ipAddress

**CLI Mode**
Privileged

**clear service dhcp lease**
Removes DHCP lease information from the DHCP service.

**Synopsis**
clear service dhcp lease

**CLI Mode**
Privileged

**clear service ipsec sa**
Deletes the SA (Security Association) associated with the specified peer name.

**NOTE**: Do not use this command to clear SAs manually. Doing so may put the Edge Services Gateway VPN connection in an inconsistent state. To clear the SAs, disable the IPSec service. For more information on how to disable IPSec service, refer to *NSX Administration Guide*.

**Synopsis**
clear service ipsec sa name
CLI Mode
Privileged

Example

nsx-edge # clear service ipsec sa 10.0.0.1_1.1.1.0/24-100.0.0.1_2.2.2.0/24

NOTE: You can find out the connection name from output of the "show service ipsec site" command.

debug packet capture
Captures all packets processed by an NSX Edge, similar to a tcpdump. Enabling this command can slow NSX Edge performance. Packet debug capture is disabled by default. To disable packet capture, use no before the command.

Synopsis

[no] debug packet capture (intif | extif) [expression]

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>intif</td>
<td>extif</td>
</tr>
<tr>
<td>expression</td>
<td>A tcpdump-formatted string. You must use an underscore between words in the expression.</td>
</tr>
</tbody>
</table>

CLI Mode
Privileged

debug packet display interface
Displays all packets captured by an NSX Edge interface, similar to a tcpdump. Enabling this command can impact NSX Edge performance.

To disable the display of packets, use no before the command.

Synopsis

[no] debug packet display interface [intName] [expression]

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>intName</td>
<td>The specific interface from which to capture packets.</td>
</tr>
<tr>
<td>expression</td>
<td>A tcpdump-formatted string. You must use an underscore between words in the expression.</td>
</tr>
</tbody>
</table>

CLI Mode
Privileged

Example

NSX-edge-1-0# debug packet display interface vNic_0 host_10.10.11.11_and_port_80

disable
Switches to Basic mode from Privileged mode.

Synopsis
disable
Chapter 4 NSX Edge Commands

CLI Mode
Basic

Example
NSX-edge-1-0# disable
NSX-edge-1-0>

Related Commands
disable
enable

dnslookup serverName
Makes DNS lookup query to the specified DNS server.

Synopsis
dnslookup serverName

CLI Mode
Basic

dnslookup serverName (hostname | ipAddress)
Makes DNS lookup query for the specified host or IP address.

Synopsis
dnslookup serverName (hostname | ipAddress)

CLI Mode
Basic

enable
Switches to Privileged mode from Basic mode.

Synopsis
enable

CLI Mode
Basic

Example
NSX-edge-1-0> enable
NSX-edge-1-0#

Related Commands
disable

d! Export tech-support scp
Exports the system diagnostics to a specific location via Secure Copy Protocol (SCP). You can also export system diagnostics for an NSX virtual machine from the NSX Manager user interface.

Synopsis
export tech-support scp url
NSX Command Line Interface Reference

CLI Mode
Basic and Privileged

Example
NSX-edge-1-0# export tech-support scp user123@host123:file123

ping
Pings a destination by its hostname or IP address.
Enter CTRL+C to end ping replies.

Synopsis
ping (hostname | ipAddress)

CLI Mode
Basic, Privileged

Example
NSX-edge-1-0# ping 192.168.1.1

ping interface addr
Pings an external destination from the internal address of a virtual machine protected by an NSX Edge. This command is useful for debugging IPSec-related issues.
Enter CTRL+C to end ping replies.

Synopsis
ping interface addr (sourceHostname | sourceAddress) (destHostname | destAddress)

Option Description
sourceHostname | sourceAddress The hostname or internal IP address of a virtual machine protected by an NSX Edge.
destHostname | destAddress The hostname or IP address of the destination.

CLI Mode
Basic, Privileged

Example
vshieldEdge# ping interface addr 192.168.1.1 69.147.76.15

ping (ip | ipv6) ipAddress
Pings a destination by its hostname or IP address. Specify ip to ping an IPv4 address, or ipv6 to ping an IPv6 address.
Optionally you can specify the following:
Size: The data packet size (not including the ICMP header) and “don’t fragment” flag. Enter CTRL+C to end ping replies.
Count: Stop after sending count ECHO_REQUEST packets, that you'd like to be recorded and displayed.

Timeout: Time to wait for a response, in seconds.

**Synopsis**

`ping (ip | ipv6) ipAddress [size packetSize [nofrag]]`

**CLI Mode**

Basic, Privileged

**Example**

NSX-edge> ping ip 192.168.110.10 size 32
PING 192.168.110.10 (192.168.110.10) 32(60) bytes of data.
40 bytes from 192.168.110.10: icmp_seq=1 ttl=127 time=9.37 ms
40 bytes from 192.168.110.10: icmp_seq=2 ttl=127 time=10.6 ms
40 bytes from 192.168.110.10: icmp_seq=3 ttl=127 time=2.98 ms
40 bytes from 192.168.110.10: icmp_seq=4 ttl=127 time=2.26 ms
40 bytes from 192.168.110.10: icmp_seq=5 ttl=127 time=3.86 ms
^C
--- 192.168.110.10 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4007ms
rtt min/avg/max/mdev = 2.266/5.832/10.667/3.483 ms

NSX-edge> ping ip 192.168.110.10 count 2
PING 192.168.110.10 (192.168.110.10) 56(84) bytes of data.
64 bytes from 192.168.110.10: icmp_seq=1 ttl=125 time=1.18 ms
64 bytes from 192.168.110.10: icmp_seq=2 ttl=125 time=1.20 ms

NSX-edge> ping ip 192.168.110.10 timeout 1

**show arp**

Shows the ARP table.

<table>
<thead>
<tr>
<th>ARP State</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERMANENT</td>
<td>The entry is valid forever. It can only be removed administratively</td>
</tr>
<tr>
<td>NOARP</td>
<td>The entry is valid. It will not be checked again, but it can be removed when its lifetime expires</td>
</tr>
<tr>
<td>REACHABLE</td>
<td>The entry is valid until the reachability timeout expires</td>
</tr>
<tr>
<td>STALE</td>
<td>The entry is valid but suspicious</td>
</tr>
<tr>
<td>DELAY</td>
<td>The kernel is waiting to confirm the state of a stale neighbor</td>
</tr>
</tbody>
</table>

**Synopsis**

`show arp`

**CLI Mode**

Basic

**Example**

vShield Edge ARP Cache:

<table>
<thead>
<tr>
<th>IP Address</th>
<th>Interface</th>
<th>MAC Address</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.115.172.1</td>
<td>vNic_0</td>
<td>00:00:0c:07:ac:01</td>
<td>DELAY</td>
</tr>
<tr>
<td>10.115.172.161</td>
<td>vNic_0</td>
<td>00:0c:29:ee:40:b9</td>
<td>STALE</td>
</tr>
</tbody>
</table>
**show clock**

Shows the current time and date of the virtual machine. If you use an NTP server for time synchronization, the time is based on Coordinated Universal Time (UTC).

**Synopsis**

`show clock`

**CLI Mode**

Basic, Privileged

**Example**

```
NSX-edge-1-0# show clock
Wed Apr 29 00:08:24 GMT 2015
```

**show configuration application-set**

Show the application sets (Service Groups) used in the Edge firewall configuration.

**Synopsis**

`show configuration application-set`

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show configuration
-----------------------------------------------------------------------
vShield Edge ApplicationSet Config:
{
    "applicationSet" : [
        {
            "application" : [],
            "id" : "application-370"
        },
        {
            "application" : [
                {
                    "protocol" : [
                        "6"
                    ],
                    "icmpType" : [],
                    "sourcePort" : [],
                    "port" : [
                        "2100"
                    ]
                },
                {
                    "protocol" : [
                        "6"
                    ],
                    "icmpType" : [],
                    "sourcePort" : [],
                    "port" : [
                        "1575"
                    ]
                },
                {
                    "protocol" : [
                        "6"
                    ],
                    "icmpType" : [],
                    "sourcePort" : [],
                    "port" : []
                }
            ]
        }
    ]
```

"port" : [
  "8080"
],
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "2482"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "1521"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "2481"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "1521"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "2481"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "1521"
  ]
},
{
  "protocol" : [
    "6"
  ],
  "icmpType" : [],
  "sourcePort" : [],
  "port" : [
    "1526"
  ]
]}
show configuration bgp

Shows the BGP configuration.

**Synopsis**

show configuration bgp

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show configuration

vShield Edge BGP Routing Protocol Config:

```
{  
  "bgp" : {  
    "gracefulRestart" : true,  
    "redistribute" : {  
      "rules" : [  
        {  
          "fromOSPF" : false,  
          "fromBGP" : false,  
          "fromStatic" : false,  
          "fromConnected" : true,  
          "action" : "permit",  
          "id" : 0,  
          "prefix" : null  
        },  
        "enabled" : true  
      ]  
    },  
    "localAS" : 65001,  
    "defaultOriginator" : true,  
    "neighbours" : [  
      {  
        "remoteAS" : 65001,  
        "password" : null,  
        "keepAliveTimer" : 1,  
        "holdDownTimer" : 3,  
        "weight" : 60,  
        "protocolAddress" : null,  
        "ipAddress" : "192.168.10.6",  
        "filters" : [],  
        "forwardingAddress" : null  
      },  
      {  
        "remoteAS" : 65002,  
        "action" : "permit",  
        "id" : 0,  
        "prefix" : null  
      }  
    ],  
    "enabled" : true  
  },  
  "localAS" : 65001,  
  "defaultOriginator" : true,  
  "neighbours" : [  
    {  
      "remoteAS" : 65001,  
      "password" : null,  
      "keepAliveTimer" : 1,  
      "holdDownTimer" : 3,  
      "weight" : 60,  
      "protocolAddress" : null,  
      "ipAddress" : "192.168.10.6",  
      "filters" : [],  
      "forwardingAddress" : null  
    }  
  ]  
}
```
show configuration certificatestore

Shows the certificate store configuration.

Synopsis

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration certificatestore
vShield Edge Certificate Store Config:
{
    "certificateStoreConfig": {
        "certificates": [],
        "caCertificates": [],
        "crls": []
    }
}

show configuration dhcp

Shows NSX Edge IP address pooling and one-to-one static IP address allocation.

Synopsis

show configuration dhcp

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration dhcp
vShield Edge DHCP Config:
{
    "dhcp": {
        "relay": null,
        "ipAddress": "192.168.10.6",
        "weight": 60,
        "protocolAddress": null,
        "remoteAS": 65002,
        "password": null,
        "keepAliveTimer": 1,
        "holdDownTimer": 3,
        "weight": 60,
        "protocolAddress": null,
        "ipAddress": "192.168.100.2",
        "filters": [],
        "forwardingAddress": null
    },
    "enabled": true
}
show configuration dns

Shows the DNS configuration.

Synopsis

show configuration dns

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration dns

-------------------------------------------------------------------------------
vShield Edge DNS Config:
{
  "dns" : {
    "views" : [
      {
        "recursion" : true,
        "enableForwarding" : true,
        "name" : "vsm-default-view",
        "zones" : null,
        "forwarders" : ["10.112.0.1", "10.112.0.2"],
        "matchInterfaces" : ["any"],
        "matchClients" : ["any"]
      }
    ],
    "logging" : {
      "enable" : false,
      "logLevel" : "info"
    }
  }
}
show configuration firewall

Shows the firewall configuration.

Synopsis
show configuration firewall

CLI Mode
Basic

Example
NSX-edge-1-0> show configuration firewall

vShield Edge Firewall Config:
{
  "firewall": {
    "globalConfig": {
      "ipGenericTimeout": 120,
      "icmp6Timeout": 10,
      "tcpPickOngoingConnections": false,
      "tcpAllowOutOfWindowPackets": false,
      "tcpTimeoutEstablished": 3600,
      "disableFirewall": false,
      "dropInvalidTraffic": true,
      "tcpTimeoutClose": 30,
      "icmpTimeout": 10,
      "udpTimeout": 60,
      "tcpTimeoutOpen": 30,
      "tcpSendResetForClosedVsePorts": true,
      "logInvalidTraffic": false
    },
    "rules": [
      {
        "source": [
          "vse"
        ],
        "dstIface": [],
        "destination": [
          "any"
        ],
        "matchTranslated": false,
        "sourcePort": [],
        "description": "firewall",
        "service": [
          "any:any:any"
        ],
        "srcIface": [],
        "logging": {
          "enable": false,
          "logLevel": null
        }
      }
    ]
  }
}
show configuration global

Shows the configuration for all NSX Edge services.

Synopsis

show configuration global

CLI Mode

Basic
Example

NSX-edge-1-0> show configuration global

vShield Edge Global Config:
{
  "global": {
    "edgeAssistId": 0,
    "enableTcpLoose": false,
    "hostname": "NSX-edge-1-0",
    "hypervisorAssist": false,
    "size": "compact",
    "fips": {
      "enable": false
    },
    "enableAesni": true,
    "tenantId": "default",
    "haIndex": "0",
    "distributedRouter": false
  }
}

show configuration gslb

Show the GSLB (Global Server Load Balancer) configuration.

Synopsis

show configuration gslb [gip | monitor | pool | site]

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gip</td>
<td>Show GSLB global IP configuration.</td>
</tr>
<tr>
<td>monitor</td>
<td>Show GSLB health monitor configuration.</td>
</tr>
<tr>
<td>pool</td>
<td>Shows GSLB pools configuration.</td>
</tr>
<tr>
<td>site</td>
<td>Shows GSLB site configuration.</td>
</tr>
</tbody>
</table>

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration gslb

vShield Edge GSLB Config:
{
  "monitorService": {
    "logging": {
      "enable": true,
      "logLevel": "info"
    },
    "enable": true,
    "healthMonitors": [
      {
        "extension": null,
        "send": null,
        "expected": null,
        "maxRetries": 3,
        "name": "default_tcp_monitor",
        "interval": 5,
        "receive": null,
        "timeout": 15,
        "url": null,
        "type": "tcp",
        "method": null
      }
    ]
  }
}
show configuration highavailability

Shows the high availability configuration.

Synopsis

show configuration highavailability

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration highavailability
-----------------------------------------------------------------------
vShield Edge High Availability Config:

"name" : "default_http_monitor",
"interval" : 5,
"receive" : null,
"timeout" : 15,
"url" : "/",
"type" : "http",
"method" : "GET"

"name" : "default_https_monitor",
"interval" : 5,
"receive" : null,
"timeout" : 15,
"url" : "/",
"type" : "https",
"method" : "GET"

"gslb" : {
"ports" : null,
"logging" : null,
"globalIps" : null,
"enable" : false,
"sites" : null,
"serviceTimeout" : null,
"listenOn" : null,
"security" : null,
"persistentCache" : null,
"pools" : null
}
show configuration interface

Shows the interface configuration.

Synopsis

show configuration interface

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration interface

vShield Edge Interface Config:

{  
  "interfaceConfig" : {  
    "vNic_0" : {  
      "status" : "up",  
      "name" : "uplink",  
      "sendRedirects" : false,  
      "index" : 0,  
      "enableProxyArp" : false,  
      "lifName" : null,  
      "mac" : "00:50:56:a2:57:f9",  
      "subnets" : [  
        {  
          "primary" : "10.115.172.18",  
          "address" : [  
            "10.115.172.18"  
          ],  
          "subnet" : "10.115.172.0/24"  
        }  
      ],  
      "mtu" : 1500  
    },  
    "vNic_9" : {  
      "status" : "down",  
      "name" : "vnic9",  
      "sendRedirects" : true,  
      "index" : 9,  
      "enableProxyArp" : false,  
      "lifName" : null,  
      "mac" : "00:50:56:a2:73:98",  
      "subnets" : [  
        {  
          "primary" : "10.115.172.18",  
          "address" : [  
            "10.115.172.18"  
          ],  
          "subnet" : "10.115.172.0/24"  
        }  
      ],  
      "mtu" : 1500  
    }  
  }  
}
show configuration interface-set

Shows the interface set configuration.

**Synopsis**

show configuration interface-set

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0$ show configuration interface-set
vShield Edge InterfaceSet Config:
{
  "interfaceSet" : [
    {
      "value" : [
        "vNic_1"
      ],
      "id" : "vnic-index-1"
    },
    {
      "value" : [
        "vNic_6"
      ],
      "id" : "vnic-index-6"
    }
  ],
  "mtu" : 1500
}
```
<table>
<thead>
<tr>
<th>Value</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>vse</td>
<td>vnic-index-0</td>
</tr>
<tr>
<td>vnic_9</td>
<td>vnic-index-9</td>
</tr>
<tr>
<td>vnic_5</td>
<td>vnic-index-5</td>
</tr>
<tr>
<td>vnic_8</td>
<td>vnic-index-8</td>
</tr>
<tr>
<td>vnic_4</td>
<td>vnic-index-4</td>
</tr>
<tr>
<td>vnic_0</td>
<td>external</td>
</tr>
<tr>
<td>vnic_7</td>
<td>vnic-index-7</td>
</tr>
<tr>
<td>vnic_3</td>
<td>vnic-index-3</td>
</tr>
<tr>
<td>vnic_6</td>
<td>vnic-index-6</td>
</tr>
<tr>
<td>vnic_0</td>
<td>external</td>
</tr>
<tr>
<td>vnic_7</td>
<td>vnic-index-7</td>
</tr>
</tbody>
</table>
show configuration ipsec

Shows certificate configuration for IPSec VPN.

Synopsis

show configuration ipsec

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration ipsec

vShield edge IPSec VPN Config:
{
  "ipsec": {
    "sites": [
      {
        "certificate": null,
        "encryptionAlgorithm": "aes",
        "enabled": true,
        "mtu": null,
        "psk": "****",
        "extension": null,
        "peerSubnets": [
          "192.168.2.0/24"
        ],
        "peerIp": "10.115.172.19",
        "name": "IPsec",
        "description": null,
        "localSubnets": [
          "11.1.1.0/24"
        ],
        "dhGroup": "dh2",
        "peerId": "10.115.172.19",
        "enablePfs": true,
        "localIp": "10.115.172.18",
      }
    ]
  }
}
show configuration ipset

Shows IP address groups (IP Sets) configured on the NSX Edge.

**Synopsis**

show configuration ipset

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show configuration ipset
-----------------------------------------------------------------------
vShield Edge IpSet Config:
{
  "ipSet": [
    {
      "value": [],
      "id": "ipset-1"
    }
  ]
}
```

show configuration l2vpn

Shows L2 VPN configuration.

**Synopsis**

show configuration l2vpn

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show configuration l2vpn
-----------------------------------------------------------------------
{"l2vpn": {
  "ciphers": [
    "AES256-SHA"
  ],
  "listenerPort": 443,
}}
"clientVnicIndex" : null,
"filters" : [],
"serverPort" : null,
"caCertificate" : null,
"encryptionAlgorithm" : null,
"listenerIp" : "10.110.18.190",
"peerSites" : [
{
  "vseVnicNames" : [
    "vNic_10",
    "vNic_11",
    "vNic_12",
    "vNic_13",
    "vNic_14",
    "vNic_15",
    "vNic_16",
    "vNic_17",
    "vNic_18",
    "vNic_19"
  ],
  "name" : "site1",
  "filters" : [],
  "l2vpnUser" : {
    "password" : "****",
    "userId" : "user1"
  }
},
{
  "vseVnicNames" : [
    "vNic_20",
    "vNic_21",
    "vNic_22",
    "vNic_23",
    "vNic_24",
    "vNic_25",
    "vNic_26",
    "vNic_27",
    "vNic_28",
    "vNic_29"
  ],
  "name" : "site2",
  "filters" : [],
  "l2vpnUser" : {
    "password" : "****",
    "userId" : "user2"
  }
}]
,"clientProxySetting" : null,
"enable" : true,
"trunkedVnicIndexes" : [
1
],
"serverVnicIndex" : null,
"l2vpnUsers" : [],
"serverAddress" : null,
"logging" : {
  "enable" : true,
  "logLevel" : "info"
},
"vseVnicNames" : null,
"serverCertificate" : null}
show configuration loadbalancer

Shows external, or public, IP address mapped to internal servers for load balancing. Note that there are a number of specialized show configuration loadbalancer sub-commands explained after this one.

Synopsis
show configuration loadbalancer

CLI Mode
Basic

Example
NSX-edge-1-0> show configuration loadbalancer

vshield Edge Loadbalancer Config:
{
  "monitorService": {
    "logging": {
      "enable": false,
      "logLevel": "info"
    },
    "enable": true,
    "healthMonitors": [
      {
        "extension": null,
        "send": null,
        "expected": null,
        "maxRetries": 3,
        "name": "default_tcp_monitor",
        "interval": 5,
        "receive": null,
        "timeout": 15,
        "url": null,
        "type": "tcp",
        "method": null
      },
      {
        "extension": null,
        "send": null,
        "expected": null,
        "maxRetries": 3,
        "name": "default_http_monitor",
        "interval": 5,
        "receive": null,
        "timeout": 15,
        "url": "/",
        "type": "http",
        "method": "GET"
      },
      {
        "extension": null,
        "send": null,
        "expected": null,
        "maxRetries": 3,
        "name": "default_https_monitor",
        "interval": 5,
        "receive": null,
        "timeout": 15,
        "url": "/",
        "type": "https",
        "method": "GET"
      }
    ]
  },
  "loadBalancer": {

```
show configuration loadbalancer monitor

Shows service monitor configuration for the load balancer.

Synopsis

show configuration loadbalancer monitor [monitorName]

CLI Mode

Basic
Example

NSX-edge-1-0> show configuration loadbalancer monitor
-----------------------------------------------------------------------
vShield Edge Loadbalancer Config:
{
  "healthMonitors" : [
    {
      "extension" : null,
      "send" : null,
      "expected" : null,
      "maxRetries" : 3,
      "name" : "default_tcp_monitor",
      "interval" : 5,
      "receive" : null,
      "timeout" : 15,
      "url" : null,
      "type" : "tcp",
      "method" : null
    },
    {
      "extension" : null,
      "send" : null,
      "expected" : null,
      "maxRetries" : 3,
      "name" : "default_http_monitor",
      "interval" : 5,
      "receive" : null,
      "timeout" : 15,
      "url" : "/",
      "type" : "http",
      "method" : "GET"
    },
    {
      "extension" : null,
      "send" : null,
      "expected" : null,
      "maxRetries" : 3,
      "name" : "default_https_monitor",
      "interval" : 5,
      "receive" : null,
      "timeout" : 15,
      "url" : "/",
      "type" : "https",
      "method" : "GET"
    }
  ]
}

show configuration loadbalancer pool

Shows load balancer pool configuration.

Synopsis

show configuration loadbalancer pool [poolName]

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration loadbalancer pool
-----------------------------------------------------------------------
vShield Edge Loadbalancer Config:
{
"pools" : [ 
  { "members" : [ 
    { "maxConn" : 0,  
      "minConn" : 0, 
      "name" : "http-Server", 
      "objectId" : null, 
      "ipAddress" : "11.1.1.2", 
      "port" : 80, 
      "weight" : 1, 
      "monitorPort" : 80, 
      "healthMonitors" : [ 
        "default_http_monitor" 
      ], 
      "condition" : "enabled" 
    ], 
    "algorithm" : "round-robin", 
    "transparent" : { 
      "enable" : false 
    }, 
    "name" : "http-pool" 
  } 
] 
}

**show configuration loadbalancer rule**

Shows load balancer application rules.

**Synopsis**

`show configuration loadbalancer rule [ruleName]`

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show configuration loadbalancer rule
```

vShield Edge Loadbalancer Config:

```
{ 
  "applicationRules" : [ 
    { 
      "script" : "# log the name of the virtual server\ncapture request header Host len 32\n# log the amount of data uploaded during a POST\ncapture request header Content-Length len 10\n# log the beginning of the referrer\ncapture request header Referer len 20\n", 
      "name" : "advanced-logging" 
    } 
  ] 
}
```

**show configuration loadbalancer virtual**

Shows virtual server (Virtual IP) configuration.

**Synopsis**

`show configuration loadbalancer virtual [virtualServerName]`

**CLI Mode**

Basic
Example

NSX-edge-1-0> show configuration loadbalancer virtual
-----------------------------------------------------------------------
vShield Edge Loadbalancer Config:
{ 
  "vips" : [
    {
      "maxConn" : 0,
      "rateLimit" : 0,
      "applicationRules" : null,
      "mode" : "http",
      "name" : "VSIP",
      "accelerationEnabled" : false,
      "redirection" : null,
      "serverSsl" : null,
      "serverSslEnabled" : false,
      "insertXForwardedFor" : false,
      "sessionPersistence" : null,
      "ipAddresses" : [ ["10.115.172.18":80"
      ],
      "defaultPool" : http-pool,
      "clientSsl" : null
    }
  ]
}

show configuration nat

Shows the NAT configuration.

Synopsis

show configuration nat

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration nat
-----------------------------------------------------------------------
vShield Edge NAT Config:
{ 
  "dnat" : [
    {
      "protocol" : "17",
      "internalIp" : "10.115.172.18",
      "externalPort" : "500",
      "comments" : "ipsec",
      "ruleId" : 200706,
      "icmpType" : null,
      "internalPort" : "500",
      "logging" : {
        "enable" : false,
        "logLevel" : null
      },
      "interface" : "vNic_0",
      "externalIp" : "10.115.172.18"
    },
    {
      "protocol" : "17",
      "internalIp" : "10.115.172.18",
      "externalPort" : "4500",
      "comments" : "ipsec",
      "ruleId" : 200707,
"icmpType": null,
"internalPort": "4500",
"logging": {
  "enable": false,
  "logLevel": null
},
"interface": "vNic_0",
"externalIp": "10.115.172.18"
},
{
  "protocol": "50",
  "internalIp": "10.115.172.18",
  "externalPort": "any",
  "comments": "ipsec",
  "ruleId": 200708,
  "icmpType": null,
  "internalPort": "any",
  "logging": {
    "enable": false,
    "logLevel": null
  },
  "interface": "vNic_0",
  "externalIp": "10.115.172.18"
},
{
  "protocol": "51",
  "internalIp": "10.115.172.18",
  "externalPort": "any",
  "comments": "ipsec",
  "ruleId": 200709,
  "icmpType": null,
  "internalPort": "any",
  "logging": {
    "enable": false,
    "logLevel": null
  },
  "interface": "vNic_0",
  "externalIp": "10.115.172.18"
},
{
  "protocol": "6",
  "internalIp": "10.115.172.18",
  "externalPort": "443",
  "comments": "sslvpn",
  "ruleId": 196609,
  "icmpType": null,
  "internalPort": "443",
  "logging": {
    "enable": false,
    "logLevel": null
  },
  "interface": "vNic_0",
  "externalIp": "10.115.172.18"
},
{
  "protocol": "6",
  "internalIp": "10.115.172.18",
  "externalPort": "80",
  "comments": "loadBalancer",
  "ruleId": 200710,
  "icmpType": null,
  "internalPort": "80",
  "logging": {
    "enable": false,
    "logLevel": null
  },
  "interface": "vNic_0",
  "externalIp": "10.115.172.18"
show configuration ospf

Shows the OSPF configuration.

Synopsis

show configuration ospf

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration ospf
vShield Edge OSPF Routing Protocol Config:
{
   "ospf" : {
      "defaultOriginate" : false,
      "forwardingAddress" : null,
      "gracefulRestart" : true,
      "interfaces" : [
         {
            "cost" : 1,
            "priority" : 128,
            "areaId" : 51,
            "mtuIgnore" : false,
            "vnic" : "vNic_1",
            "deadInterval" : 40,
            "helloInterval" : 10
         },
         {
            "cost" : 1,
            "priority" : 128,
            "areaId" : 0,
            "mtuIgnore" : false,
            "vnic" : "vNic_2",
            "deadInterval" : 40,
            "helloInterval" : 10
         }
      ],
      "redistribute" : {
         "rules" : [
            {
               "fromOSPF" : false,
               "fromBGP" : false,
               "fromStatic" : true,
               "fromConnected" : false,
               "action" : "permit",
               "id" : 0,
               "prefix" : null
            }
         ],
         "enabled" : true
      },
      "protocolAddress" : null,
      "areas" : [
         {
            "areaId" : 51,
            "authenticationType" : "none",
            "authenticationSecret" : null,
            "type" : "nssa"
         },
         {
            "areaId" : 0,
            "authenticationType" : "none",
            "authenticationSecret" : null,
            "type" : "regular"
         }
      ]
   }
}
show configuration routing-global

Shows the global routing configuration.

Synopsis

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration routing-global

vShield Edge Routing Global Config:
{
    "routingGlobal" : {
        "logging" : {
            "enable" : true,
            "logLevel" : "info"
        },
        "routerId" : "192.168.100.3",
        "ecmp" : true
    }
}

show configuration snmp

Shows the SNMP configuration.

Synopsis

CLI Mode

Basic

Example

NSX-edge-1-0> show configuration snmp

vShield Edge SNMP Agent Config:
{
    "snmp" : null
}

show configuration sslvpn-plus

Shows the SSL VPN configuration.
Synopsis
show configuration sslvpn-plus

CLI Mode
Basic

show configuration static-routing

Shows the static routes defined for the NSX Edge data packets.

Synopsis
show configuration static-routing

CLI Mode
Basic

Example
NSX-edge-1-0> show configuration static-routing
vShield Edge Static Routing Config:
{
    "staticRouting" : [
        {
            "gatewayAddress" : null,
            "destinationNetwork" : "0.0.0.0/0",
            "adminDistance" : 0,
            "gatewayAddresses" : [
                "192.168.100.2"
            ],
            "interface" : "vNic_0",
            "description" : null,
            "mtu" : 1500
        }
    ]
}

show configuration syslog

Shows remote syslog servers defined for the NSX Edge.

Synopsis
show configuration syslog

CLI Mode
Basic

Example
NSX-edge-1-0> show configuration syslog
vShield Edge Syslog Config:
{
    "syslog" : {
        "protocol" : "tcp",
        "destinationHost" : [
            "11.1.1.100",
            "11.1.1.2"
        ]
    }
}
show eventmgr

Shows event manager statistics.

Synopsis

show eventmgr

CLI Mode

Basic

Example

NSX-edge-1-0> show eventmgr
-----------------------
messagebus     : disabled
debug          : 0
profiling      : 0
cfg_rx         : 1865
cfg_rx_msgbus  : 0
cfg_exec_err   : 0
cfg_resp       : 0
cfg.resp.err   : 0
cfg.resp Ln.err: 0
fastquery_rx   : 926
fastquery_err  : 1
clearcmd_rx    : 931
clearcmd_err   : 0
ha_rx          : 0
ha_rx.err      : 0
ha_exec_err    : 0
status_rx      : 38
status_rx.err  : 0
status_svr     : 27
statusEvt      : 0
statusEvtPush  : 0
status_ha      : 0
status_ver     : 6
status_sys     : 5
status_cmd     : 0
status_svr.err : 0
statusEvt.err  : 0
status_sys.err : 0
status_ha.err  : 0
status_ver.err : 0
status_cmd.err : 0
evt_report     : 0
evt_report_err : 0
hc_report      : 0
hc_report_err  : 0
cli_rx         : 1
cli.resp       : 0
cli.resp.err   : 0
counter_reset  : 0
---------- Health Status ------------
system status  : good
ha state       : active
cfg version    : 17
generation     : 0
server status  : 1
syslog-ng      : 1
haproxy        : 0
ipsec          : 0
sslvpn         : 0
l2vpn          : 0
dns            : 0
dhcp           : 0
heartbeat : 0
monitor : 0
gslb : 0

---------- System Events ----------

show firewall

Shows firewall packet counters along with firewall rules that specify what to do with a packet that matches.

Synopsis

  show firewall

CLI Mode

  Basic

show firewall flows

Shows firewall packet counters along with packet flows.

Synopsis

  show firewall flows

CLI Mode

  Basic

show firewall flows top n

Shows firewall packet counters along with top n number of packet flows.

Synopsis

  show firewall flows top n

CLI Mode

  Basic

show firewall flows top n sort-by bytes

Shows firewall packet counters along with top n number of packet flows sorted by byte numbers.

Synopsis

  show firewall flows top n sort-by-bytes

CLI Mode

  Basic

show firewall flows top n sort-by pkts

Shows firewall packet counters along with top n number of packet flows sorted by packet numbers.

Synopsis

  show firewall flows top n sort-by-pkts

CLI Mode

  Basic
show firewall rule-id id

Shows firewall rule information filtered by rule-id.

Synopsis
show firewall rule-id id

CLI Mode
Basic

show firewall rule-id id flows

Shows firewall rule information and flow information filtered by rule-id.

Synopsis
show firewall rule-id id flows

CLI Mode
Basic

show firewall rule-id id flows top n

Shows firewall packet counters filtered by rule-id id along with top n number of packet flows.

Synopsis
show firewall rule-id id flows top n

CLI Mode
Basic

show firewall rule-id id flows top n sort-by bytes

Shows firewall packet counters filtered by rule-id id along with top n number of packet flows sorted by byte numbers.

Synopsis
show firewall rule-id id flows top n sort-by-bytes

CLI Mode
Basic

show firewall rule-id id flows top n sort-by pkts

Shows firewall packet counters filtered by rule-id id along with top n number of packet flows sorted by packet numbers.

Synopsis
show firewall rule-id id flows top n sort-by-pkts

CLI Mode
Basic

show flowstats

Shows metrics related to the internal implementation of the flow-based services provided by NSX Edge.
The following four metrics provide useful operational support indicators, which can be utilised to assist with NSX Edge services capacity monitoring, and as warning signs for presence of corrupted or undesirable traffic that is reaching the Edge:

**Total Flow Capacity** displays the total number of concurrently open connections that the Edge is configured to support.

**entries** displays the total number of currently open connections, which includes sockets in ESTABLISHED, SYN_SENT, and TIME_WAIT state. If this counter reaches the Total Flow Capacity, new connections through to Edge services, such as Edge Load Balancer, would be dropped.

**invalid** displays the number of packets seen with Invalid L3, L4 Headers, which could be an indicator of presence of an endpoint (VM or physical) that may be sending corrupted packets, either due to a configuration/defect, or intentionally.

**drop** displays the number of packets dropped due to Edge L3/L4 engine’s inability to handle the packet. This can be caused by Edge resource exhaustion, or by corrupt L3/L4 headers, in which case “invalid” counter will also be increased.

### Metric Explanation

<table>
<thead>
<tr>
<th>Metric</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Flow Capacity</td>
<td>Maximum number of concurrent connections that NSX Edge allows</td>
</tr>
<tr>
<td>entries</td>
<td>Current active connections</td>
</tr>
<tr>
<td>searched</td>
<td>Max depth of hash table chain seen so far</td>
</tr>
<tr>
<td>found</td>
<td>Number of entries found through hash table lookup</td>
</tr>
<tr>
<td>new</td>
<td>Number of new connections created so far</td>
</tr>
<tr>
<td>invalid</td>
<td>Number of packets seen with Invalid L3, L4 headers</td>
</tr>
<tr>
<td>ignore</td>
<td>Number of untracked connections: loopback or due to NOTRACK target</td>
</tr>
<tr>
<td>delete</td>
<td>Number of entries deleted so far: done with the connection</td>
</tr>
<tr>
<td>delete_list</td>
<td>Number of entries deleted due to inactivity timeout</td>
</tr>
<tr>
<td>insert</td>
<td>Number of entries successfully inserted into hash table</td>
</tr>
<tr>
<td>insert_failed</td>
<td>Number of entries failed to add to hash table due to a race condition between NAT and conntrack</td>
</tr>
<tr>
<td>drop</td>
<td>Number of packets dropped, L3/L4 protocols unable to handle the packet</td>
</tr>
<tr>
<td>early_drop</td>
<td>Number of dying entries forcefully deleted to make a room for a new connection)</td>
</tr>
<tr>
<td>icmp_error</td>
<td>Not used/obsolete</td>
</tr>
<tr>
<td>expect_new</td>
<td>Number of actual expected connections seen so far</td>
</tr>
<tr>
<td>expect_create</td>
<td>Number of expected entries (holes) created so far by ALGs</td>
</tr>
<tr>
<td>expect_delete</td>
<td>Number of expected entries deleted due to timeout</td>
</tr>
<tr>
<td>search_restart</td>
<td>Number of times a hash table chain search is restarted due to a change during search operation</td>
</tr>
</tbody>
</table>

### Synopsis

`show flowstats`

### CLI Mode

**Basic**

### Example

```
vShieldEdge> show flowstats
Total Flow Capacity: 1000000
Current Statistics :
entries       76
searched      31
found         13985
```
new                    12657
invalid                0
ignore                 413
delete                 12567
delete_list            11846
insert                 11937
insert_failed          0
drop                   0
early_drop             0
icmp_error             0
expect_new             1
expect_create          2
expect_delete          2
search_restart         0

show flowtable
Shows packet flows in a table.

Synopsis
show flowtable

CLI Mode
Basic

show flowtable expect
Shows expected flows.

Synopsis
show flowtable expect

CLI Mode
Basic

Example
vShieldEdge> show flowtable expect
Total flows: 0

show flowtable rule-id id
Shows packet flows matched by rule-id.

Synopsis
show flowtable rule-id id

CLI Mode
Basic

show flowtable rule-id id top n
Shows the top $n$ number of packet flows matched by rule-id.

Synopsis
show flowtable rule-id id top n

CLI Mode
Basic
show flowtable rule-id id top n sort-by bytes

Shows top $n$ number of packet flows matched by rule-id sorted by byte numbers.

Synopsis
show flowtable rule-id id top n sort-by bytes

CLI Mode
Basic

show flowtable rule-id id top n sort-by pkts

Shows the top $n$ number of packet flows matched by rule-id sorted by packet numbers.

Synopsis
show flowtable rule-id id top n sort-by pkts

CLI Mode
Basic

show flowtable top n

Shows top $n$ number of packet flows.

Synopsis
show flowtable top n

CLI Mode
Basic

show flowtable top n sort-by bytes

Shows top $n$ number of packet flows sorted by byte numbers.

Synopsis
show flowtable top n sort-by bytes

CLI Mode
Basic

show flowtable top n sort-by pkts

Shows top $n$ number of packet flows sorted by packet numbers.

Synopsis
show flowtable top n sort-by pkts

CLI Mode
Basic

show flowtimeouts

Shows connection tracking inactivity timeouts.

Synopsis
show flowtimeouts
**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show flowtimeouts
nf_contrack_tcp_timeout_syn_sent = 30
nf_contrack_tcp_timeout_syn_recv = 30
nf_contrack_tcp_timeout_established = 3600
nf_contrack_tcp_timeout_fin_wait = 20
nf_contrack_tcp_timeout_close_wait = 60
nf_contrack_tcp_timeout_last_ack = 30
nf_contrack_tcp_timeout_time_wait = 20
nf_contrack_tcp_timeout_close = 10
nf_contrack_udp_timeout = 30
nf_contrack_udp_timeout_stream = 30
nf_contrack_icmp_timeout = 10
nf_contrack_icmpv6_timeout = 30
nf_contrack_generic_timeout = 120
```

**show hostname**

Shows the current hostname for an NSX Edge.

**Synopsis**

```
show hostname
```

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0# show hostname
NSX-edge-1-0
```

**show interface**

Shows interface information for all interfaces, or a specific interface.

**Synopsis**

```
show interface [intName]
```

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show interface
Interface VDR is up, line protocol is up
  index 2 metric 1 mtu 1500 <UP,BROADCAST,_RUNNING,NOARP>
  Hwaddr: c2:9d:ca:29:ff:1b
  inet6 fe80::c09d:caff:fe29:ff1b/64
  proxy_arp: disabled
  Auto-duplex (Full), Auto-speed (3239Mb/s)
  input packets 0, bytes 0, dropped 0, multicast packets 0
  input errors 0, length 0, overrun 0, crc 0, frame 0, fifo 0, missed 0
  output packets 0, bytes 0, dropped 0
  output errors 0, aborted 0, carrier 0, fifo 0, heartbeat 0, window 0
  collisions 0
Interface br-sub is up, line protocol is up
  index 13 metric 1 mtu 1500 <UP,BROADCAST,_RUNNING,MULTICAST>
  inet6 fe80::90b8:2fff:fe4e:5fd3/64
  proxy_arp: disabled
  Auto-duplex (Full), Auto-speed (3239Mb/s)
```
Input packets 0, bytes 0, dropped 0, multicast packets 0
Input errors 0, length 0, overrun 0, CRC 0, frame 0, fifo 0, missed 0
Output packets 2326, bytes 200100, dropped 0
Output errors 0, aborted 0, carrier 0, fifo 0, heartbeat 0, window 0
Collisions 0

Interface lo is up, line protocol is up
Index 1 metric 1 mtu 16436 <UP,LOOPBACK,RUNNING>
inet 127.0.0.1/8
inet6 ::1/128
Proxy-arp: disabled
Auto-duplex (Full), Auto-speed (3239Mb/s)
Input packets 168, bytes 37172, dropped 0, multicast packets 0
Input errors 0, length 0, overrun 0, CRC 0, frame 0, fifo 0, missed 0
Output packets 168, bytes 37172, dropped 0
Output errors 0, aborted 0, carrier 0, fifo 0, heartbeat 0, window 0
Collisions 0

Interface vNIC_0 is up, line protocol is up
Index 3 metric 1 mtu 1500 <UP,BROADCAST,RUNNING,MULTICAST>
HWaddr: 00:50:56:8e:45:15
inet6 fe80::250:56ff:fe8e:4515/64
inet 192.168.100.3/24
Proxy-arp: disabled
Auto-duplex (Full), Auto-speed (3239Mb/s)
Input packets 14860, bytes 986822, dropped 0, multicast packets 0
Input errors 0, length 0, overrun 0, CRC 0, frame 0, fifo 0, missed 0
Output packets 2707, bytes 346233, dropped 0
Output errors 0, aborted 0, carrier 0, fifo 0, heartbeat 0, window 0
Collisions 0

or

NSX-edge-1-0> show interface vNIC_0
Interface vNIC_0 is up, line protocol is up
Index 3 metric 1 mtu 1500 <UP,BROADCAST,RUNNING,MULTICAST>
HWaddr: 00:50:56:8e:95:20
inet6 fe80::250:56ff:fe8e:9520/64
inet 192.168.100.3/24
Proxy-arp: disabled
Auto-duplex (Full), Auto-speed (2174Mb/s)
Input packets 819279, bytes 54577962, dropped 595, multicast packets 30
Input errors 0, length 0, overrun 0, CRC 0, frame 0, fifo 0, missed 0
Output packets 674153, bytes 57609401, dropped 0
Output errors 0, aborted 0, carrier 0, fifo 0, heartbeat 0, window 0
Collisions 0

show ip bgp
Shows entries in the Border Gateway Protocol (BGP) routing table.

Synopsis
show ip bgp

CLI Mode
Basic

Example
NSX-edge-1-0> show ip bgp
Status codes: s - suppressed, d - damped, > - best, i - internal
Origin codes: i - IGP, e - EGP, ? - incomplete
show ip bgp neighbors

Shows BGP neighbors. Optionally show neighbor information for only the IP address specified.

Synopsis

show ip bgp neighbors [ipAddress]

CLI Mode

Basic

Example

BGP neighbor is 20.20.20.1, remote AS 200,
BGP state = Established, up
Hold time is 180, Keep alive interval is 60 seconds
Neighbor capabilities:
  Route refresh: advertised and received
  Address family IPv4 Unicast: advertised and received
  Graceful restart Capability: advertised and received
  Restart remain time: 0
Received 3034 messages, Sent 3033 messages
Default minimum time between advertisement runs is 30 seconds
For Address family IPv4 Unicast: advertised and received
  Index 1 Identifier 0x9ac9f52c
  Route refresh request: received 0 sent 0
  Prefixes received 1 sent 3 advertised 3
Connections established 2, dropped 57
Local host: 20.20.20.113, Local port: 43886
Remote host: 20.20.20.1, Remote port: 179
BGP neighbor is 70.70.70.1, remote AS 200,
BGP state = Established, up
Hold time is 180, Keep alive interval is 60 seconds
Neighbor capabilities:
  Route refresh: advertised and received
  Address family IPv4 Unicast: advertised and received
  Graceful restart Capability: advertised and received
  Restart remain time: 0
Received 3085 messages, Sent 3075 messages
Default minimum time between advertisement runs is 30 seconds
For Address family IPv4 Unicast: advertised and received
  Index 2 Identifier 0x9ac9f52c
  Route refresh request: received 0 sent 0
  Prefixes received 1 sent 3 advertised 3
Connections established 1, dropped 9
Local host: 70.70.70.113, Local port: 179
Remote host: 70.70.70.1, Remote port: 26563

show ip forwarding

Shows forwarding table entries. Optionally show forwarding table entries for the specified prefix only.

Synopsis

show ip forwarding [ipAddress/netmask]

CLI Mode

Basic
show ip ospf

Shows information about Open Shortest Path First (OSPF) routing process.

Synopsis

to

Example

OSPF routing process with Router ID 50.50.50.113
Supports opaque LSA
SPF schedule delay: 5 secs, Hold time between two SPFs: 10 secs
Minimum LSA interval: 5 secs, Minimum LSA arrival: 1 secs
Number of external LSA: 4, Checksum Sum: 0X119C0
Number of opaque AS LSA: 0, Checksum Sum: 0

Area BACKBONE(0)
  SPF algorithm executed 292 times
  Number of area border routers reachable within area: 0
  Number of LSA: 9, Checksum Sum: 0X32360
  Number of router LSA: 3, Checksum Sum: 0XE766
  Number of network LSA: 1, Checksum Sum: 0X5808
  Number of summary network LSA: 0, Checksum Sum: 0
  Number of summary ASB LSA: 0, Checksum Sum: 0
  Number of external NSSA LSA: 0, Checksum Sum: 0
  Number of opaque LSA: 5, Checksum Sum: 0X1E3F2

Area 0.0.0.51
  It is a NSSA area
  NSSA Translator Role: Always
  NSSA Translator State: Disable
  SPF algorithm executed 292 times
  Number of area border routers reachable within area: 0
  Number of LSA: 3, Checksum Sum: 0X203EE
  Number of router LSA: 0, Checksum Sum: 0
  Number of network LSA: 0, Checksum Sum: 0
  Number of summary network LSA: 0, Checksum Sum: 0
  Number of summary ASB LSA: 0, Checksum Sum: 0
  Number of external NSSA LSA: 1, Checksum Sum: 0X8BF5
  Number of opaque LSA: 2, Checksum Sum: 0X177f9

show ip ospf database

Shows IPv4 OSPF database.

Synopsis

to
**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database

Opaque Area Link States (Area 0.0.0.0)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.0.1</td>
<td>192.168.100.3</td>
<td>668</td>
<td>0x8000003c</td>
<td>0x0000ea87</td>
</tr>
</tbody>
</table>

Router Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.11.9</td>
<td>192.168.11.9</td>
<td>610</td>
<td>0x8000003a</td>
<td>0x00009098</td>
</tr>
<tr>
<td>192.168.100.3</td>
<td>192.168.100.3</td>
<td>609</td>
<td>0x8000003c</td>
<td>0x00002663</td>
</tr>
</tbody>
</table>

Network Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.11.1</td>
<td>192.168.100.3</td>
<td>614</td>
<td>0x80000039</td>
<td>0x0000603c</td>
</tr>
</tbody>
</table>

Opaque Area Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.0.1</td>
<td>192.168.11.9</td>
<td>621</td>
<td>0x80000039</td>
<td>0x0000c02d</td>
</tr>
<tr>
<td>1.0.0.1</td>
<td>192.168.100.3</td>
<td>263</td>
<td>0x8000003c</td>
<td>0x0000ea87</td>
</tr>
</tbody>
</table>

AS External Link States

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0</td>
<td>192.168.100.3</td>
<td>263</td>
<td>0x8000003c</td>
<td>0x00008f37</td>
</tr>
<tr>
<td>172.16.10.0</td>
<td>192.168.11.9</td>
<td>616</td>
<td>0x80000039</td>
<td>0x000037a0</td>
</tr>
<tr>
<td>172.16.20.0</td>
<td>192.168.11.9</td>
<td>616</td>
<td>0x80000039</td>
<td>0x0000c805</td>
</tr>
<tr>
<td>172.16.30.0</td>
<td>192.168.11.9</td>
<td>616</td>
<td>0x80000039</td>
<td>0x00005a69</td>
</tr>
</tbody>
</table>

**show ip ospf database adv-router**

Shows OSPF results filtered by advertising router.

**Synopsis**

show ip ospf database adv-router

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database adv-router 192.168.100.3

Opaque Area Link States (Area 0.0.0.0)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.0.1</td>
<td>192.168.100.3</td>
<td>711</td>
<td>0x8000003c</td>
<td>0x0000ea87</td>
</tr>
</tbody>
</table>

Router Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.100.3</td>
<td>192.168.100.3</td>
<td>652</td>
<td>0x8000003c</td>
<td>0x00002663</td>
</tr>
</tbody>
</table>

Network Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.11.1</td>
<td>192.168.100.3</td>
<td>657</td>
<td>0x80000039</td>
<td>0x0000603c</td>
</tr>
</tbody>
</table>
Opaque Area Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.0.1</td>
<td>192.168.100.3</td>
<td>306</td>
<td>0x8000003c</td>
<td>0x0000ea87</td>
</tr>
</tbody>
</table>

AS External Link States

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0</td>
<td>192.168.100.3</td>
<td>306</td>
<td>0x8000003c</td>
<td>0x00008f37</td>
</tr>
</tbody>
</table>

show ip ospf database asbr-summary

Shows asbr-summary (type 4) LSAs.

Synopsis

show ip ospf database asbr-summary

CLI Mode

Basic

show ip ospf database external

Shows external (type 5) LSAs.

Synopsis

show ip ospf database external

CLI Mode

Basic

Example

NSX-edge-1-0> show ip ospf database external

AS External Link States

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0</td>
<td>192.168.100.3</td>
<td>445</td>
<td>0x8000003c</td>
<td>0x00008f37</td>
</tr>
<tr>
<td>172.16.10.0</td>
<td>192.168.11.9</td>
<td>798</td>
<td>0x80000039</td>
<td>0x000037a0</td>
</tr>
<tr>
<td>172.16.20.0</td>
<td>192.168.11.9</td>
<td>798</td>
<td>0x80000039</td>
<td>0x0000c805</td>
</tr>
<tr>
<td>172.16.30.0</td>
<td>192.168.11.9</td>
<td>798</td>
<td>0x80000039</td>
<td>0x00005a69</td>
</tr>
</tbody>
</table>

show ip ospf database network

Shows network (type 2) LSAs.

Synopsis

show ip ospf database network

CLI Mode

Basic

Example

NSX-edge-1-0> show ip ospf database network

Network Link States (Area 0.0.0.1)

<table>
<thead>
<tr>
<th>Link ID</th>
<th>ADV Router</th>
<th>Age</th>
<th>Seq Num</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.11.1</td>
<td>192.168.100.3</td>
<td>829</td>
<td>0x80000039</td>
<td>0x0000603c</td>
</tr>
</tbody>
</table>
**show ip ospf database nssa-external**

Shows nssa-external (type 7) LSAs.

**Synopsis**

show ip ospf database nssa-external

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database nssa-external

```
Network Link States (Area  0.0.0.51)
  Link ID           ADV Router        Age           Seq Num        Checksum
  172.16.10.0       192.168.11.9      1143          0x800001b1    0x00004519
  172.16.20.0       192.168.11.9      1143          0x800001b1    0x0000d67d
  172.16.30.0       192.168.11.9      1143          0x800001b1    0x000068e1
```

**show ip ospf database opaque-area**

Shows opaque-area (type 10) LSAs.

**Synopsis**

show ip ospf database opaque-area

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database opaque-area

```
Opaque Area Link States (Area  0.0.0.0)
  Link ID           ADV Router        Age           Seq Num        Checksum
  1.0.0.1           192.168.100.3     908           0x8000003c    0x0000ea87

Opaque Area Link States (Area  0.0.0.1)
  Link ID           ADV Router        Age           Seq Num        Checksum
  1.0.0.1           192.168.11.9      861           0x80000039    0x0000c02d
  1.0.0.1           192.168.100.3     503           0x8000003c    0x0000ea87
```

**show ip ospf database router**

Shows router (type 1) LSAs.

**Synopsis**

show ip ospf database router

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database router

```
Router Link States (Area  0.0.0.1)
```
show ip ospf database summary

Shows summary (type 3) LSAs.

**Synopsis**

show ip ospf database summary

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf database summary

```
Router Link States (Area 0.0.0.0)
Link ID         ADV Router        Age           Seq Num        Checksum
50.50.50.41     50.50.50.41       841           0x8000006b    0x00001b84
50.50.50.113    50.50.50.113      841           0x80000068    0x00009039
60.60.60.3      60.60.60.3        146           0x8000005b    0x00003ba9
```

show ip ospf interface

Shows IPv4 OSPF interface.

**Synopsis**

show ip ospf interface

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf interface

```
vNic_1 is activated
Internet Address 192.168.11.1, Network Mask 255.255.255.240, Area 0.0.0.1
Transmit Delay is 1 sec, Network Type BROADCAST, State DR, Priority 128
Designated Router's Interface Address 192.168.11.1
Backup Designated Router's Interface Address 192.168.11.10
Timer intervals configured, Hello 1, Dead 4, Retransmit 5
```

show ip ospf neighbor

Shows information about OSPF neighbors.

**Synopsis**

show ip ospf neighbor

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip ospf neighbor

```
Neighbor ID      Priority  Address          Dead Time  State           Interface
192.168.10.2     128       192.168.10.3     37         Full/DR          vNic_1
```
show ip ospf statistics

Shows IPv4 OSPF statistics.

Synopsis

show ip ospf statistics

CLI Mode

Basic

Example

NSX-edge-1-0> show ip ospf statistics
Area 0.0.0.0: SPF algorithm executed 60 times
Area 0.0.0.1: SPF algorithm executed 59 times

show ip route

Shows all routes in the routing information base (RiB), or a specific route. The numbers in square brackets in the command output are the administrative distance and the routing metric. For example, the route below for 172.16.10.0/24 has an administrative distance of 110, and a routing metric of 1.

Synopsis

show ip route [ipAddress/netmask]

CLI Mode

Basic

Example

NSX-edge-1-0> show ip route
Codes: O - OSPF derived, i - IS-IS derived, B - BGP derived,
C - connected, S - static, L1 - IS-IS level-1, L2 - IS-IS level-2,
IA - OSPF inter area, E1 - OSPF external type 1, E2 - OSPF external type 2,
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
Total number of routes: 6

B        0.0.0.0/0        [20/0]        via 192.168.100.2
O E2  172.16.10.0/24    [110/1]       via 192.168.11.9
O E2  172.16.20.0/24    [110/1]       via 192.168.11.9
O E2  172.16.30.0/24    [110/1]       via 192.168.11.9
C       192.168.11.0/28  [0/0]         via 192.168.11.1
C       192.168.100.0/24 [0/0]         via 192.168.100.3

or

NSX-edge-1-0> show ip route 192.168.110.10

Codes: O - OSPF derived, i - IS-IS derived, B - BGP derived,
C - connected, S - static, L1 - IS-IS level-1, L2 - IS-IS level-2,
IA - OSPF inter area, E1 - OSPF external type 1, E2 - OSPF external type 2,
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

S        0.0.0.0/0        [0/0]         via 192.168.100.2

show ip route bgp

Shows routes in routing information base (RiB) learned through the BGP protocol.
**Synopsis**

show ip route bgp

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show ip route bgp

Codes: O - OSPF derived, i - IS-IS derived, B - BGP derived,
C - connected, S - static, L1 - IS-IS level-1, L2 - IS-IS level-2,
IA - OSPF inter area, E1 - OSPF external type 1, E2 - OSPF external type 2,
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

```
B       0.0.0.0/0            [20/0]        via 192.168.100.2
```

**show ip route ospf**

Shows routes in routing information base (RiB) learned through OSPF protocol.

**Synopsis**

show ip route ospf

**CLI Mode**

Basic

**Example**

```
O   E2  60.60.60.0/24        [110/1]       via 50.50.50.3
O   E2  90.90.90.0/24        [110/1]       via 50.50.50.3
```

**show ipset**

Shows IP set information

**Synopsis**

show ipset

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show ipset
Name: 0_131075-ov-v4-1
Type: hash:oservice (Match un-translated Ports)
Revision: 2
Header: hashsize 64 maxelem 65536
Size in memory: 2224
References: 0
Members:
Proto=89, DestPort=Any, SrcPort=Any    (encoded: 0.89.0.0/16,0.89.0.0/16)

Name: 0_131075-ov-v6-1
Type: hash:oservice (Match un-translated Ports)
Revision: 2
Header: hashsize 64 maxelem 65536
```
show ipv6 forwarding

Shows IPv6 forwarding information

Synopsis
show ipv6 forwarding

CLI Mode

Basic

Example
NSX-edge-1-0> show ipv6 forwarding

IPv6 Routing Table
Codes: C - connected, L - local, S - static

  L   fe80::/64
      via ::, VDR
  L   fe80::/64
      via ::, vNic_0
  L   fe80::/64
      via ::, br-sub
  L   fe80::/64
      via ::, vNic_1
  L   ff00::/8
      via ::, VDR
  L   ff00::/8
      via ::, vNic_0
  L   ff00::/8
      via ::, br-sub
  L   ff00::/8
      via ::, vNic_1

show log

Shows the system log.

Synopsis
show log [follow | reverse]
**CLI Mode**

**Basic**

**Example**

```
NSX-edge-1-0# show log
2015-01-24T05:33:49+00:00 vShieldEdge kernel: Initializing cgroup subsys cpuset
2015-01-24T05:33:49+00:00 vShieldEdge kernel: Initializing cgroup subsys cpu
2015-01-24T05:33:49+00:00 vShieldEdge kernel: Linux version 3.2.31
   (root@build-vm-dhcp221.eng.vmware.com) (gcc version 4.5.3 (GCC) ) #1 SMP
   Wed Nov 26 00:51:39 GMT 2014
2015-01-24T05:33:49+00:00 vShieldEdge kernel: Command line: BOOT_IMAGE=/boot/vmlinuz
   loglevel=3 root=/dev/sda1
2015-01-24T05:33:49+00:00 vShieldEdge kernel: Disabled fast string operations
2015-01-24T05:33:49+00:00 vShieldEdge kernel: BIOS-provided physical RAM map:
```

**show log routing**

Show the routing log.

**Synopsis**

```
show log routing [follow | reverse]
```

**Option** | **Description**
--- | ---
follow | Update the displayed log.
reverse | Show the log in reverse chronological order.

**CLI Mode**

**Basic**

**Example**

```
NSX-edge-1-0> show log routing
**** AUDIT       0x2901 - 7    (0001) **** -:-------- F:00000002
   ambsmmpi.c 174 :at 18:05:07, 14 August 2015 (100 ms)
   SCM initialized successfully.
**** AUDIT       0x1601 - 72   (0000) **** -:-------- F:00000002
   asemain.c 1007 :at 18:05:07, 14 August 2015 (100 ms)
   Primary System Manager instance started.
   Location index                 = 1
**** AUDIT       0x5701 - 1    (0000) **** -:-------- F:00000002
   cssmain.c 141 :at 18:05:07, 14 August 2015 (110 ms)
   The CSS component has been initialized successfully.
   Process ID                = 0x01103000
   Interface index           = 1
```

**show messagebus**

Shows the message bus forwarder counters or message counters.
**Synopsis**

show messagebus (forwarder | messages)

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show messagebus forwarder

```
-----------------------
Forwarder Command Channel
  vmci_conn          : up
  app_client_conn    : up
  vmci_rx            : 593
  vmci_tx            : 591
  vmci_rx_err        : 0
  vmci_tx_err        : 0
  vmci_closed_by_peer: 0
  vmci_tx_no_socket  : 0
  app_rx             : 591
  app_tx             : 593
  app_rx_err         : 0
  app_tx_err         : 0
  app_conn_req       : 1
  app_closed_by_peer : 0
  app_tx_no_socket   : 0
-----------------------
Forwarder Event Channel
  vmci_conn          : up
  app_client_conn    : up
  vmci_rx            : 179
  vmci_tx            : 1739
  vmci_rx_err        : 0
  vmci_tx_err        : 0
  vmci_closed_by_peer: 0
  vmci_tx_no_socket  : 0
  app_rx             : 1739
  app_tx             : 179
  app_rx_err         : 0
  app_tx_err         : 0
  app_conn_req       : 1
  app_closed_by_peer : 0
  app_tx_no_socket   : 0
-----------------------
  cli_rx             : 2
  cli_tx             : 2
  cli_tx_err         : 0
  counters_reset     : 0
```

or

NSX-edge-1-0> show messagebus messages

```
-----------------------
Message bus is enabled
  cmd conn state : listening
  init_req       : 1
  init_resp      : 1
  init_req_err   : 0
  init_resp_err  : 0
  pwchg_req      : 0
  pwchgResp      : 0
  pwchgRespOk    : 0
  pwchgRespFail  : 0
  pwchgUpdated   : 0
  pwchgReqErr    : 0
  pwchgRespErr   : 0
  pwchgRespMiss  : 0
```

show nat
Displays NAT packet counters along with the NAT rules that specify how to translate network addresses for a packet that matches.

Synopsis
show nat

CLI Mode
Basic

show netdevice
Show network device settings.

Synopsis
show netdevice [deviceName]
**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show netdevice vNic_0
Settings for vNic_0:
   Supported ports: [ TP ]
   Supported link modes:   1000baseT/Full
   10000baseT/Full
   Supported pause frame use: No
   Supports auto-negotiation: No
   Advertised link modes: Not reported
   Advertised pause frame use: No
   Advertised auto-negotiation: No
   Speed: 10000Mb/s
   Duplex: Full
   Port: Twisted Pair
   PHYAD: 0
   Transceiver: internal
   Auto-negotiation: off
   MDI-X: Unknown
   Supports wake-on: uag
   wake-on: d
   Link detected: yes

**show process**

Shows information related to NSX Edge processes.

**Synopsis**

show process (list | monitor)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>list</td>
<td>List all currently running processes on the NSX Edge.</td>
</tr>
<tr>
<td>monitor</td>
<td>Continuously monitor the list of processes.</td>
</tr>
</tbody>
</table>

**CLI Mode**

Basic

**Example**

NSX-edge-1-0# show process list

<table>
<thead>
<tr>
<th>%CPU</th>
<th>%MEM</th>
<th>VSZ</th>
<th>RSZ</th>
<th>STAT</th>
<th>STARTED</th>
<th>TIME</th>
<th>COMMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.1</td>
<td>3956</td>
<td>692</td>
<td>Ss</td>
<td>May 05 00:00:02</td>
<td>init [3]</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S</td>
<td>May 05 00:00:00</td>
<td>kthreadd</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S</td>
<td>May 05 00:00:00</td>
<td>ksoftirqd/0</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S</td>
<td>May 05 00:00:00</td>
<td>kworker/u:0</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S&lt;</td>
<td>May 05 00:00:00</td>
<td>migration/0</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S&lt;</td>
<td>May 05 00:00:00</td>
<td>[cpuset]</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S&lt;</td>
<td>May 05 00:00:00</td>
<td>[khelper]</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>S&lt;</td>
<td>May 05 00:00:00</td>
<td>[netns]</td>
<td></td>
</tr>
</tbody>
</table>

**show rpfilter**

Shows the reverse path filter settings.
**Reverse Path Filter Setting** | **Description**
---|---
0 | Disable - no reverse path confirmation will be performed
1 | Strict - confirms the source address is reachable via the same interface from which the packet arrived.
2 | Loose - confirms the source address is reachable via any interface.

**Synopsis**
show rpfilter

**CLI Mode**
Basic

**Example**
NSX-edge-1-0> show rpfilter
net.ipv4.conf.all.rp_filter = 1
net.ipv4.conf.default.rp_filter = 0
net.ipv4.conf.lo.rp_filter = 0
net.ipv4.conf.VDR.rp_filter = 0
net.ipv4.conf.vNic_0.rp_filter = 1
net.ipv4.conf.vNic_1.rp_filter = 1
net.ipv4.conf.vNic_2.rp_filter = 1
net.ipv4.conf.vNic_3.rp_filter = 1
net.ipv4.conf.vNic_4.rp_filter = 1
net.ipv4.conf.vNic_5.rp_filter = 1
net.ipv4.conf.vNic_6.rp_filter = 1
net.ipv4.conf.vNic_7.rp_filter = 1
net.ipv4.conf.vNic_8.rp_filter = 1
net.ipv4.conf.vNic_9.rp_filter = 1
net.ipv4.conf.br-sub.rp_filter = 0

**show rpfstats**
Shows the reverse path filter statistics.

**Synopsis**
show rpfstats

**CLI Mode**
Basic

**Example**
NSX-edge-1-0> show rpfstats
RPF drop packet count: 13301

**show service all**
Show the status of all services.

**Synopsis**
show service all

**CLI Mode**
Basic

**Example**
NSX-edge-1-0> show service all
<table>
<thead>
<tr>
<th>Service</th>
<th>Admin Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIREWALL</td>
<td>Enabled</td>
</tr>
<tr>
<td>SNAT</td>
<td>Enabled</td>
</tr>
<tr>
<td>DNAT</td>
<td>Enabled</td>
</tr>
<tr>
<td>LB</td>
<td>Enabled</td>
</tr>
<tr>
<td>IPSEC</td>
<td>Disabled</td>
</tr>
<tr>
<td>DNS-RELAY</td>
<td>Disabled</td>
</tr>
<tr>
<td>SSLVPN</td>
<td>Disabled</td>
</tr>
<tr>
<td>L2VPN</td>
<td>Disabled</td>
</tr>
<tr>
<td>GSLB</td>
<td>Disabled</td>
</tr>
<tr>
<td>DHCP</td>
<td>Disabled</td>
</tr>
<tr>
<td>ECMP</td>
<td>Disabled</td>
</tr>
<tr>
<td>OSPF</td>
<td>Enabled</td>
</tr>
<tr>
<td>BGP</td>
<td>Disabled</td>
</tr>
<tr>
<td>ARP-FLTR</td>
<td>Disabled</td>
</tr>
<tr>
<td>SYSLOG</td>
<td>Disabled</td>
</tr>
<tr>
<td>HA</td>
<td>Enabled</td>
</tr>
<tr>
<td>SSH</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

**show service dhcp**

Shows whether the DHCP service is running, and shows lease information with the `leaseinfo` argument.

**Synopsis**

`show service dhcp [leaseinfo]`

**CLI Mode**

Basic

**show service dns**

Shows whether the DNS service is running.

**Synopsis**

`show service dns`

**CLI Mode**

Basic

**show service highavailability**

Shows high availability (HA) service information such as HA status and Healthcheck status, etc.

**Synopsis**

`show service highavailability`

**CLI Mode**

Basic

**Example**

```
NSX-edge-2-0> show service highavailability
Highavailability Status: running
Highavailability Unit Name: nsx-edge-2-0
Highavailability Unit State: active
Highavailability Interface(s): vNic_1
Unit Poll Policy:
  Frequency: 3 seconds
  Deadtime: 15 seconds
  Stateful Sync-up Time: 10 seconds
Highavailability Healthcheck Status:
```

Peer host [nsx-edge-2-1]: good
This host [nsx-edge-2-0]: good
Highavailability Stateful Logical Status:
  File-Sync running
  Connection-Sync running
    xmit  xerr  rcv  rerr
    73176  0    71392  0

show service highavailability connection-sync

Shows HA connection sync-up status information. For example, statistics about current active connections of both local and peer device.

Synopsis

show service highavailability connection-sync

CLI Mode

Basic

Example

NSX-edge-2-0> show service highavailability connection-sync
connections local:
current active connections: 0
connections created: 0 failed: 0
connections updated: 0 failed: 0
connections destroyed: 0 failed: 0

connections peer:
current active connections: 0
connections created: 0 failed: 0
connections updated: 0 failed: 0
connections destroyed: 0 failed: 0

traffic processed:
  0 Bytes  0 Pckts

UDP traffic (active device=vNic_1):
  74080 Bytes sent  72264 Bytes recv
  4676 Pckts sent  4673 Pckts recv
  0 Error send  0 Error recv

message tracking:
  0 Malformed msgs  9 Lost msgs

show service highavailability internal

Show high availability internal status information.

Synopsis

show service highavailability internal

CLI Mode

Basic

Example

NSX-edge-1-0> show service highavailability internal
Highavailability Internal Status:
Last updated: Mon Aug 17 00:28:50 2015
Current DC: nsx-edge-1-1 (1d263b8a-ff14-f737-a14e-67171e3c2293)
Version: 1.0.9-da7075976b5ff0bee71074385f8fd02f296ec8a3
  2 Nodes configured.
  1 Resources configured.
show service highavailability link

Shows HA link information such as IP addresses for peer links and local links.

Synopsis

show service highavailability link

CLI Mode

Basic

Example

NSX-edge-2-0> show service highavailability link
Local IP Address: 169.254.1.1/30
Peer IP Address: 169.254.1.2/30

show service ipsec

Shows the VPN service details. For an explanation of the various sub-modes of this command, see the sections that follow this one.

Synopsis

show service ipsec (cacerts | certs | crls | pubkeys | sa | sp)

Option Description

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cacerts</td>
<td>Show the CA certificates.</td>
</tr>
<tr>
<td>certs</td>
<td>Show the Edge certificates</td>
</tr>
<tr>
<td>crls</td>
<td>Show the CRLs revoke certificates.</td>
</tr>
<tr>
<td>pubkeys</td>
<td>Show the public keys.</td>
</tr>
<tr>
<td>sa</td>
<td>Show the Security Association Database (SAD) entry.</td>
</tr>
<tr>
<td>site</td>
<td>Show the site information.</td>
</tr>
<tr>
<td>sp</td>
<td>Show the Security Policy Database (SPD) entry.</td>
</tr>
</tbody>
</table>

CLI Mode

Basic

Example

NSX-edge-1-0# show service ipsec status

show service ipsec cacerts

Shows IPSEC CA certificates.

Synopsis

show service ipsec cacerts

CLI Mode

Privileged, Configuration, and Interface Configuration

show service ipsec certs

Shows IPSEC certificates.
show service ipsec certs

Synopsis
show service ipsec certs

CLI Mode
Basic

show service ipsec crls

Shows Certificate Revocation Lists (CRL).

Synopsis
show service ipsec crls

CLI Mode
Basic

show service ipsec pubkeys

Shows all installed public keys that are either received from peers or loaded locally.

Synopsis
show service ipsec pubkeys

CLI Mode
Basic

show service ipsec sa

Shows the security association database, which contains a set of security information that describes a particular kind of secure connection between one device and another.

Synopsis
show service ipsec sa

CLI Mode
Basic

show service ipsec site

Shows the IPSec site information.

Synopsis
show service ipsec site

CLI Mode
Basic

show service ipsec stats

Displays IPSec statistics information.

Synopsis
show service ipsec stats
show service ipsec sp

Shows the security policy database, which contains a set of rules that are programmed into the IPSec implementation that tells it how to process different packets received by the device.

Synopsis
show service ipsec sp

show service l2vpn (on client)

Shows the L2 VPN client status.

Synopsis
show service l2vpn

Example
NSX-edge-1-0> show service l2vpn
L2 VPN is running
-----------------------------------------------------------------------
L2 VPN type: Client
Tunnel status: up
Total bytes sent: 582
Total bytes received: 408
Tx Packet drop : 0
Rx Packet drop : 0
Encryption Cipher : AES128-GCM-SHA256

show service l2vpn (on server)

Shows the L2 VPN server status and the tunnel information.

Synopsis
show service l2vpn

Example
NSX-edge-1-0> show service l2vpn
L2 VPN is running
-----------------------------------------------------------------------
L2 VPN type : Server
Tunnel Information :

<table>
<thead>
<tr>
<th>CONN ID</th>
<th>SITENAME</th>
<th>USERNAME</th>
<th>INTERFACE</th>
<th>UP TIME</th>
<th>CLIENT ESG IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Client1</td>
<td>user1</td>
<td>na1</td>
<td>1:19:12</td>
<td>10.172.65.144</td>
</tr>
<tr>
<td>2</td>
<td>SiteOne</td>
<td>s1</td>
<td>na1</td>
<td>12:24:28</td>
<td>10.161.95.11</td>
</tr>
</tbody>
</table>
show service l2vpn site

Shows the site status for L2 VPN server. You can run this command on both the client and the server.

- On server side, all the sites are displayed (irrespective of tunnel status). You can filter to see information about a particular site using the `show service l2vpn site <sitename>` command. If `<sitename>` does not exist, then the output will be blank.
- On client side, all the sites are displayed (irrespective of tunnel status). As there is only one site on client side, you cannot filter to see information about a particular site.

**Synopsis**

show service l2vpn site

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show service l2vpn site

   SITENAME     INTERFACE       TYPE       VLANID/VNI           TUNNELID
Site One      vNic_10         VLAN       100                  10
Site Two      vNic_10         VLAN       100                  10

NSX-edge-1-0> show service l2vpn site sitename
show service l2vpn site siteone

   SITENAME     INTERFACE       TYPE       VLANID/VNI           TUNNELID
Site One      vNic_10         VLAN       100                  10
```

show service l2vpn bridge

Shows the L2 VPN bridge configuration. You can run this command on both the client and the server.

You can filter the output on the following three parameters.

- `vlan_id`: `vlan_id=300`
- `mac_addr`: `mac_addr=00:50:56:bd:1d:ff`
- `interface`: `interface=vNic_2`

You can use them in combination, separated by two underscores. For example: `vlan_id=<vlanid>__interface=<interface>__mac_addr=<macaddr>`

**Synopsis**

show service l2vpn bridge

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show service l2vpn bridge

   bridge name     bridge id      STP enabled interfaces
br-sub           8000.005056b86b  no          vNic_2
                4                                     4
                6                                     6
```
List of learned MAC addresses for L2 VPN bridge br-sub

<table>
<thead>
<tr>
<th>INTERFACES</th>
<th>MAC ADDR</th>
<th>VLAN ID</th>
<th>ON BRIDGE</th>
<th>AGING TIMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>4094</td>
<td>yes</td>
<td>0.00</td>
</tr>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>0</td>
<td>yes</td>
<td>0.00</td>
</tr>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>300</td>
<td>yes</td>
<td>0.00</td>
</tr>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>2101</td>
<td>yes</td>
<td>0.00</td>
</tr>
<tr>
<td>na1</td>
<td>82:ef:2e:9d:68:ff</td>
<td>0</td>
<td>yes</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NSX-edge-1-0> show service l2vpn bridge vlan_id=300

<table>
<thead>
<tr>
<th>INTERFACES</th>
<th>MAC ADDR</th>
<th>VLAN ID</th>
<th>ON BRIDGE</th>
<th>AGING TIMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>300</td>
<td>yes</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NSX-edge-1-0> show service l2vpn bridge vlan_id=300__interface=vNic_2

<table>
<thead>
<tr>
<th>INTERFACES</th>
<th>MAC ADDR</th>
<th>VLAN ID</th>
<th>ON BRIDGE</th>
<th>AGING TIMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>300</td>
<td>yes</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NSX-edge-1-0> show service l2vpn bridge vlan_id=300__mac_addr=00:50:56:bd:1d:ff

<table>
<thead>
<tr>
<th>INTERFACES</th>
<th>MAC ADDR</th>
<th>VLAN ID</th>
<th>ON BRIDGE</th>
<th>AGING TIMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_2</td>
<td>00:50:56:bd:1d:ff</td>
<td>300</td>
<td>yes</td>
<td>0.00</td>
</tr>
</tbody>
</table>

show service l2vpn conversion table

Lists the tunnel ID to which the network is mapped. Also indicates whether the network is VLAN or VXLAN.

Synopsis

show service l2vpn conversion-table
show service l2vpn ebtables

*ebtables* is an application program used to set up and maintain the tables of rules that inspect Ethernet frames. To view these rules, run the *ebtables* command.

**Synopsis**

show service l2vpn ebtables

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show service l2vpn ebtables
Bridge table: filter

Bridge chain: INPUT, entries: 2, policy: ACCEPT
-i na1 -j chain_na1
-i vNic_2 -j chain_vNic_2

Bridge chain: FORWARD, entries: 4, policy: ACCEPT
-o na1 -j chain_na1
-i na1 -j chain_na1
-o vNic_2 -j chain_vNic_2
-i vNic_2 -j chain_vNic_2

Bridge chain: OUTPUT, entries: 2, policy: ACCEPT
-o na1 -j chain_na1
-o vNic_2 -j chain_vNic_2

Bridge chain: chain_vNic_2, entries: 12, policy: ACCEPT
-p 802_1Q -o vNic_2 --vlan-id 300 -j ACCEPT
-p 802_1Q -i vNic_2 --vlan-id 300 -j ACCEPT
-p 802_1Q -o vNic_2 --vlan-id 4094 -j ACCEPT
-p 802_1Q -i vNic_2 --vlan-id 4094 -j ACCEPT
-p 802_1Q -o vNic_2 --vlan-id 2101 -j ACCEPT
-p 802_1Q -i vNic_2 --vlan-id 2101 -j ACCEPT
-i vNic_2 -j DROP
-o vNic_2 -j DROP
-i vNic_2 -j DROP
-o vNic_2 -j DROP
-i vNic_2 -j DROP
-o vNic_2 -j DROP

Bridge chain: chain_na1, entries: 4, policy: ACCEPT
-p 802_1Q -o na1 --vlan-id 2101 -j ACCEPT
-p 802_1Q -i na1 --vlan-id 2101 -j ACCEPT
-1 na1 -j DROP
-0 na1 -j DROP

**show service l2vpn trunk-table**

Lists the interfaces of the Edge and shows the trunk interfaces. You can run this command on both the client and the server.

**Synopsis**

```
show service l2vpn trunk-table
```

**CLI Mode**

Basic

**Example**

NSX-edge-1-0> show service l2vpn trunk-table

<table>
<thead>
<tr>
<th>ifindex</th>
<th>iface</th>
<th>trunk</th>
<th>flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>lo</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>02</td>
<td>VDR</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03</td>
<td>vNIC_0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04</td>
<td>vNIC_4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>05</td>
<td>vNIC_5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>06</td>
<td>vNIC_9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>07</td>
<td>VDR</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**show service loadbalancer**

Shows overall current loadbalancer engine state.

**Synopsis**

```
show service loadbalancer
```

**CLI Mode**

Basic

**Example**

Loadbalancer Services Status:

```
L7 Loadbalancer : stopped
L7 Loadbalancer Statistics:
STATUS        PID MAX_MEM_MB MAX_SOCK MAX_CONN MAX_PIPE CUR_CONN CONN_RATE
stopped        0     0         0         0         0         0         0         0
```

```
L4 Loadbalancer Statistics:
MAX_CONN ACT_CONN INACT_CONN TOTAL_CONN
0         0         0         0
```

Prot LocalAddress:Port Scheduler Flags

```
-> RemoteAddress:Port Forward Weight ActiveConn InActConn
```
show service loadbalancer error

Shows recent loadbalancer errors.

Synopsis
show service loadbalancer error

CLI Mode
Basic

Example
L7 Loadbalancer : stopped

show service loadbalancer monitor

Shows health of specified monitor.

Synopsis
show service loadbalancer monitor [monitorName]

CLI Mode
Basic

Example
NSX-edge-1-0> show service loadbalancer monitor
-------------------------------------------------------------
Loadbalancer HealthMonitor Statistics:

POOL MEMBER HEALTH STATUS
http-pool http-Server default_http_monitor:CRITICAL

show service loadbalancer pool

Shows pool member state.

Synopsis
show service loadbalancer pool [poolName]

CLI Mode
Basic

Example
NSX-edge-1-0> show service loadbalancer pool
-------------------------------------------------------------
Loadbalancer Pool Statistics:

POOL http-pool
 | LB METHOD round-robin
 | LB PROTOCOL L7
 | Transparent disabled
 | SESSION (cur, max, limit, total) = (0, 0, 1, 0)
 | BYTES in = (0), out = (0)
 +->POOL MEMBER: http-pool/http-Server, STATUS: DOWN
 | | STATUS = DOWN, MONITOR STATUS = default_http_monitor:CRITICAL
 | | SESSION (cur, max, limit, total) = (0, 0, , 0)
 | | BYTES in = (0), out = (0)
**show service loadbalancer session**

Shows concurrent sessions for both L4 and L7 load balancer engines.

**Synopsis**

```
show service loadbalancer session [l4 | l7]
```

**CLI Mode**

Basic

**show service loadbalancer table**

Shows session persistence table entries.

**Synopsis**

```
show service loadbalancer table [tableName]
```

**CLI Mode**

Basic

**show service loadbalancer virtual**

Shows virtual server details.

**Synopsis**

```
show service loadbalancer virtual [serverName]
```

**CLI Mode**

Basic

**Example**

```
NSX-edge-1-0> show service loadbalancer virtual
-------------------------------
Loadbalancer VirtualServer Statistics:
VIRTUAL VSIP
 | ADDRESS [10.115.172.18]:80
 | SESSION (cur, max, limit, total) = (0, 0, 1024, 0)
 | RATE (cur, max, limit) = (0, 0, 0)
 | BYTES in = (0), out = (0)
```

**show service monitor**

Shows the running status of the health monitor service.

**Synopsis**

```
show service monitor
```

**CLI Mode**

Basic, Privileged

**Example**

```
NSX-edge-1-0> show service monitor
Network Monitor Service Status:
Network Monitor : running
PID : 18578
Total Services : 7
Monitored Services Status:
```
Services in OK/WARNING/UNKNOWN/CRITICAL : 1 / 0 / 0 / 6
Services Scheduled : 7
Services Checked : 7
Service Checks Last 1/5/15 min : 45 / 45 / 45
Total Service State Change : 0.000 / 0.000 / 0.000 %

**show service monitor service**

Shows the running status of health monitor instances.

**Synopsis**

```
show service monitor service [monitorName]
```

**CLI Mode**

Basic, Privileged

**Example**

```
NSX-edge-1-0> show service monitor service
Network Monitor: Monitored Services Statistics:
MONITOR default_tcp_monitor
| TOTAL SERVICES MONITORED: 5
++->SERVICE [0]
++->SERVICE METADATA INFORMATION:
| MONITOR: default_tcp_monitor
| POOL: iis-pool
| MEMBER: m1
| HOST ADDRESS: 10.117.5.62
| CHECK EXECUTION TIME (s): 15.033
| CHECK LATENCY (s): 0.627
| CHECK ATTEMPTS (CUR/MAX): 1/1
| CHECK RESULT: CRITICAL - Socket timeout after 15 seconds
++->SERVICE [1]
++->SERVICE METADATA INFORMATION:
| MONITOR: default_tcp_monitor
| POOL: tcp-pool-shared-14-17
| MEMBER: 192.168.1.100
| HOST ADDRESS: 192.168.1.100
| CHECK EXECUTION TIME (s): 3.036
| CHECK LATENCY (s): 0.652
| CHECK ATTEMPTS (CUR/MAX): 1/1
| CHECK RESULT: No route to host
++->SERVICE [2]
++->SERVICE METADATA INFORMATION:
| MONITOR: default_tcp_monitor
| POOL: tcp-pool
| MEMBER: m1
| HOST ADDRESS: 192.168.1.100
| CHECK EXECUTION TIME (s): 2.036
| CHECK LATENCY (s): 0.653
| CHECK ATTEMPTS (CUR/MAX): 1/1
| CHECK RESULT: No route to host
.
.
.
MONITOR HC-WEB
| TOTAL SERVICES MONITORED: 2
++->SERVICE [0]
++->SERVICE METADATA INFORMATION:
| MONITOR: HC-WEB
| POOL: http-pool
| MEMBER: m1
| HOST ADDRESS: 192.168.1.100
| CHECK EXECUTION TIME (s): 3.037
| CHECK LATENCY (s): 0.652
```
show service network-connections

Shows service network connection information. For example, TCP and UDP service information.

Synopsis

show service network-connections

CLI Mode

Basic

Example

NSX-edge-1-0> show service network-connections

vShield Edge Service Network-Connection Status:
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
PID/Program name
tcp        0      0 127.0.0.1:2601          0.0.0.0:*               LISTEN      833/zebra
1584/vmciproxy
tcp        0      0 127.0.0.1:10000         0.0.0.0:*               LISTEN      1584/vmciproxy
tcp        0      0 0.0.0.0:179             0.0.0.0:*               LISTEN      863/dcsms
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      1553/sshd
tcp        0      0 127.0.0.1:15000         0.0.0.0:*               LISTEN      863/dcsms
tcp        0      0 127.0.0.1:2812          0.0.0.0:*               LISTEN      895/monit
tcp        0      0 127.0.0.1:10000         127.0.0.1:18566         ESTABLISHED 863/dcsms
1586/msgmgr
tcp        0      0 127.0.0.1:36905         127.0.0.1:10001         ESTABLISHED 1586/msgmgr
tcp        0      0 192.168.101.3:22        192.168.110.10:51116    ESTABLISHED 31299/sshd: admin [ 1584/vmciproxy
tcp        0      0 192.168.101.3:50522     192.168.10.6:50726      ESTABLISHED 1584/vmciproxy
tcp        0      0 127.0.0.1:10001         127.0.0.1:36905         ESTABLISHED 1584/vmciproxy
udp        0      0 127.0.0.1:514           0.0.0.0:*               LISTEN      692/syslog-ng
Active UNIX domain sockets (servers and established)
Proto RefCnt Flags       Type       State         I-Node PID/Program name    Path
unix  2      [ ACC ]     STREAM     LISTENING     517    824/fcron
/usr/local/var/run/fcron.fifo
unix  2      [       ] DGRAM                    7950   1586/msgmgr
/var/run/vmware/vshield/msgmgr/vse_event.sock
unix  2      [ ACC ]     STREAM     LISTENING     538    833/zebra
/var/run/zserv.ap1
unix  2      [ ACC ]     STREAM     LISTENING     545    833/zebra
/var/run/zebra.vty
show service sslvpn-plus

Shows SSL VPN-Plus service information.

Synopsis
global show service sslvpn-plus

CLI Mode
Basic

show service sslvpn-plus sessions

Shows SSL VPN-Plus active sessions.

Synopsis
global show service sslvpn-plus sessions

CLI Mode
Basic

show service sslvpn-plus stats

Shows SSL VPN-Plus statistic information.

Synopsis
global show service sslvpn-plus stats

CLI Mode
Basic

show service sslvpn-plus tunnels

Shows SSL VPN-Plus tunnel information.

Synopsis
global show service sslvpn-plus tunnels

CLI Mode
Basic

show system cpu

Shows the system CPU details.
**Synopsis**

```
show system cpu
```

### CLI Mode

**Basic**

### Example

```
NSX-edge-1-0# show system cpu
processor       : 0
vendor_id       : GenuineIntel
cpu family      : 6
model           : 45
model name      : Intel(R) Xeon(R) CPU E5-2680 0 @ 2.70GHz
stepping        : 7
microcode       : 0x710
cpu MHz         : 2700.000
cache size      : 20480 KB
fpu             : yes
fpu_exception   : yes
cpuid level     : 13
wp              : yes
flags           : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                   clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm constant_tsc
                   arch_perfmon pebs bts npb xtopology tsck_reliable nonstop_tsc aperf perf
                   pni pclmulqdq ssse3 cx16 pcid sse4_1 sse4_2 x2apic popcnt aes xsave avx
                   hypervisor lahf_lm ida arat epb pni pts dtherm
bogomips        : 5400.00
clflush size    : 64
cache_alignment : 64
address sizes   : 40 bits physical, 48 bits virtual
power management:
processor       : 1
vendor_id       : GenuineIntel
cpu family      : 6
.
.
.
```

### Related Commands

```
show system memory
show system uptime
```

### show system interrupt

Shows system interrupt and affinity information.

**Synopsis**

```
show system interrupt [affinity irqID]
```

### Example

```
NSX-edge-1-0# show system interrupt
CPU          CPU0 CPU1
0:           796  0   IO-APIC-edge  timer
1:            4  4   IO-APIC-edge  i8042
4:           11  0   IO-APIC-edge  serial
8:           52  0   IO-APIC-edge  rtc0
9:            0  0   IO-APIC-fasteoi acpi
12:           0 114  IO-APIC-edge  i8042
```
show system memory

Shows the summary of memory utilization.

Synopsis

show system memory

CLI Mode

Basic, Privileged

Example

NSX-edge-1-0# show system mem
MemTotal: 2072204 kB
MemFree: 1667248 kB
Buffers: 83120 kB


show system network-stats

Shows network statistics. For example, statistics for IP, ICMP, TCP and UDP.

Synopsis

show system network-stats

CLI Mode

Basic

Example

NSX-edge-1-0> show system network-stats
Ip:
45198 total packets received
0 forwarded
Standalone NSX Edge Overview

A standalone NSX Edge appliance can be deployed as a L2 VPN client in a vCenter that does not use NSX. The L2VPN client connects to an NSX Edge L2VPN server that is part of an NSX installation.

You deploy a standalone edge using an OVF file. After deployment, all configuration changes must be made using the command line interface.

A standalone NSX Edge appliance has the same basic and privileged modes as an NSX Edge that is deployed in an NSX environment. In addition, it has configuration, interface configuration and L2VPN configuration modes.

Log in as the user admin to use the standalone NSX Edge commands.

Standalone NSX Edge Commands

**ciphers**

Add ciphers to the configuration. Available options are 3DES, AES, AES256, GCM, and NULL. List multiple ciphers separated by a colon (:). To remove a cipher, use `no` before the command.

**Synopsis**

```text
[no] ciphers cipherName1[:cipherName2][:...]
```

**CLI Mode**

L2VPN

**Example**

```bash
nsx-l2vpn-edge(config-l2vpn)# ciphers 3DES

or

nsx-l2vpn-edge(config-l2vpn)# ciphers 3DES:AES

or

nsx-l2vpn-edge(config-l2vpn)# no ciphers 3DES
```

**Related Commands**

- `show configuration l2vpn`

**commit**

Applies changes made in configuration, interface configuration, or L2VPN mode to the system. Uncommitted changes are persistent across reboots. You can view uncommitted changes with `show configuration uncommitted`.
**Synopsis**
```
commits
```

**CLI Mode**
Configuration, Interface Configuration, L2VPN

**Example**
```
nsx-l2vpn-edge(config)# commit
```

**Related Commands**
```
show configuration uncommitted
```

### configure terminal

Switches to Configuration mode from Privileged mode.

**Synopsis**
```
configure terminal
```

**CLI Mode**
Privileged

**Example**
```
nsx-l2vpn-edge# configure terminal
nsx-l2vpn-edge(config)#
```

**Related Commands**
```
exit
quit
interface intName
l2vpn
commit
```

### dns name-server

Configures DNS servers. To remove a DNS server, use `no` before the command.

**Synopsis**
```
[no] dns name-server ipAddressPrimary [ipAddressSecondary]
```

**CLI Mode**
Configuration

**Example**
```
nsx-l2vpn-edge(config)# dns name-server 192.168.110.10
```

**Related Commands**
```
show configuration global
```

### egress-optimize

Adds one or more IP addresses to the egress-optimize IP list. To remove an IP address, use `no` before the command.

**Synopsis**
```
[no] egress-optimize ipAddress1[:ipAddress2:][...]
```

VMware, Inc.
**CLI Mode**

**L2VPN**

**Example**

```plaintext
nsx-l2vpn-edge(config-l2vpn)# no egress-optimize 192.168.1.1
or
nsx-l2vpn-edge(config-l2vpn)# egress-optimize 192.168.1.1:192.168.2.1:192.168.3.1
```

**Related Commands**

`show configuration l2vpn`

---

**exit**

Exits from the current mode and switches to the previous mode, or exits the CLI session if run from Privileged or Basic mode.

**Synopsis**

`exit`

**CLI Mode**

Basic, Privileged, Configuration, Interface Configuration, L2VPN

**Example**

```plaintext
nsx-l2vpn-edge(config)# exit
nsx-l2vpn-edge#
or
nsx-l2vpn-edge# exit
Connection to 192.168.100.200 closed.
```

**Related Commands**

`quit`

`disable`

---

**fips enable**

Enable FIPS mode for the standalone edge. You must reboot standalone edge after committing the changes.

**Synopsis**

`fips enable`

**CLI Mode**

Configuration

**Example**

```plaintext
nsx-l2vpn-edge# configure terminal
nsx-l2vpn-edge(config)# fips enable
nsx-l2vpn-edge(config)# commit
```

**Related Commands**

`configure terminal`
`commit`
`fips disable`
**fips disable**

Disable FIPS mode for the standalone edge. You must reboot standalone edge after committing the changes.

**Synopsis**

`fips disable`

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge# configure terminal
nsx-l2vpn-edge(config)# fips disable
nsx-l2vpn-edge(config)# commit
```

**Related Commands**

- `configure terminal`
- `commit`
- `fips enable`

**interface intName**

Switches to Interface Configuration mode for the specified interface. Changing the configuration of the uplink interface is the only supported option.

**Synopsis**

`interface intName`

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge(config)# interface uplink
nsx-l2vpn-edge(config-if)#
```

**Related Commands**

- `show configuration interface`

**ip address**

Assigns an IP address to an interface. To remove an IP address from an interface, use `no` before the command. It is recommended to change the IP address setting from the console only.

**Synopsis**

`[no] ip address ipAddress/netmask`

**CLI Mode**

Interface Configuration

**Example**

```
nsx-l2vpn-edge(config-if)# ip address 192.168.100.200/24
```

**Related Commands**

- `show configuration interface`
**ip route**

Adds a static route. To delete an IP route, use `no` before the command.

**Synopsis**

`[no] ip route ipAddress/netmask gatewayIP`

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge(config)# ip route 0.0.0.0/0 192.168.100.2
```

**Related Commands**

- `show configuration static-routing`

**l2vpn**

Switches to L2VPN mode from Configuration mode.

**Synopsis**

`l2vpn`

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge(config)# l2vpn
nsx-l2vpn-edge(config-l2vpn)#
```

**Related Commands**

- `commit`
- `exit`
- `quit`
- `show configuration l2vpn`

**mtu**

Specify MTU for an interface. Valid values are between 60 and 9000.

**Synopsis**

`mtu intName mtuSize`

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge(config)# mtu uplink 1500
```

**Related Commands**

- `show configuration interface`

**no proxy setup**

Remove the proxy setup including proxy user setup.
**Synopsis**
no proxy setup

**CLI Mode**
L2VPN

**Example**
nsx-l2vpn-edge(config-l2vpn)# no proxy setup

**Related Commands**
show configuration l2vpn
proxy address
proxy username

**no proxy user**
Remove the proxy user configuration.

**Synopsis**
no proxy user

**CLI Mode**
L2VPN

**Example**
nsx-l2vpn-edge(config-l2vpn)# no proxy user

**Related Commands**
show configuration l2vpn
proxy username

**password**
Change the password of the admin, enable, or root user. The password command takes effect immediately without having to commit the change.

**Synopsis**
password userName

**CLI Mode**
Configuration

**Example**
nsx-l2vpn-edge(config)# password admin

**proxy address**
Set the proxy IP address and port.

**Synopsis**
proxy address ipAddress portNumber

**CLI Mode**
L2VPN

**Example**
nsx-l2vpn-edge(config-l2vpn)# proxy address 10.10.1.1 port 553
Related Commands

proxy username
no proxy setup
show configuration l2vpn

proxy username
Sets the proxy authentication username and password. There can be only one user configured. If you run this command when a user is already configured, the previous user configuration will be overwritten.

Synopsis

proxy username userName password password

CLI Mode

L2VPN

Example

nsx-l2vpn-edge(config-l2vpn)# proxy username test password test

Related Commands

no proxy user
show configuration l2vpn

quit

Exits from the current mode and switches to the previous mode, or exits the CLI session if run from Privileged or Basic mode.

Synopsis

quit

CLI Mode

Configuration, Interface Configuration, L2VPN

Example

nsx-l2vpn-edge(config-l2vpn)# quit
nsx-l2vpn-edge(config-l2vpn)#

or

nsx-l2vpn-edge# exit
Connection to 192.168.100.200 closed.

Related Commands

exit

rpfilter

Specify an reverse path filter value for an interface. Specifying all sets all the rpfilter policy for all interfaces. Specifying default sets the rpfilter policy for any new interfaces.

Synopsis

rpfilter interfaceName policy

<table>
<thead>
<tr>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Disable - no reverse path confirmation will be performed</td>
</tr>
</tbody>
</table>
server ipAddress [port]

Configure the remote L2VPN server IP address, and optionally port. If no port is specified, the default port of 443 is used.

To delete a remote L2VPN server, use `no` before the command.

**Synopsis**

```
[no] server ipAddress [port]
```

**CLI Mode**

L2VPN

**Example**

```
nsx-l2vpn-edge(config-l2vpn)# server 10.10.10.1 553
```

**Related Commands**

`show configuration 12vpn`

---

### show configuration

Show configuration information. With no arguments, it shows all configuration. You can optionally specify which section of the configuration to view: certificatestore, global, interface, l2vpn, routing-global, and static-routing. Specifying uncommitted will show any configuration that has been entered but not yet committed. Uncommitted configuration is persistent across reboots.

**Synopsis**

```
show configuration [configType]
```

**CLI Mode**

Configuration, Interface Configuration, L2VPN

**Example**

```
nsx-l2vpn-edge(config-if)# show configuration static-routing
```

```
vsifield Edge Static Routing Config:
{
    "staticRouting" : [
        {
            "gatewayAddress" : null,
            "destinationNetwork" : "0.0.0.0/0",
            "interface" : "vNic_0",
            "gatewayAddresses" : [
                "192.168.100.2"
            ],
            "description" : "",
            "mtu" : 1500
```
show log

Show system log file.

**Synopsis**

show log

**CLI Mode**

Configuration, Interface Configuration, L2VPN

**Example**

```
nsx-l2vpn-edge(config)# show log
2015-08-13T21:04:17+00:00 vShieldEdge kernel: Initializing cgroup subsys cpuset
2015-08-13T21:04:17+00:00 vShieldEdge kernel: Initializing cgroup subsys cpu
2015-08-13T21:04:17+00:00 vShieldEdge kernel: Linux version 3.2.62
(root@sc-d01-255-093.eng.vmware.com) (gcc version 4.5.3 (GCC) ) #1 SMP Fri Jul 17 23:38:44 GMT 2015
2015-08-13T21:04:17+00:00 vShieldEdge kernel: Command line: BOOT_IMAGE=/boot/vmlinuz
loglevel=3 root=/dev/sda1
2015-08-13T21:04:17+00:00 vShieldEdge kernel: Disabled fast string operations
2015-08-13T21:04:17+00:00 vShieldEdge kernel: BIOS-provided physical RAM map:
2015-08-13T21:04:17+00:00 vShieldEdge kernel: BIOUS-e820: 0000000000000000 -
000000000009f800 (usable)
2015-08-13T21:04:17+00:00 vShieldEdge kernel: BIOUS-e820: 000000000009f800 -
00000000000a0000 (reserved)
2015-08-13T21:04:17+00:00 vShieldEdge kernel: BIOUS-e820: 00000000000a0000 -
00000000000cc000 (reserved)
2015-08-13T21:04:17+00:00 vShieldEdge kernel: BIOUS-e820: 00000000000cc000 -
0000000000100000 (reserved)
2015-08-13T21:04:17+00:00 vShieldEdge syslog-ng[730]: syslog-ng starting up;
version='3.3.11'
```

show service dns

Show DNS service status information.

**Synopsis**

show service dns

**CLI Mode**

Configuration, Interface Configuration, L2VPN

**Example**

```
nsx-l2vpn-edge(config)# show service dns
```

show service l2vpn

Show L2VPN service status information.

**Synopsis**

show service l2vpn [bridge | conversion-table | trunk-table]
**Option** | **Description**
--- | ---
bridge | Shows L2VPN bridge information.
conversion-table | Shows conversion table for tunnel IDs to VLAN/VNI IDs, if they are not the same.
trunk-table | Shows trunk information for interfaces.

**CLI Mode**

Configuration, Interface Configuration, L2VPN

**Example**

```
nsx-l2vpn-edge(config)# show service l2vpn
L2 VPN is running.
----------------------------------------
L2 VPN type            : Client
Tunnel status          : down
Total bytes sent       : 0
Total bytes received   : 0
```

**show sub-interface**

Show sub-interfaces configured on the trunk interface. An NSX Edge can have 10 interfaces (vNic_0 - vNic_9), so the sub-interface numbering starts at 10. The interface index is the TunnelId plus 10.

**Synopsis**

```
show sub-interface
```

**CLI Mode**

Configuration, Interface Configuration, L2VPN

**Example**

```
nsx-l2vpn-edge(config)# show sub-interface
```

<table>
<thead>
<tr>
<th>Name</th>
<th>Index</th>
<th>TunnelId</th>
<th>NetworkId</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_210</td>
<td>210</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

--------------------- total 1 ---------------------

**ssh (start | stop)**

Start or stop the ssh service. It is recommended to stop the ssh service from the console only.

**Synopsis**

```
ssh (start | stop)
```

**CLI Mode**

Configuration

**Example**

```
nsx-l2vpn-edge(config)# ssh stop
nsx-l2vpn-edge(config)# commit
```

**sub-interface pairs**

Add a sub-interface with VLAN ID to tunnel ID mapping. The VLAN ID and tunnel ID must be separated by a colon (:). Multiple vlan-tunnel pairs can be specified in the same command, with each pair separated by a space, and the group of pairs enclosed in quotes.
**Synopsis**

sub-interface pairs “vlanID1:tunnelID1 [vlanID2:tunnelID2] [...]”

**CLI Mode**

Configuration

**Example**

nsx-l2vpn-edge(config)# sub-interface pairs 250:20
or
nsx-l2vpn-edge(config)# sub-interface pairs “300:30 400:31 500:32 600:33”

**Related Commands**

show sub-interface
sub-interface range

---

**sub-interface range**

Add a range of sub-interfaces with VLAN ID to tunnel ID mapping. The VLAN ID and tunnel ID of each sub-interface is the same when created with this command.

**Synopsis**

sub-interface range startID endID

**CLI Mode**

Configuration

**Example**

nsx-l2vpn-edge(config)# sub-interface range 10 15
nsx-l2vpn-edge(config)# commit
nsx-l2vpn-edge(config)# show sub-interface

<table>
<thead>
<tr>
<th>Name</th>
<th>Index</th>
<th>TunnelId</th>
<th>NetworkId</th>
</tr>
</thead>
<tbody>
<tr>
<td>vNic_20</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>vNic_21</td>
<td>21</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>vNic_22</td>
<td>22</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>vNic_23</td>
<td>23</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>vNic_24</td>
<td>24</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>vNic_25</td>
<td>25</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

------------- total 6  -------------

**Related Commands**

show sub-interface
sub-interface pairs

---

**trustca**

Import one or more CA certificates. Each run of trustca command overwrites the previous configuration. The certificates must be in PEM format. To remove all certificates, use no before the command.

**Synopsis**

[no] trustca

**CLI Mode**

L2VPN

**Example**

nsx-l2vpn-edge(config-12vpn)# trustca
Related Commands

- show configuration 12vpn
- show configuration certificatestore

user

Sets the L2VPN username and password. To remove a user, use no before the command.

Synopsis

[no] user userName password password

CLI Mode

L2VPN

Example

nsx-l2vpn-edge(config-l2vpn)# user vpn password vpntest

Related Commands

- show configuration 12vpn
NSX Host Commands

The chapter includes the following topics:

- “ESXi CLI Commands” on page 167
- “DVFilter Commands” on page 173

ESXi CLI Commands

This section describes the ESXi CLI commands for NSX vSphere. For additional ESX CLI commands, see *vSphere Command-Line Interface Documentation*.

**esxcli network vswitch dvs vmware vxlan config stats get**

Shows statistics.

**Synopsis**

esxcli network vswitch dvs vmware vxlan config stats get

**Example**

# esxcli network vswitch dvs vmware vxlan config stats get
Level: 1

**esxcli network vswitch dvs vmware vxlan config stats set**

Enable statistics. Adding level=0 disables statistics.

**Synopsis**

esxcli network vswitch dvs vmware vxlan config stats set

**esxcli network vswitch dvs vmware vxlan get**

Shows VXLAN global states on the system.

**Synopsis**

esxcli network vswitch dvs vmware vxlan get

**Example**

# esxcli network vswitch dvs vmware vxlan get
Controlplane Out Of Sync: No
UDPport: 8472
esxcli network vswitch dvs vmware vxlan list --vds-name value

Shows VXLAN switches information for the specified vDS.

Synopsis
esxcli network vswitch dvs vmware vxlan list

Example
# esxcli network vswitch dvs vmware vxlan list

<table>
<thead>
<tr>
<th>VDS ID</th>
<th>VDS Name</th>
<th>MTU</th>
<th>Segment ID</th>
<th>Gateway IP</th>
<th>Gateway MAC</th>
<th>Network Count</th>
<th>Vmnic Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 fe 34 50 d4 59 27 dc-c7 9f</td>
<td>dvSwitch</td>
<td>1600</td>
<td>192.168.0.0</td>
<td>192.168.0.254</td>
<td>00:00:0c:00:11:22</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

esxcli network vswitch dvs vmware vxlan network list --vds-name value --vxlan-id value

Shows VXLAN network information with specified vDS.

Synopsis
esxcli network vswitch dvs vmware vxlan network list --vds-name value [--vxlan-id value]

Example
# esxcli network vswitch dvs vmware vxlan network list --vds-name dvSwitch

<table>
<thead>
<tr>
<th>VXLAN ID</th>
<th>Multicast IP</th>
<th>Control Plane</th>
<th>Controller</th>
<th>Connection</th>
<th>Port Count</th>
<th>MAC Entry Count</th>
<th>ARP Entry Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000</td>
<td>N/A (headend replication)</td>
<td>Enabled (multicast proxy,ARP proxy)</td>
<td>192.168.100.1</td>
<td>(up)</td>
<td>1</td>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>

esxcli network vswitch dvs vmware vxlan network arp list --vds-name value --vxlan-id value

Retrieves VXLAN network ARP table for specified vDS.

Synopsis
esxcli network vswitch dvs vmware vxlan network arp list --vds-name value --vxlan-id value --vdsport-id value

Example
# esxcli network vswitch dvs vmware vxlan network arplist --vds-name dvSwitch --vxlan-id 5000 --vdsport-id=101

<table>
<thead>
<tr>
<th>IP</th>
<th>MAC</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.200.1</td>
<td>00:50:56:00:11:22</td>
<td>00000000</td>
</tr>
</tbody>
</table>

esxcli network vswitch dvs vmware vxlan network arp reset --vds-name value --vxlan-id value

Resets VXLAN network ARP table for specified vDS.
### Synopsis

```
esxcli network vswitch dvs vmware vxlan network are reset -vds-name value --vxlan-id value --vdsport-id value
```

### esxcli network vswitch dvs vmware vxlan network mac list --vds-name value --vxlan-id value

Retrieves VXLAN network MAC table for specified vDS.

### Synopsis

```
esxcli network vswitch dvs vmware vxlan network mac ABC 500
```

### Example

```
# esxcli network vswitch dvs vmware vxlan network mac --vds-name dvSwitch --vxlan-id 5000
```

### esxcli network vswitch dvs vmware vxlan network mac reset --vxlan-id value --vdsport-id value

Resets VXLAN network MAC table for specified vDS.

### Synopsis

```
esxcli network vswitch dvs vmware vxlan network mac reset -vxlan-id=value --vdsport-id=value
```

### esxcli network vswitch dvs vmware vxlan network port list --vds-name value --vxlan-id value --vdsport-id value

Shows VXLAN port information with specified network.

### Synopsis

```
esxcli network vswitch dvs vmware vxlan network port list --vds-name value --vxlan-id value --vdsport-id value
```

### Example

```
# esxcli network vswitch dvs vmware vxlan network port list --vds-name dvSwitch --vxlan-id 5000
```

### esxcli network vswitch dvs vmware vxlan network port stats list --vds-name value --vdsport-id value --vxlan-id value

Shows VXLAN port statistics information with specified network.

### Synopsis

```
esxcli network vswitch dvs vmware vxlan network port stats list --vds-name value --vdsport-id value --vxlan-id value
```

### Example

```
# esxcli network vswitch dvs vmware vxlan network port stats list --vds-name dvSwitch --vxlan-id 5000 --vdsport-id=101
```
```
Name        Value
---        ---
tx.total   0
rx.total   0

**esxcli network vswitch dvs vmware vxlan network stats list --vdsd-name value --vxlan-id value**

Shows VXLAN network statistics.

**Synopsis**

```bash
esxcli network vswitch dvs vmware vxlan network stats list --vds-name value --vxlan-id value
```

**Example**

```
# esxcli network vswitch dvs vmware vxlan network stats list --vds-name dvSwitch --vxlan-id 5000
```

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>tx.total</td>
<td>0</td>
</tr>
<tr>
<td>tx.nonUnicast</td>
<td>0</td>
</tr>
<tr>
<td>tx.crossRouter</td>
<td>0</td>
</tr>
<tr>
<td>tx.drop.total</td>
<td>0</td>
</tr>
<tr>
<td>rx.total</td>
<td>0</td>
</tr>
<tr>
<td>rx.mcastEncap</td>
<td>0</td>
</tr>
<tr>
<td>rx.crossRouter</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.wrongDest</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.invalidEncap</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.total</td>
<td>0</td>
</tr>
<tr>
<td>mac.lookup.found</td>
<td>0</td>
</tr>
<tr>
<td>mac.lookup.flood</td>
<td>0</td>
</tr>
<tr>
<td>mac.lookup.full</td>
<td>0</td>
</tr>
<tr>
<td>mac.update.learn</td>
<td>0</td>
</tr>
<tr>
<td>mac.update.extend</td>
<td>0</td>
</tr>
<tr>
<td>mac.update.full</td>
<td>0</td>
</tr>
<tr>
<td>mac.age</td>
<td>0</td>
</tr>
<tr>
<td>mac.renew</td>
<td>0</td>
</tr>
<tr>
<td>arp.lookup.found</td>
<td>0</td>
</tr>
<tr>
<td>arp.lookup.unknown</td>
<td>0</td>
</tr>
<tr>
<td>arp.lookup.full</td>
<td>0</td>
</tr>
<tr>
<td>arp.lookup.wait</td>
<td>0</td>
</tr>
<tr>
<td>arp.lookup.timeout</td>
<td>0</td>
</tr>
<tr>
<td>arp.update.update</td>
<td>0</td>
</tr>
<tr>
<td>arp.update.unknown</td>
<td>0</td>
</tr>
<tr>
<td>arp.update.notFound</td>
<td>0</td>
</tr>
<tr>
<td>arp.age</td>
<td>0</td>
</tr>
<tr>
<td>arp.renew</td>
<td>0</td>
</tr>
</tbody>
</table>
```
esxcli network vswitch dvs vmware vxlan network stats reset --vxlan-id value --vdsport-id value

Resets VXLAN network statistics.

Synopsis

esxcli network vswitch dvs vmware vxlan network stats reset -vxlan-id value --vdsport-id value

esxcli network vswitch dvs vmware vxlan network vtep list --vds-name value --vxlan-id value --segment-id value --vtep-ip value

Retrieves VXLAN network VTEP table for specified vDS. To retrieve VTEP information for a specific segment or VTEP IP address, specify the segmentID or vtepIP parameter.

Synopsis

esxcli network vswitch dvs vmware vxlan network mac --vds-name value --vxlan-id value [--segment-id value --vtep-ip value]

Example

# esxcli network vswitch dvs vmware vxlan network mac --vds-name dvSwitch --vxlan-id 5000

IP Segment ID Is MTEP
192.168.0.2 192.168.0.0 False

esxcli network vswitch dvs vmware vxlan vmknic list --vds-name value --endpoint-id value --vmknic-name value --vmknic-ip value

Retrieves VXLAN vmknic multicast group information. To retrieve multicast group information for a specific vmknic, specify the vmknic ID, IP, or name using the appropriate parameter.

Synopsis

esxcli network vswitch dvs vmware vxlan vmknic list --vds-name value [--endpoint-id value --vmknic-name value --vmknic-ip value]

Example

# esxcli network vswitch dvs vmware vxlan vmknic list --vds-name dvSwitch

<table>
<thead>
<tr>
<th>Vmnic Name</th>
<th>Switch Port ID</th>
<th>VDS Port ID</th>
<th>Endpoint ID</th>
<th>VLAN ID</th>
<th>IP</th>
<th>Netmask</th>
<th>IP Acquire Timeout</th>
<th>Multicast Group Count</th>
<th>Segment ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>vmk2</td>
<td>67108868</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>192.168.0.1</td>
<td>255.255.255.0</td>
<td>34960</td>
<td>0</td>
<td>192.168.0.0</td>
</tr>
</tbody>
</table>

esxcli network vswitch dvs vmware vxlan vmknic multicastgroup list --vds-name value --vmknic-id value --vmknic-name value --vmknic-ip value

Retrieves VXLAN network VTEP table for specified vDS. To retrieve VTEP information for a specific segment or VTEP IP address, specify the segmentID or vtepIP parameter.

Synopsis

esxcli network vswitch dvs vmware vxlan vmknic multicastgroup list --vds-name value [--vmknic-id value --vmknic-name value --vmknic-ip value]

Example

# esxcli network vswitch dvs vmware vxlan network mac --vds-name dvSwitch --vmknic-name vmk2
esxcli network vswitch dvs vmware vxlan stats list --vds-name value
   --endpoint-id value --vmknic-name value --vmknic-ip value

Retrieves VXLAN vmknic statistics. To retrieve statistics for a specific vmknic, specify the Endpoint ID, IP, or
name using the appropriate parameter.

Synopsis

esxcli network vswitch dvs vmware vxlan stats list -vds-name value
   [--endpoint-id value --vmknic-name value --vmknic-ip value]

Example

# esxcli network vswitch dvs vmware vxlan stats list --vds-name dvSwitch

<table>
<thead>
<tr>
<th>Vmnic Name</th>
<th>Vmnic ID</th>
<th>VXLAN IP</th>
<th>Multicast IP</th>
<th>Joined</th>
<th>Port Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>vmk2</td>
<td>0</td>
<td>192.168.0.1</td>
<td>239.0.0.1</td>
<td>YES</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>tx.passThrough</td>
<td>0</td>
</tr>
<tr>
<td>tx.vxlanTotal</td>
<td>0</td>
</tr>
<tr>
<td>tx.clone</td>
<td>0</td>
</tr>
<tr>
<td>tx.tso</td>
<td>0</td>
</tr>
<tr>
<td>tx.csum</td>
<td>0</td>
</tr>
<tr>
<td>tx.drop.invalidFrame</td>
<td>0</td>
</tr>
<tr>
<td>tx.drop.guestTag</td>
<td>0</td>
</tr>
<tr>
<td>tx.drop.noResource</td>
<td>0</td>
</tr>
<tr>
<td>tx.drop.invalidState</td>
<td>0</td>
</tr>
<tr>
<td>rx.passThrough</td>
<td>0</td>
</tr>
<tr>
<td>rx.vxlanTotal</td>
<td>0</td>
</tr>
<tr>
<td>rx.clone</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.invalidFrame</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.notExist</td>
<td>0</td>
</tr>
<tr>
<td>rx.drop.noResource</td>
<td>0</td>
</tr>
<tr>
<td>forward.pass</td>
<td>0</td>
</tr>
<tr>
<td>forward.reject</td>
<td>0</td>
</tr>
<tr>
<td>forward.rpf</td>
<td>0</td>
</tr>
<tr>
<td>arpProxy.reply.total</td>
<td>0</td>
</tr>
<tr>
<td>arpProxy.reply.fail</td>
<td>0</td>
</tr>
<tr>
<td>arpProxy.request.total</td>
<td>0</td>
</tr>
<tr>
<td>arpProxy.request.fail</td>
<td>0</td>
</tr>
<tr>
<td>mcastProxy.tx.total</td>
<td>0</td>
</tr>
<tr>
<td>mcastProxy.tx.fail</td>
<td>0</td>
</tr>
<tr>
<td>mcastProxy.rx.total</td>
<td>0</td>
</tr>
<tr>
<td>mcastProxy.rx.fail</td>
<td>0</td>
</tr>
</tbody>
</table>
esxcli network vswitch dvs vmware vxlan stats reset --vds-name value

Resets VXLAN vDS statistics.

Synopsis

esxcli network vswitch dvs vmware vxlan stats reset --vds-name value

DVFilter Commands

To use the DVFilter command, log in to the host CLI terminal as root with the password that you specified while installing NSX Manager.

summarize-dvfilter

Shows fast-path and slow-path agents of the DVFilters that are deployed on the host.

Synopsis

summarize-dvfilter

Example

# summarize-dvfilter
Fastpaths:
agent: dvfilter-faulter, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter
agent: dvfg-igmp, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: dvfg-igmp
agent: dvfilter-generic-vmware, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter-generic-fastpath
agent: vmware-sfw, refCount: 1, rev: 0x1010000, apiRev: 0x1010000, module: vsip
agent: dvfilter-generic-vmware-swsec, refCount: 2, rev: 0x1010000, apiRev: 0x1010000, module: dvfilter-switch-security

Slowpaths:

Filters:
world 1000672395 vmm0:pro-vm vcUuid:'50 07 6c 09 c9 18 c5 9a-bb 78 37 70 e0 52 bd b6'
port 67108869 pro-vm.eth1
vNic slot 0
name: nic-1000672395-eth1-dvfilter-generic-vmware-swsec.0
agentName: dvfilter-generic-vmware-swsec
state: IOChain Attached
vmState: Detached
failurePolicy: failOpen
slowPathID: none
filter source: Alternate Opaque Channel

Related Commands

show dfw host hostID summarize-dvfilter
NSX Controller Commands

This section describes NSX Controller CLI commands. Log in as the user admin to use the NSX Controller commands.

NOTE Using the NSX Controller CLI commands to enable or disable IPSec is not supported. Use NSX API to enable or disable IPSec. For details, refer to NSX API Guide.

restart controller

Restarts a controller. You must restart only one controller in a cluster at a time.

Synopsis

restart controller

show control-cluster core connection ipAddress

Shows status of specified connection.

Synopsis

show control-cluster core connection ipAddress

Example

nsx-controller # show control-cluster core connection 11.11.111.11
Host-IP        Port  ID
10.24.106.158   53540 3

show control-cluster core connection-stats ipAddress

Shows statistics for the specified controller.

Synopsis

show control-cluster core connection-stats ipAddress

Example

nsx-controller # show control-cluster core connection-stats 10.24.106.158
messages.received        22
messages.received.dropped 0
messages.transmitted     10
messages.transmit.dropped 0

show control-cluster core log-level

Shows log level for the specified controller.
Synopsis
show control-cluster core log-level

Example
nsx-controller # show control-cluster core log-level
Log level: INFO

show control-cluster core stats

Shows controller statistics.

Synopsis
show control-cluster core stats

Example
nsx-controller # show control-cluster core stats
messages.received               40
messages.received.dropped       0
messages.transmitted            22
messages.transmit.dropped       0
messages.processing.dropped     0
connections.up                  2
connections.down                0
connections.timeout             0
connections.active              2
connections.sharding.subscribed 0

show control-cluster logical-routers

Lists all available properties, the required parameters, and their descriptions for logical routers.

Synopsis
show control-cluster logical-routers

show control-cluster logical-routers bridge-mac
logicalRouterID_and/or_bridgeID

Shows bridge mac records for a bridge of a logical router. logical_router_ID and/or bridge_ID can be all.

Synopsis
show control-cluster logical-routers bridge-mac logicalRouterID_and_bridgeID

Example
nsx-controller # show control-cluster logical-routers bridge-mac 1 all
LR-Id       Bridge-Id   Mac            Vlan-Id Vxlan-Id Port-Id   Source
1           1001        01:00:00:01:00:00 0       65535    1         vxlan

show control-cluster logical-routers bridges logicalRouterID_and_bridgeID

Shows bridge instance information for a logical router. logical_router_id and/or bridge-id can be all.

Synopsis
show control-cluster logical-routers bridges logicalRouterID_and_bridgeID

Example
nsx-controller # show control-cluster logical-routers bridges logicalRouterID_and_bridgeID
LR-Id       Bridge-Id   Host            Active
1           1001        10.24.106.158   true
show control-cluster logical-routers instance `logicalRouterID`

Shows logical router information. `logicalRouterID` can be all.

**Synopsis**

```
show control-cluster logical-routers instance `logicalRouterID`
```

**Example**

```
nsx-controller # show control-cluster logical-routers instance 1
LR-Id      LR-Name            Hosts[]         Edge-Connection Service-Controller
1          perftest           10.24.106.158                10.24.105.58
```

show control-cluster logical-routers interface `logicalRouterID` `interfaceName`

Shows interface details for logical router specified by ID and name.

**Synopsis**

```
show control-cluster logical-routers interface `logicalRouterID` `interfaceName`
```

**Example**

```
nsx-controller # show control-cluster logical-routers interface 1 lif0
Interface-Name:   lif0
Logical-Router-Id:1
Id:               0
Type:             vlan
IP:               10.0.0.0/24
DVS-UUID:         64767331-0000-0000-0000-000000000000
Mac:              00:00:00:00:00:00
Mtu:              1500
Multicast-IP:     
Designated-IP:    10.24.106.158
Is-Sedimented:    false
Bridge-Id:        
Bridge-Name:      
```

show control-cluster logical-routers interface-summary `logicalRouterID`

Shows interface summary for specified logical router.

**Synopsis**

```
show control-cluster logical-routers interface-summary `logicalRouter_ID`
```

**Example**

```
nsx-controller # show control-cluster logical-routers interface-summary 1
Interface                        Type   Id           IP[]
lif0                             vlan   0            10.0.0.0/24
lif1                             vlan   1            10.0.1.0/24
```

show control-cluster logical-routers routes `routerID`

Shows static route for router specified by ID. `routerID` can be all.

**Synopsis**

```
show control-cluster logical-routers routes `routerID`
```

**Example**

```
nsx-controller # show control-cluster logical-routers routes 1
LR-Id     Destination        Next-Hop
1         70.70.70.0/24      10.0.1.2
1         80.80.80.0/24      10.0.0.2
```
**show control-cluster logical-routers routes**

routerID_and_IPaddress_and_prefixLength

Shows static route for router specified by ID, IP address, and prefix length. router_ID can be all.

**Synopsis**

```
show control-cluster logical-routers routes routerID_and_IPaddress_and_prefixLength
```

**Example**

```
nsx-controller # show control-cluster logical-routers route 1 70.70.70.0 24
LR-Id    Destination        Next-Hop
1        70.70.70.0/24      10.0.1.2
```

**show control-cluster logical-routers stats**

Shows statistics of all logical routers on this controller.

**Synopsis**

```
show control-cluster logical-routers stats
```

**Example**

```
nsx-controller # show control-cluster logical-routers stats
messages.query        0
messages.update       4
messages.Flush        0
messages.notification 0
```

**show control-cluster logical-routers vdr-stats logicalRouterID**

Shows statistics of the specified logical router.

**Synopsis**

```
show control-cluster logical-routers vdr-stats logicalRouterID
```

**Example**

```
nsx-controller # show control-cluster logical-routers vdr-stats 1
host.reports.received      1
host.reports.dropped       0
devices.reports.received   2
devices.reports.dropped    0
bridge.reports.received    1
bridge.reports.dropped     0
bridge.macs.received       1
bridge.macs.dropped        0
route.queries.received     0
interface.queries.received 0
mac.queries.received       0
clear.routes.received      0
clear.macs.received        0
errdecode.messages.dropped 0
memfull.messages.dropped    0
errserver.messages.dropped  0
notifications.error        0
```

**show control-cluster logical-switches arp-records ipAddress**

Shows the ARP records updated from the specified connection.

**Synopsis**

```
show control-cluster logical-switches arp-records ipAddress
```
show control-cluster logical-switches arp-records vni

Example
nsx-controller # show control-cluster logical-switches arp-records 192.168.110.52
VNI      IP              MAC               Connection-ID
5000     192.168.10.6    00:50:56:8e:f5:fb 2
5000     192.168.10.1    00:50:56:8e:6a:04 2
5000     192.168.10.2    00:50:56:8e:9d:88 2

show control-cluster logical-switches arp-table vni

Synopsis
show control-cluster logical-switches arp-table vni

Example
nsx-controller # show control-cluster logical-switches arp-table 5000
VNI      IP              MAC               Connection-ID
5000     192.168.10.6    00:50:56:8e:f5:fb 2
5000     192.168.10.1    00:50:56:8e:6a:04 2
5000     192.168.10.2    00:50:56:8e:9d:88 2

show control-cluster logical-switches connection-table vni

Synopsis
show control-cluster logical-switches connection-table vni

Example
nsx-controller # show control-cluster logical-switches connection-table 5000
Host-IP         Port  ID
192.168.110.52  32141 2
192.168.110.51  34692 3
192.168.210.56  33323 4
192.168.210.52  12074 5
192.168.210.51  35441 6
192.168.210.57  56744 7

show control-cluster logical-switches joined-vnis ipAddress

Synopsis
show control-cluster logical-switches joined-vnis ipAddress

Example
nsx-controller # show control-cluster logical-switches joined-vnis 192.168.110.52
VNI      Controller      BUM-Replication ARP-Proxy Connections VTEPs
5002     192.168.110.202 Enabled         Enabled   6           3
5000     192.168.110.202 Enabled         Enabled   6           2

show control-cluster logical-switches mac-records ipAddress

Synopsis
show control-cluster logical-switches mac-records ipAddress

Example
nsx-controller # show control-cluster logical-switches mac-records 192.168.110.52
VNI      Controller      BUM-Replication ARP-Proxy Connections VTEPs
5002     192.168.110.202 Enabled         Enabled   6           3
5000     192.168.110.202 Enabled         Enabled   6           2
Example

nsx-controller # show control-cluster logical-switches mac-records 192.168.110.52
VNI      MAC               VTEP-IP         Connection-ID
5000     00:50:56:8e:f5:8b 192.168.150.52  2
5000     00:50:56:8e:6a:04 192.168.150.52  2
5000     00:50:56:8e:9d:88 192.168.150.52  2

show control-cluster logical-switches mac-table vni
Shows MAC records of the specified VNI.

Synopsis

show control-cluster logical-switches mac-table vni

Example

nsx-controller # show control-cluster logical-switches mac-table 5000
VNI      MAC               VTEP-IP         Connection-ID
5000     00:50:56:8e:f5:8b 192.168.150.52  2
5000     00:50:56:8e:6a:04 192.168.150.52  2
5000     00:50:56:8e:9d:88 192.168.150.52  2

show control-cluster logical-switches pkt-cap pktcap-uuid display
Shows packet capture data for the specified packet capture operation.

Synopsis

show control-cluster logical-switches pkt-cap pktcap-uuid display

Example

nsx-controller # show control-cluster logical-switches pkt-cap 24301920-126f-4255-bf1b-02f42e001389 display
Time-Stamp Source-IP       Dest-IP         TX/RX Type  Comments
3588336241 192.168.250.53  192.168.250.52  TX    REQ   CAPPT PktFree TSO 0 CSUM 0 CSUMVFD
0 ENCAP 0 VXLAN 5001 SEGS 1 [ 142 ] +0us:EtherswitchDispatch +4us:EtherswitchOutput +0us:PortOutput +3us:IOChain +0us:PreDVFilter +1us:PostDVFilter +85us:PktFree
3588339300 192.168.250.53  192.168.250.52  TX    REQ   CAPPT PktFree TSO 0 CSUM 0 CSUMVFD
0 ENCAP 0 VXLAN 5001 SEGS 1 [ 142 ] +0us:EtherswitchDispatch +82us:PktFree
3588342671 192.168.250.53  192.168.250.52  TX    REQ   CAPPT PktFree TSO 0 CSUM 0 CSUMVFD
0 ENCAP 0 VXLAN 5001 SEGS 1 [ 142 ] +0us:EtherswitchDispatch +82us:PktFree
3588662506 192.168.250.53  192.168.250.52  RX    REQ   CAPPT PktFree TSO 0 CSUM 0 CSUMVFD
0 ENCAP 0 VXLAN 5001 SEGS 1 [ 92 ] +0us:EtherswitchDispatch +4us:EtherswitchOutput +0us:PortOutput +3us:IOChain +0us:PreDVFilter +1us:PostDVFilter +85us:PktFree

Related Commands

show control-cluster logical-switches pkt-cap pktcap-uuid none
start control-cluster logical-switches ping
start control-cluster logical-switches pktcap
start control-cluster logical-switches pktcap-time
show control-cluster logical-switches pkt-cap *pktcap-uuid* none

Shows all available packet capture files.

**Synopsis**

show control-cluster logical-switches pkt-cap *pktcap-uuid* none

**Example**

nsx-controller # show control-cluster logical-switches pkt-cap 24301920-126f-4255-bf1b-02f42e001389 none

```
Trace-File-Name
file1-24301920-126f-4255-bf1b-02f42e001389-192.168.250.53-TX.pcapng
file1-24301920-126f-4255-bf1b-02f42e001389-192.168.250.52-RX.pcapng
file1-24301920-126f-4255-bf1b-02f42e001389-192.168.250.52-TX.pcapng
file1-24301920-126f-4255-bf1b-02f42e001389-192.168.250.53-RX.pcapng
```

**Related Commands**

- show control-cluster logical-switches pkt-cap *pktcap-uuid* display
- start control-cluster logical-switches ping
- start control-cluster logical-switches pktcap
- start control-cluster logical-switches pktcap-time

**show control-cluster logical-switches stats**

Shows statistics for all logical switches on this controller.

**Synopsis**

show control-cluster logical-switches stats

**Example**

nsx-controller # show control-cluster logical-switches stats

```
messages.query        2144
messages.update       64
messages.flush        1
messages.notification 0
```

**show control-cluster logical-switches stats-sample**

Shows the latest samples of node statistics.

**Synopsis**

show control-cluster logical-switches stats-sample

**Example**

nsx-controller # show control-cluster logical-switches stats-sample

```
03:44:10   03:44:20   03:44:30   03:44:40   03:44:50
messages.query        2144       2144       2144       2144       2145
messages.update       64         64         64         64         64
messages.flush        1          1          1          1          1
messages.notification 0          0          0          0          0
```

**show control-cluster logical-switches vni *vni***

Shows controller, configuration, and status of the specified VNI.

**Synopsis**

show control-cluster logical-switches vni *vni*

**Example**

nsx-controller # show control-cluster logical-switches vni 5000
show control-cluster logical-switches vni-stats vni

Shows statistics for the specified VNI.

Synopsis

show control-cluster logical-switches vni-stats vni

Example

nsx-controller # show control-cluster logical-switches vni-stats 5000
update.member  6
update.vtep    12
update.mac     1
update.mac.invalidate 0
update.arp     1
update.arp.duplicate 0
query.mac      716
query.mac.miss 0
query.arp      3
query.arp.miss 1

show control-cluster logical-switches vni-stats-sample vni

Shows the latest statistics samples for the specified VNI.

Synopsis

show control-cluster logical-switches vni-stats-sample vni

Example

nsx-controller # show control-cluster logical-switches vni-stats-sample 5000
03:00:00  03:10:00  03:20:00  03:30:00  03:40:00
update.member  0  0  0  0  0
update.vtep    0  0  0  0  0
update.mac     0  0  0  0  0
update.mac.invalidate 0  0  0  0  0
update.arp     0  0  0  0  0
update.arp.duplicate 0  0  0  0  0
query.mac      1  2  1  1  2
query.mac.miss 0  0  0  0  0
query.arp      0  0  0  0  0
query.arp.miss 0  0  0  0  0

show control-cluster logical-switches vtep-records ipAddress

Shows the VTEP records updated from the specified connection.

Synopsis

show control-cluster logical-switches vtep-records ipAddress

Example

nsx-controller # show control-cluster logical-switches vtep-records 192.168.110.52
VNI      IP              Segment         MAC               Connection-ID
5000     192.168.150.52  192.168.150.0   00:50:56:60:1e:dd 2

show control-cluster logical-switches vtep-table vni

Shows the VTEP table for the specified VNI.
**Synopsis**

`show control-cluster logical-switches vtep-table vni`

**Example**

```
nsx-controller # show control-cluster logical-switches vtep-table 5000
VNI    IP              Segment       MAC               Connection-ID
5000   192.168.250.52  192.168.250.0  00:50:56:6b:37:64  5
5000   192.168.150.52  192.168.150.0  00:50:56:60:1e:dd  2
```

**show control-cluster startup-nodes**

Shows the set of NSX Controller nodes that this node will attempt to connect to upon startup in order to rejoin its NSX Controller cluster. This is not an accurate list of active nodes in the controller cluster and may include nodes that are inactive, or may exclude nodes that are active.

**Synopsis**

`show control-cluster startup-nodes`

**Example**

```
nsx-controller # show control-cluster startup-nodes
10.24.105.59
```

**show control-cluster status**

Shows control-cluster status. The example below shows that the controller status is normal. All controllers in the cluster should have the same cluster ID as the first controller.

**Synopsis**

`show control-cluster status`

**Example**

```
nsx-controller # show control-cluster status
Type Status Since
--------------------------------------------------------------------------------
Join status: Join complete 08/15 00:39:57
Majority status: Connected to cluster majority 08/15 00:39:33
Restart status: This controller can be safely restarted 08/15 00:40:03
Cluster ID: 2105ad76-0449-47ef-9f99-83e7ddd14cd0
Node UUID: 2105ad76-0449-47ef-9f99-83e7ddd14cd0
Role Configured status Active status
--------------------------------------------------------------------------------
api_provider enabled activated
persistence_server enabled activated
switch_manager enabled activated
logical_manager enabled activated
directory_server enabled activated
--------------------------------------------------------------------------------
```

**show network interface**

Shows the IP address of the controller.

**Synopsis**

`show network interface`

**CLI Mode**

Basic, Privileged
**start control-cluster logical-switches ping**

Starts a ping capture to test connectivity between VTEPs.

**Synopsis**

```
start control-cluster logical-switches ping vni vtepIP1 vtepIP2 scheme packetNum
  packetSize trace fileName
```

**Example**

```
nsx-controller# start control-cluster logical-switches ping 5001 192.168.250.52
  192.168.250.53 uni 3 50 trace file1
```

**Operation Status**

Operation in progress: 24301920-126f-4255-bf1b-02f42e001389
Capture stage StartCaptureHostRx, failure time-out is 63 seconds
Retrieve results with command: show control-cluster logical-switches pkt-cap
  24301920-126f-4255-bf1b-02f42e001389 <display|none>

**Related Commands**

```
show control-cluster logical-switches pkt-cap pktcap-uuid none
show control-cluster logical-switches pkt-cap pktcap-uuid display
start control-cluster logical-switches pktcap
start control-cluster logical-switches pktcap-time
```

**start control-cluster logical-switches pktcap**

Starts packet capture on the host identified by the VTEP IP. The package capture runs for `maxPackets` packets. See `pktcap-uw` for supported command arguments. The `pktcap-uw` command arguments must be surrounded by single quotes.

**Synopsis**

```
start control-cluster logical-switches pktcap vni vtepIP maxPackets fileName
  commandArguments
```

**Example**

```
nsx-controller # start control-cluster logical-switches pktcap 5001 192.168.250.53 3
  file2 '--vmk vmk3'
```

**Operation Status**

Operation in progress: c77a1eeb-33a9-48c4-9676-988913001389
Capture for 300 seconds or 3 packets
Retrieve results with command: show control-cluster logical-switches pkt-cap
c77a1eeb-33a9-48c4-9676-988913001389 none

**Related Commands**

```
show control-cluster logical-switches pkt-cap pktcap-uuid none
show control-cluster logical-switches pkt-cap pktcap-uuid display
start control-cluster logical-switches ping
start control-cluster logical-switches pktcap-time
```

**start control-cluster logical-switches pktcap-time**

Starts packet capture on the host identified by the VTEP IP. See `pktcap-uw` for supported command arguments. The package capture runs for `maxTime` seconds.

**Synopsis**

```
start control-cluster logical-switches pktcap-time vni vtepIP maxTime fileName
  commandArguments
```

**Example**

```
nsx-controller # start control-cluster logical-switches pktcap-time 5001 192.168.250.53
  20 file3 '--vmk vmk3'
```

**Operation Status**
Operation in progress: 0e9389c8-d1a4-480f-a582-e5d937001389
Capture for 20 seconds or 10000 packets
Retrieve results with command: show control-cluster logical-switches pkt-cap
  0e9389c8-d1a4-480f-a582-e5d937001389 none

Related Commands

  show control-cluster logical-switches pkt-cap pktcap-uuid none
  show control-cluster logical-switches pkt-cap pktcap-uuid display
  start control-cluster logical-switches ping
  start control-cluster logical-switches pktcap
Hardware Gateway Commands

This section describes CLI commands used to troubleshoot common issues with a hardware gateway deployment. Log in as the user admin to use these commands. This chapter includes the following sections:

- “Hardware Gateway Query Commands” on page 187
- “Replicator Node Command” on page 188
- “Bindings Commands” on page 189
- “Host Commands” on page 190
- “Controller Commands” on page 191
- “Agent Commands” on page 192

For additional information about hardware gateways, see:

- “Configuring Hardware Gateways” in the NSX for vSphere Administration Guide
- “Managing Hardware Gateways” in the NSX for vSphere API Reference Guide
- documentation from your hardware gateway vendor

Hardware Gateway Query Commands

Use these commands to query hardware gateways.

show hardware-gateway list

Shows a list of known hardware gateways (regardless of status).

Synopsis

show hardware-gateway list

CLI Mode

Basic

demonstration

Example

nsx?mgr> show hardware-gateway list
ID       Name       UUID                  BFD Enabled Management IP
---       ------      --------               -------       -------
torgateway-1  torgateway1      3e5ff4d66-448d-4e54-82ec-92fffd46d4af  true          10.144.137.91
torgateway-2  torgateway2      6c43af48-d742-43b4-9416-10c508edbcf  true          10.144.138.116
show hardware-gateway hsc *hardwareGatewayID* brief

Shows the relevant data of the specified hardware gateway in a brief format.

**Synopsis**

show hardware-gateway hsc *hardwareGatewayID* brief

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway hsc torgateway-1 brief
ID                  Name                BFD Enabled    Management IP
UUID
Torgateway-1        Torgateway1         true           10.144.137.91
3e5ffd66-448d-4e54-82ec-92fffd46d4af
```

show hardware-gateway hsc *hardwareGatewayID* certificate

Shows the certificate of the specified hardware gateway.

**Synopsis**

show hardware-gateway hsc *hardwareGatewayID* certificate

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway hsc torgateway-1 certificate
-----BEGIN CERTIFICATE-----
MIIDeDCCAmACAQEwDQYJKoZIhvcNAQEFBQAwYEYExCZAJBgNVBAYTA1VTMQswCQYDVQQEwYEX...
-----END CERTIFICATE-----
```

**Replicator Node Command**

Use this command to query replicator nodes.

show hardware-gateway replicator-nodes

Shows all replicator nodes on the hardware gateway.

**Synopsis**

show hardware-gateway replicator-nodes

--- END CERTIFICATE ---
CLI Mode

Basic

Example

```
nsx?mgr> show hardware-gateway replicator-nodes
ID                  Host Name/IP
host-26             10.144.137.20
host-21             10.144.138.181
host-20             10.144.138.50
```

Bindings Commands

Use these commands to query bindings on the hardware gateway.

**show hardware-gateway binding all**

Shows all bindings on the hardware gateway.

**Synopsis**

```
show hardware-gateway binding all
```

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway binding all
Switch Name         Port Name           VLAN ID   VNI                 Hardware Gateway
1-switch-603        p1                  0         8823                torgateway-1
1-switch-603        p2                  0         8824                torgateway-1
1-switch-168        p1                  0         8823                torgateway-2
1-switch-168        p2                  0         8824                torgateway-2
```

**show hardware-gateway binding hsc hardwareGatewayID all**

Shows all bindings for the specified hardware gateway.

**Synopsis**

```
show hardware-gateway binding hsc hardwareGatewayID all
```

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway binding hsc torgateway-1 all
Switch Name         Port Name           VLAN ID   VNI                 Hardware Gateway
1-switch-603        p1                  0         8823                torgateway-1
1-switch-603        p2                  0         8824                torgateway-1
```

**show hardware-gateway binding vni vni all**

Shows all bindings for the specified virtual network instance.

**Synopsis**

```
show hardware-gateway binding vni vni all
```

**CLI Mode**

Basic
Example

```
nsx?mgr> show hardware-gateway binding vni 8823 all
```

```
<table>
<thead>
<tr>
<th>Switch Name</th>
<th>Port Name</th>
<th>VLAN ID</th>
<th>VNI</th>
<th>Hardware Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-switch-603</td>
<td>p1</td>
<td>0</td>
<td>8823</td>
<td>torgateway-1</td>
</tr>
<tr>
<td>1-switch-168</td>
<td>p1</td>
<td>0</td>
<td>8823</td>
<td>torgateway-2</td>
</tr>
</tbody>
</table>
```

```
show hardware-gateway binding hsc hardwareGatewayID vni vni
```

Shows all bindings for the specified virtual network instance on the specified hardware gateway.

**Synopsis**

```
show hardware-gateway binding hsc hardwareGatewayID vni vni
```

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway binding hsc torgateway-1 vni 8823
```

```
<table>
<thead>
<tr>
<th>Switch Name</th>
<th>Port Name</th>
<th>VLAN ID</th>
<th>VNI</th>
<th>Hardware Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-switch-603</td>
<td>p1</td>
<td>0</td>
<td>8823</td>
<td>torgateway-1</td>
</tr>
</tbody>
</table>
```

**Host Commands**

Use these commands to query host information.

```
show hardware-gateway host hostID vnis
```

Shows the virtual network instances on the specified host.

**Synopsis**

```
show hardware-gateway host hostID vnis
```

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway host host-21 vnis
```

Is PTEP:        Yes
VXLAN count:    2
VXLAN IDs:
8824
8823

```
show hardware-gateway host hostID bfd-tunnels
```

Shows the tunnels (BFD configuration) on the specified host.

**Synopsis**

```
show hardware-gateway host hostID bfd-tunnels
```

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway host host-21 bfd-tunnels
```

BFD count:      2
172.18.171.169  -->  172.21.145.84 , Inner Dest IP: 169.254.1.0 , Inner Dst
Mac: 00:23:20:00:00:01 , Local State: up, Remote State: up
Controller Commands

Use these commands to query information about the hardware gateway controller.

**show hardware-gateway controller controllerIP list**

Shows details on the specified hardware gateway controller. Output of the `UtepProbeInterval` parameter is in milliseconds.

**Synopsis**

`show hardware-gateway controller controllerIP list`

**CLI Mode**

Basic

**Example**

```
nsx7?mgr> show hardware-gateway controller 10.144.136.210 list
ToR-Uuid                                 Bfd-Enabled     UtepProbeInterval
3e5ffd66-448d-4e54-82ec-92fffd46d4af     true            300
6c43af48-d742-43b4-9416-10c508edbcf        true            300
```

**show hardware-gateway controller controllerIP hsc hardwareGatewayID certificate**

Shows the certificate of the specified hardware gateway.

**Synopsis**

`show hardware-gateway controller controllerIP hsc hardwareGatewayID certificate`

**CLI Mode**

Basic

**Example**

```
nsx7?mgr> show hardware-gateway controller 10.144.136.211 hsc torgateway-1 certificate
-----BEGIN CERTIFICATE-----
MIIDeDCCAmACAQEwDQYJKoZIhvcNAQEFBQAwgYExCzAJBgNVBAYTAlVTMQswCQYD
VQQIEwJDQTEVMBMGAAwGgYExCzAJBgNVBAYTAlVTMQswCQYD
VQQIEwJDQTEVMBMGAAwGgYExCzAJBgNVBAYTAlVTMQswCQYD
VQQIEwJDQTEVMBMGAAwGgYExCzAJBgNVBAYTAlVTMQswCQYD
YETMdkGai8Ez5yRt3Hk3aX3rjaGNgH1EN1cncRzpM7jYXRLIcGyMDE2IFw
clAycOAvMDoKmJoynNSkhcMMTwyW2I4MDcxMjIIwhcNMjWYNd2MDVdxMIIwhCB
gTELMAUlE3mCwMVzC3a3BnvBAgTAKBNMmuwEuYDVSQKEXwPGVhUVHZtd210
Y2gkETA8p8VBsATCN3aX3rlajGNgH1EN1cncRzpM7jYXRLIcGyMDE2IFw
Q2VvV0gIMmaoNhgGyK1D1eWMTyyn3dXz4810411AfJeCmTr1KCCAS1eDQyKoZIhvcN
AQEBBQAdgggPADCQAcOqE9gREA1nza1A93yYLQ8mDEx5n8uACi4Hhe1V+kg3Z2
H7HxXbDxXtXn3KLLxZ2XV1hLTyje1XcJ3WmMj910bcyQK+d2WCZ0CBztcjEp+EKW4
LdsUNVaza3p96U1cDzboRTaJvKsB886G6h9NVWwgJ10sk545sC73J3MBnY
PwMbgL868bu2yua3M1/fRntkvyvjk5NOSgy2Z9FbpuU2917wrc3oa10by7LxvbGB
0wyr7tjvH6Oqbaj156C5M+yjaJ3JNwbB0QgKuXmZbKvN5SU0PFxNsvpxuyK1aKgLh2
Qgk/8iPfsBPvRQg4z8fAWh6RJ7m7Ffr00T3F/64ypDO5EKnKPCcAweAATANBgkqhkiG
9w0BAQUFACAQQAjRKgP4Z8w8RfAfAinw3H3POERsgDXsGx008w6hl6BhSbu734C
11mlsRFZMTs688n1f9vVnRuxhVnwtXy252Mm/ky9A6p0L9qso77CG7Um6s2w
42AWbqowiCst+QFyHz9XpOM4V074C4ykmnRNNkr09j9wMbqL8DnF82zUsx+tIDw
0dpHQ+7vzo}sYnKhK1Ehph2s+ju310jEgwbx5LXa+5bq5ru9CM0xwlt6/gkTI/7XK
YpsO5NSnUss4RYUtiiIE3Loxky9gKFdF9209H+7FeVUX/ueNdzhj2bipKcwT
HzwWw6D8a3Zj1lwAVomXHo7NbcGAC06qYQQ==
-----END CERTIFICATE-----
```
show hardware-gateway controller controllerIP port-bindings

Shows the port bindings (logical port attachment configuration) of the specified hardware gateway controller.

**Synopsis**

show hardware-gateway controller controllerIP port-bindings

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway controller 10.144.136.211 port-bindings

<table>
<thead>
<tr>
<th>VNI</th>
<th>VLAN</th>
<th>Switch-Name</th>
<th>Port-Id</th>
<th>ToR-Uuid</th>
</tr>
</thead>
<tbody>
<tr>
<td>8823</td>
<td>0</td>
<td>1-switch-603</td>
<td>p1</td>
<td>3e5fffd66-448d-4e54-82ec-92fffd46d4af</td>
</tr>
<tr>
<td>8823</td>
<td>0</td>
<td>1-switch-168</td>
<td>p1</td>
<td>6c43af48-d742-43b4-9416-10c508edbcf</td>
</tr>
<tr>
<td>8824</td>
<td>0</td>
<td>1-switch-168</td>
<td>p2</td>
<td>6c43af48-d742-43b4-9416-10c508edbcf</td>
</tr>
<tr>
<td>8824</td>
<td>0</td>
<td>1-switch-603</td>
<td>p2</td>
<td>3e5fffd66-448d-4e54-82ec-92fffd46d4af</td>
</tr>
</tbody>
</table>

show hardware-gateway controller controllerIP control-nodes

Shows all controller nodes of the specified hardware gateway controller.

**Synopsis**

show hardware-gateway controller controllerIP control-nodes

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway controller 10.144.136.211 control-nodes

<table>
<thead>
<tr>
<th>Node-Uuid</th>
<th>IP</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>94ecd027-a210-452f-8e98-77d6100f2fc3</td>
<td>10.144.136.212</td>
<td>1234</td>
</tr>
<tr>
<td>e37a1f0c-2c72-4b87-9487-e7006fbc3d6</td>
<td>10.144.136.211</td>
<td>1234</td>
</tr>
<tr>
<td>7a90d58e-6224-46f6-bd8b-69746ba4e128</td>
<td>10.144.136.210</td>
<td>1234</td>
</tr>
</tbody>
</table>

show hardware-gateway controller controllerIP hsc hardwareGatewayID inventory

Shows all inventory information of the specified hardware gateway.

**Synopsis**

show hardware-gateway controller controllerIP hsc hardwareGatewayID inventory

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway controller 10.144.136.212 hsc torgateway-1 inventory

<table>
<thead>
<tr>
<th>Switch-Name</th>
<th>Port-Id</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-switch-603</td>
<td>p4</td>
</tr>
<tr>
<td>1-switch-603</td>
<td>p3</td>
</tr>
<tr>
<td>1-switch-603</td>
<td>p2</td>
</tr>
<tr>
<td>1-switch-603</td>
<td>p1</td>
</tr>
</tbody>
</table>

**Agent Commands**

Use these commands to query hardware gateway agent information.
show hardware-gateway agent agentIP status

Shows the connection status of the specified hardware gateway.

**Synopsis**

`show hardware-gateway agent agentIP status`

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 10.144.136.212 status
controller IP                              connection status
10.144.136.210                              connected
10.144.136.212                              connected
10.144.136.211                              connected
```

show hardware-gateway agent agentIP replication-cluster

Shows the PTEP list for a specified VNI on the specified hardware gateway agent.

**Synopsis**

`show hardware-gateway agent agentIP replication-cluster`

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 10.144.136.212 replication-cluster
172.18.175.120
172.18.175.119
172.19.226.89
```

show hardware-gateway agent agentIP hardware-gateway [uuid]

Show details about the master hardware gateway agent for the specified hardware gateway instance on the specified master gateway agent.

The `<uuid>` of the hardware gateway instance is optional. If unspecified, then this command returns a list of all hardware gateways mastered by this hardware gateway agent.

Output of the *Bfd Probe Interval* parameter is in milliseconds.

**Synopsis**

`show hardware-gateway agent agentIP hardware-gateway [uuid]`

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 10.144.136.212 hardware-gateway 3e5ffd66-448d-4e54-82ec-92fffd46d4af
UUID                            3e5ffd66-448d-4e54-82ec-92fffd46d4af
Ip                              10.144.137.91
Instance Id                     1
Connected                       true
Physical Master                 true
Bfd Enabled                     true
```
Bfd Probe Interval              300
Session Id                      cb492832-322c-4d56-be9f-31b74d033ec9
Certificate                     -----BEGIN CERTIFICATE-----
MIIDeDCCAmACAQEwDQJYJKoZIhvcNAQEFQgMBAAIGNwYXZlcnNlYXR5IEFwczQK
Y29sb3d3dC55b3UgLS0t
VQQEewJDQTEVMBQGA1UECmNHTjEeMC4wHwYDVQQLEw9zd21oY2hj
Y29sb3d3dC55b3UgLS0t
Y29sb3d3dC55b3UgLS0t
Y29sb3d3dC55b3UgLS0t
-----END CERTIFICATE-----

show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid tunnels

Shows the tunnel table (including BFD) on the specified hardware gateway agent.

**Synopsis**

`show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid tunnels`

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 192.161.126.22 hardware-gateway 1e100ec0-b15a-4727-ba9f-ebdb74e357f2 tunnels
```

**Endpoints**

<table>
<thead>
<tr>
<th>Local Ip</th>
<th>Remote Ip</th>
<th>Local config</th>
<th>Destination Ip</th>
<th>Destination Mac</th>
<th>00:23:20:00:01</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.21.145.85</td>
<td>172.19.152.225</td>
<td>169.254.1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BFD parameters**

<table>
<thead>
<tr>
<th>Enable</th>
<th>Min Rx</th>
<th>Min Tx</th>
<th>Forwarding If Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>false</td>
<td>false</td>
<td>false</td>
<td>false</td>
</tr>
</tbody>
</table>

**BFD status**

<table>
<thead>
<tr>
<th>Diagnostic</th>
<th>Enabled</th>
<th>Forwarding</th>
<th>Remote diagnostic</th>
<th>State</th>
<th>Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>false</td>
<td>false</td>
<td>false</td>
<td>false</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Endpoints**

<table>
<thead>
<tr>
<th>Local Ip</th>
<th>Remote Ip</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.21.145.85</td>
<td>172.19.152.225</td>
</tr>
<tr>
<td>Local config</td>
<td>169.254.1.0</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Destination Ip</td>
<td>169.254.1.0</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:23:20:00:00:01</td>
</tr>
<tr>
<td>Remote config</td>
<td>172.19.152.226</td>
</tr>
<tr>
<td>Destination Ip</td>
<td>172.19.152.226</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:00:00:00:00:00</td>
</tr>
<tr>
<td>BFD parameters</td>
<td>true</td>
</tr>
<tr>
<td>Enable</td>
<td>true</td>
</tr>
<tr>
<td>Min Rx</td>
<td>300</td>
</tr>
<tr>
<td>Min Tx</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding If Rx</td>
<td>true</td>
</tr>
<tr>
<td>BFD status</td>
<td>Control Detection Time Expired</td>
</tr>
<tr>
<td>Diagnostic</td>
<td>true</td>
</tr>
<tr>
<td>Enabled</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding</td>
<td>true</td>
</tr>
<tr>
<td>Remote diagnostic</td>
<td>Control Detection Time Expired</td>
</tr>
<tr>
<td>Remote state</td>
<td>up</td>
</tr>
<tr>
<td>State</td>
<td>up</td>
</tr>
</tbody>
</table>

| Endpoints            | 172.21.145.85 |
| Local Ip             | 172.21.145.85 |
| Remote Ip            | 172.21.145.85 |

<table>
<thead>
<tr>
<th>Local config</th>
<th>169.254.1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Ip</td>
<td>169.254.1.0</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:23:20:00:00:01</td>
</tr>
<tr>
<td>Remote config</td>
<td>172.18.171.168</td>
</tr>
<tr>
<td>Destination Ip</td>
<td>172.18.171.168</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:00:00:00:00:00</td>
</tr>
<tr>
<td>BFD parameters</td>
<td>true</td>
</tr>
<tr>
<td>Enable</td>
<td>true</td>
</tr>
<tr>
<td>Min Rx</td>
<td>300</td>
</tr>
<tr>
<td>Min Tx</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding If Rx</td>
<td>true</td>
</tr>
<tr>
<td>BFD status</td>
<td>Neighbor Signaled Session Down</td>
</tr>
<tr>
<td>Diagnostic</td>
<td>true</td>
</tr>
<tr>
<td>Enabled</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding</td>
<td>true</td>
</tr>
<tr>
<td>Remote diagnostic</td>
<td>Control Detection Time Expired</td>
</tr>
<tr>
<td>Remote state</td>
<td>up</td>
</tr>
<tr>
<td>State</td>
<td>up</td>
</tr>
</tbody>
</table>

| Endpoints            | 172.21.145.85 |
| Local Ip             | 172.21.145.85 |
| Remote Ip            | 172.21.145.85 |

<table>
<thead>
<tr>
<th>Local config</th>
<th>169.254.1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination Ip</td>
<td>169.254.1.0</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:23:20:00:00:01</td>
</tr>
<tr>
<td>Remote config</td>
<td>172.18.171.169</td>
</tr>
<tr>
<td>Destination Ip</td>
<td>172.18.171.169</td>
</tr>
<tr>
<td>Destination Mac</td>
<td>00:00:00:00:00:00</td>
</tr>
<tr>
<td>BFD parameters</td>
<td>true</td>
</tr>
<tr>
<td>Enable</td>
<td>true</td>
</tr>
<tr>
<td>Min Rx</td>
<td>300</td>
</tr>
<tr>
<td>Min Tx</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding If Rx</td>
<td>true</td>
</tr>
<tr>
<td>BFD status</td>
<td>Neighbor Signaled Session Down</td>
</tr>
<tr>
<td>Diagnostic</td>
<td>true</td>
</tr>
<tr>
<td>Enabled</td>
<td>true</td>
</tr>
<tr>
<td>Forwarding</td>
<td>true</td>
</tr>
<tr>
<td>Remote diagnostic</td>
<td>Control Detection Time Expired</td>
</tr>
<tr>
<td>Remote state</td>
<td>up</td>
</tr>
<tr>
<td>State</td>
<td>up</td>
</tr>
</tbody>
</table>

| Endpoints            | 172.21.145.85 |
| Local Ip             | 172.21.145.85 |
| Remote Ip            | 172.21.145.85 |
**show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid local-macs [vni]**

Shows the local MAC tables (unicast and multicast) on the specified hardware gateway agent.

**Synopsis**

show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid local-macs [vni]

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway agent 10.144.136.212 hardware-gateway 3e5fffd66-448d-4e54-82ec-92fffd46d4af local-macs

<table>
<thead>
<tr>
<th>Hardware Gateway UUID</th>
<th>3e5fffd66-448d-4e54-82ec-92fffd46d4af</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Unicast Macs</td>
<td>Empty</td>
</tr>
<tr>
<td>Local Multicast Macs</td>
<td>VNI 8823</td>
</tr>
<tr>
<td></td>
<td>Macs</td>
</tr>
<tr>
<td></td>
<td>unknown-dst</td>
</tr>
<tr>
<td></td>
<td>Ip</td>
</tr>
<tr>
<td>Logical Switch UUID</td>
<td>6c752ceb-b3e9-3bbb-82cb-59c3e19a27bf</td>
</tr>
<tr>
<td>VNI</td>
<td>8823</td>
</tr>
<tr>
<td>Vtep Ips</td>
<td>172.21.225.182</td>
</tr>
</tbody>
</table>

| VNI                     | 8824                                 |
| Vtep Ips                | 172.21.225.182                       |

**show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid physical-inventory**

Shows the hardware gateway physical inventory (switches and ports) on the specified hardware gateway agent.

**Synopsis**

show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid physical-inventory

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway agent 10.144.136.212 hardware-gateway 3e5fffd66-448d-4e54-82ec-92fffd46d4af physical-inventory

<table>
<thead>
<tr>
<th>Hardware Gateway UUID</th>
<th>3e5fffd66-448d-4e54-82ec-92fffd46d4af</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Switches</td>
<td>1-switch-603</td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>OVS VTEP Emulator</td>
</tr>
<tr>
<td>Management Ips</td>
<td>Empty</td>
</tr>
<tr>
<td>Tunnel Ips</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 8 Hardware Gateway Commands

172.21.225.182

Physical Ports

<table>
<thead>
<tr>
<th>Name</th>
<th>Physical Switch Name</th>
<th>Current Bindings</th>
<th>Fault Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>p4</td>
<td>1-switch-603</td>
<td>Empty</td>
<td>Empty</td>
</tr>
<tr>
<td>p3</td>
<td>1-switch-603</td>
<td>Empty</td>
<td>Empty</td>
</tr>
<tr>
<td>p2</td>
<td>1-switch-603</td>
<td>0</td>
<td>Empty</td>
</tr>
<tr>
<td>p1</td>
<td>1-switch-603</td>
<td>0</td>
<td>Empty</td>
</tr>
</tbody>
</table>

show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid bindings

Shows hardware gateway attachments of logical ports (physical switch and port, VNI, VLAN) on the specified hardware gateway agent.

Synopsis

show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid bindings

CLI Mode

Basic

Example

nsx?mgr> show hardware-gateway agent 10.144.136.212 hardware-gateway 3e5ffd66-448d-4e54-82ec-92fffd46d4af bindings

UUID   Logical Switch UUID   VNI   Hardware Gateway UUID   Switch Name   Port Name   VLAN   Statistics
      3e5ffd66-448d-4e54-82ec-92fffd46d4af  1-switch-603   p1  0

Packets from local: 3518
Bytes from local: 566017
Packets to local: 11742
Bytes to local: 3427838

UUID   Logical Switch UUID   VNI   Hardware Gateway UUID   Switch Name   Port Name   VLAN   Statistics
      b6e273de-bff8-3c43-a4c7-9e42a671f004  801a0897-5938-3ea9-ba5f-77ecc339f4be  8824  3e5ffd66-448d-4e54-82ec-92fffd46d4af  1-switch-603   p2  0

Packets from local: 759119
Bytes from local: 107781854
show hardware-gateway agent agentIP logical-switches

Shows the list of logical switches (UUID, VNI) known to the specified hardware gateway agent.

**Synopsis**

show hardware-gateway agent agentIP logical-switches

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 10.144.136.212 logical-switches
```

```
UUID                            801a0897-5938-3ea9-ba5f-77ecc339f4be
VNI                             8824

UUID                            6c752ceb-b3e9-3bbb-82cb-59c3e19a27bf
VNI                             8823
```

show hardware-gateway agent agentIP logging-level

Gets the current logging level on the specified hardware gateway agent. One of the following values:

- ERROR
- WARN
- INFO
- DEBUG
- TRACE

**Synopsis**

show hardware-gateway agent agentIP logging-level

**CLI Mode**

Basic

**Example**

```
nsx?mgr> show hardware-gateway agent 10.144.136.212 logging-level
```

Log level: INFO

set hardware-gateway agent agentIP logging-level

**hardwareGatewayAgentLogLevel**

Sets logging on the specified hardware gateway agent to one of the following levels:

- ERROR
- WARN
- INFO
- DEBUG
- TRACE

**Synopsis**

set hardware-gateway agent agentIP logging-level hardwareGatewayLogLevel
**CLI Mode**

Basic

**Example**

nsx?mgr> set hardware-gateway agent 10.144.136.212 logging-level DEBUG

**show hardware-gateway agent agentIP dump**

Shows a full information dump of the specified hardware gateway agent.

**Synopsis**

show hardware-gateway agent agentIP dump

**CLI Mode**

Basic

**Example**

nsx?mgr> show hardware-gateway agent agentIP dump
## Deprecated Commands

The following table lists deprecated commands.

<table>
<thead>
<tr>
<th>Table 9-1. Deprecated Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Command</strong></td>
</tr>
<tr>
<td>cli ssh allow</td>
</tr>
<tr>
<td>clear firewall counters</td>
</tr>
<tr>
<td>clear vmwall rules</td>
</tr>
<tr>
<td>clear vty</td>
</tr>
<tr>
<td>close support-tunnel</td>
</tr>
<tr>
<td>copy http URL slot (1/2)</td>
</tr>
<tr>
<td>copy http URL temp</td>
</tr>
<tr>
<td>copy scp URL slot (1/2)</td>
</tr>
<tr>
<td>copy scp URL temp</td>
</tr>
<tr>
<td>debug copy</td>
</tr>
<tr>
<td>debug export snapshot</td>
</tr>
<tr>
<td>debug import snapshot</td>
</tr>
<tr>
<td>debug service</td>
</tr>
<tr>
<td>debug service flow src</td>
</tr>
<tr>
<td>debug snapshot list</td>
</tr>
<tr>
<td>debug snapshot remove</td>
</tr>
<tr>
<td>debug snapshot restore</td>
</tr>
<tr>
<td>default web-manager password</td>
</tr>
<tr>
<td>duplex auto</td>
</tr>
<tr>
<td>duplex (half/full) speed (10</td>
</tr>
<tr>
<td>http server</td>
</tr>
<tr>
<td>ip name server</td>
</tr>
<tr>
<td>ip policy-address</td>
</tr>
<tr>
<td>link-detect</td>
</tr>
<tr>
<td>linkwatch interval &lt;5-60&gt;</td>
</tr>
<tr>
<td>manager key</td>
</tr>
<tr>
<td>mode policy-based-forwarding</td>
</tr>
<tr>
<td>ntp server</td>
</tr>
<tr>
<td>open support-tunnel</td>
</tr>
<tr>
<td>set support key</td>
</tr>
</tbody>
</table>
Table 9-1. Deprecated Commands

<table>
<thead>
<tr>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>show alerts</td>
</tr>
<tr>
<td>show debug log</td>
</tr>
<tr>
<td>show dv-support</td>
</tr>
<tr>
<td>show hardware</td>
</tr>
<tr>
<td>show gateway rules</td>
</tr>
<tr>
<td>show interface</td>
</tr>
<tr>
<td>show ip addr</td>
</tr>
<tr>
<td>show iptables</td>
</tr>
<tr>
<td>show kernel message</td>
</tr>
<tr>
<td>show kernel message last</td>
</tr>
<tr>
<td>show log alerts</td>
</tr>
<tr>
<td>show log events</td>
</tr>
<tr>
<td>show service helpers</td>
</tr>
<tr>
<td>show service statistics</td>
</tr>
<tr>
<td>show services</td>
</tr>
<tr>
<td>show session-manager counters</td>
</tr>
<tr>
<td>show session-manager sessions</td>
</tr>
<tr>
<td>show stacktrace</td>
</tr>
<tr>
<td>show raid</td>
</tr>
<tr>
<td>show raid detail</td>
</tr>
<tr>
<td>show realms</td>
</tr>
<tr>
<td>show syslog</td>
</tr>
<tr>
<td>show system events</td>
</tr>
<tr>
<td>show system network_connections</td>
</tr>
<tr>
<td>show syslog</td>
</tr>
<tr>
<td>show vmwall log</td>
</tr>
<tr>
<td>show vmwall rules</td>
</tr>
<tr>
<td>ssh end</td>
</tr>
<tr>
<td>syslog</td>
</tr>
<tr>
<td>telnet</td>
</tr>
<tr>
<td>vm validation</td>
</tr>
<tr>
<td>vm validation log</td>
</tr>
<tr>
<td>vmwall log suppression</td>
</tr>
</tbody>
</table>
INDEX

C
  Capture pNic 78
  Capture vdrPort 79
  Capture VMKNic 79
  Capture vNic 78
  Central Commands Overview 29
  Central Controller Commands 32
  Central Distributed Firewall Commands 54
  Central Edge Commands 60
  Central Logical Router Commands 32
  Central Logical Switch Commands 45
  Central packet capture commands 78
ciphers 153
clear arp ipAddress 85
clear nat counters 85
clear service dhcp lease 85
clear service ipsec sa 85
cli password 15
commands, central controller 32
commands, central distributed firewall 54
commands, central edge 60
commands, central logical router 32
commands, central logical switch 45
commands, NSX Controller 173, 185
commands, overview of central 29
commands, standalone NSX Edge 153
commands,ESXi 165
commit 153
configure terminal 15, 154
D
debug packet capture 86
debug packet display interface 86
debug show files 16
Delete packet capture session 80
disable 16, 86
dns name-server 154
dnslookup serverName 87
dnslookup serverName (hostname | ip_address) 87
E
egress-optimize 154
enable 16, 87
enable password 17
esxcli network vswitch dvs vmware vxlan config stats get 165
esxcli network vswitch dvs vmware vxlan config stats set 165
N
no proxy setup 157
no proxy user 158
NSX Controller Commands 173, 185
O
overview, standalone NSX Edge 153
P
password 158
ping 20, 88
ping (ip | ipv6) ipAddress 88
ping interface addr 88
server ipAddress 160
proxy address 158
proxy username 159
Q
quit 20, 159
R
reboot 20
reset 20
restart controller 173
rpfilter 159
S
set clock 21
set hardware-gateway agent agentIP logging-level hardwareGatewayAgentLogLevel 196
setup 21
Show all packet capture sessions 80
show arp 22, 89
show clock 22, 89
show cluster (all | clusterID) 30
show configuration 160
show configuration application-set 90
show configuration bgp 91
show configuration certificatestore 93
show configuration dhcp 93
show configuration dns 94
show configuration firewall 95
show configuration global 96
show configuration gslb 97
show configuration highavailability 98
show configuration interface 99
show configuration interface-set 100
show configuration ipsec 102
show configuration ipset 103
show configuration l2vpn 103
show configuration loadbalancer 104
show configuration loadbalancer monitor 106
show edge edgeID log 71
show edge edgeID messagebus 71
show edge edgeID nat 72
show edge edgeID process list 72
show edge edgeID process snapshot 72
show edge edgeID service dhcp 73
show edge edgeID service dns 73
show edge edgeID service highavailability 74, 75
show edge edgeID service highavailability connection-sync 74, 75
show edge edgeID service highavailability link 75
show edge edgeID service ipsec 75
show edge edgeID service ipsec site 75
show edge edgeID service loadbalancer 76
show edge edgeID service loadbalancer error 76
show edge edgeID service monitor 76
show edge edgeID service monitor service 76
show edge edgeID system cpu 77
show edge edgeID system memory 77
show edge edgeID system network-stats 77
show edge edgeID system storage 77
show edge edgeID version 78
show ethernet 22
show eventmgr 113
show filesystem 23
show firewall 114
show firewall flows 115
show firewall flows top n 115
show firewall flows top n sort-by bytes 115
show firewall flows top n sort-by pkts 115
show firewall rule-id id 115
show firewall rule-id id flows 115
show firewall rule-id id flows top n 116
show firewall rule-id id flows top n sort-by bytes 116
show firewall rule-id id flows top n sort-by pkts 116
show flowstats 116
show flowtable 118
show flowtable expect 118
show flowtable rule-id id 118
show flowtable rule-id id top n 118
show flowtable rule-id id top n sort-by bytes 118
show flowtable rule-id id top n sort-by pkts 119
show flowtable top n 119
show flowtable top n sort-by bytes 119
show flowtable top n sort-by pkts 119
show flowtimeout 119
show hardware-gateway agent agentIP dump 197
show ip route ospf 129
show ipset 129
show ipv6 forwarding 130
show log 23, 130, 161
show log routing 131
show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) 32
show logical-router controller controllerID dlr dlrID bridge (all | bridgeID) mac-address-table 32
show logical-router controller controllerID dlr dlrID brief 33
show logical-router controller controllerID dlr dlrID interface 33
show logical-router controller controllerID dlr dlrID route 34
show logical-router controller controllerID dlr dlrID statistics 34
show logical-router controller controllerID host hostIP connection 35
show logical-router controller controllerID statistics 35
show logical-router host hostID connection 35
show logical-router host hostID dlr dlrID 36
show logical-router host hostID dlr dlrID arp 36
show logical-router host hostID dlr dlrID bridge bridgeName mac-address-table 37
show logical-router host hostID dlr dlrID bridge bridgeName statistics 38
show logical-router host hostID dlr dlrID bridge bridgeName verbose 39
show logical-router host hostID dlr dlrID control-plane-statistics 40
show logical-router host hostID dlr dlrID interface intName brief 41
show logical-router host hostID dlr dlrID interface intName statistics 41
show logical-router host hostID dlr dlrID interface intName verbose 42
show logical-router host hostID dlr dlrID route 43
show logical-router host hostID dlr dlrID tunable 43
show logical-router list all 44
show logical-router list dlr dlrID host 44
show logical-router resolve 44
show logical-switch controller controllerID host hostIP arp 45
show logical-switch controller controllerID host hostIP connection 45
show logical-switch controller controllerID host hostIP mac 46
show logical-switch controller controllerID host hostIP vtep 46
show logical-switch controller controllerID vni vni arp 46
show logical-switch controller controllerID vni vni brief 46
show logical-switch controller controllerID vni vni connection 47
show logical-switch controller controllerID vni vni mac 47
show logical-switch controller controllerID vni vni statistics 47
show logical-switch controller controllerID vni vni vtep 48
show logical-switch host hostID config-by-vms 48
show logical-switch host hostID statistics 49
show logical-switch host hostID verbose 50
show logical-switch host hostID vni vni arp 51
show logical-switch host hostID vni vni mac 51
show logical-switch host hostID vni vni port portID statistics 51
show logical-switch host hostID vni vni statistics 52
show logical-switch host hostID vni vni verbose 52
show logical-switch host hostID vni vni vtep 53
show logical-switch list all 53
show logical-switch list host hostID vni 54
show logical-switch list vni vni host 54
show messagebus 131
show nat 133
show netdevice 133
show network interface 181
Show packet capture file content 81
Show packet capture session 81
show process 134
show rpfilter 134
show rpftstats 135
show service 135
show service all 135
show service dhcp 136
show service dns 136, 161
show service highavailability 136
show service highavailability connection-sync 136
show service highavailability internal 137
show service highavailability link 137
show service ipsec 138
show service ipsec cacerts 138
show service ipsec certs 138
show service ipsec crls 138
show service ipsec pubkeys 139
show service ipsec sa 139
show service ipsec site 139
show service ipsec sp 139
show service ipsec stats 139
show service l2vpn 161
show service l2vpn (on client) 140
show service l2vpn (on server) 140
show service l2vpn bridge 140
show service l2vpn conversion table 141
show service l2vpn trunk-table 141
show service loadbalancer 142
show service loadbalancer error 142
show service loadbalancer monitor monitorName 142
show service loadbalancer pool 142
show service loadbalancer session 143
show service loadbalancer table 143
show service loadbalancer virtual 143
show service monitor 143
show service monitor service 144
show service network-connections 145
show service sslvpn-plus 146
show service sslvpn-plus sessions 146
show service sslvpn-plus stats 146
show service sslvpn-plus tunnels 146
show slots 24
show sub-interface 162
show system cpu 147
show system interrupt 147
show system memory 148
show system network-stats 148
show system storage 149
show system uptime 150
show tech-support 25, 150
show version 150
show vm vmID 31
show vnic vnicID 31
shutdown 25
ssh 25
ssh (start | stop) 162
Standalone NSX Edge Commands 153
Standalone NSX Edge Overview 153
start control-cluster logical-switches ping 182
start control-cluster logical-switches pktcap 182
start control-cluster logical-switches pktcap-time 182
Stop packet capture session 82
Stop packet capture session and discard 82
sub-interface pairs 162
sub-interface range 163
summarize-dvfilter 171
T
terminal length 26
terminal no length 26
ttraceroute 26, 152
Transfer packet capture file 82
trustca 163
U
user 27, 164
user userName privilege web-interface 27
show hardware-gateway agent agentIP hardware-gateway 191
V
show hardware-gateway agent agentIP hardware-gateway hardwareGatewayUuid local-macs 194
W
web-manager 28
write memory 28