

dipan-hw1# sh run nv overlay

!Command: show running-config nv overlay  
!Running configuration last done at: Mon Jul 29 00:09:07 2019  
!Time: Mon Jul 29 04:56:05 2019

version 9.3(1) Bios:version 05.19  
feature nv overlay

```
interface nve1
  no shutdown
  source-interface loopback0
  member vni 5000
  ingress-replication protocol static
  peer-ip 2.2.2.2
```

dipan-hw1# sh run interface loopback 0

!Command: show running-config interface loopback0  
!Running configuration last done at: Mon Jul 29 00:09:07 2019  
!Time: Mon Jul 29 05:03:37 2019

version 9.3(1) Bios:version 05.19

```
interface loopback0
  ip address 1.1.1.1/32
```

dipan-hw1# sh interface loopback 0  
loopback0 is up  
admin state is up,  
Hardware: Loopback  
Internet Address is 1.1.1.1/32  
MTU 1500 bytes, BW 8000000 Kbit, DLY 5000 usec  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation LOOPBACK, medium is broadcast  
Auto-mdix is turned off  
0 packets input 0 bytes  
0 multicast frames 0 compressed  
0 input errors 0 frame 0 overrun 0 fifo  
0 packets output 0 bytes 0 underruns  
0 output errors 0 collisions 0 fifo  
0 out\_carrier\_errors

dipan-hw1# sh ip route  
IP Route Table for VRF "default"  
'\*' denotes best ucast next-hop  
'\*\*' denotes best mcast next-hop  
'[x/y]' denotes [preference/metric]

'%<string>' in via output denotes VRF <string>

```
1.1.1.1/32, ubest/mbest: 2/0, attached
  *via 1.1.1.1, Lo0, [0/0], 2d09h, local
  *via 1.1.1.1, Lo0, [0/0], 2d09h, direct
2.2.2.2/32, ubest/mbest: 1/0
  *via 192.168.100.2, [1/0], 2d08h, static
192.168.100.0/30, ubest/mbest: 1/0, attached
  *via 192.168.100.1, Eth1/34, [0/0], 2d08h, direct
192.168.100.1/32, ubest/mbest: 1/0, attached
  *via 192.168.100.1, Eth1/34, [0/0], 2d08h, local
```

dipan-hw1#

dipan-hw1# sh lldp neighbors interface eth1/34

Capability codes:

(R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device

(W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other

Device ID	Local Intf	Hold-time	Capability	Port ID
dipan-hw2	Eth1/34	120	BR	Ethernet1/34

Total entries displayed: 1

dipan-hw1#

dipan-hw1# sh run interface eth1/34

!Command: show running-config interface Ethernet1/34

!Running configuration last done at: Mon Jul 29 00:09:07 2019

!Time: Mon Jul 29 04:58:19 2019

version 9.3(1) Bios:version 05.19

interface Ethernet1/34

ip address 192.168.100.1/30

no shutdown

dipan-hw1#

dipan-hw1# sh interface eth1/34

Ethernet1/34 is up

admin state is up, Dedicated Interface

Hardware: 100/1000/10000/25000 Ethernet, address: 00de.fb9d.0ea7 (bia 00de.fb9d.0ec9)

Internet Address is 192.168.100.1/30

MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec

reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, medium is broadcast

full-duplex, 10 Gb/s, media type is 10G

Beacon is turned off

Auto-Negotiation is turned on FEC mode is Auto

Input flow-control is off, output flow-control is off  
Auto-mdix is turned off  
Rate mode is dedicated  
Switchport monitor is off  
EtherType is 0x8100  
EEE (efficient-ethernet) : n/a  
admin fec state is auto, oper fec state is off  
Last link flapped 2d09h  
Last clearing of "show interface" counters never  
3 interface resets  
Load-Interval #1: 30 seconds  
30 seconds input rate 1304 bits/sec, 0 packets/sec  
30 seconds output rate 1304 bits/sec, 0 packets/sec  
input rate 1.30 Kbps, 0 pps; output rate 1.30 Kbps, 0 pps  
Load-Interval #2: 5 minute (300 seconds)  
300 seconds input rate 1192 bits/sec, 1 packets/sec  
300 seconds output rate 1192 bits/sec, 1 packets/sec  
input rate 1.19 Kbps, 1 pps; output rate 1.19 Kbps, 1 pps  
RX  
132840 unicast packets 17416 multicast packets 8 broadcast packets  
150264 input packets 23731944 bytes  
0 jumbo packets 0 storm suppression bytes  
0 runs 0 giants 0 CRC 0 no buffer  
0 input error 0 short frame 0 overrun 0 underrun 0 ignored  
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop  
0 input with dribble 0 input discard  
0 Rx pause  
TX  
132887 unicast packets 18103 multicast packets 10 broadcast packets  
151000 output packets 23807179 bytes  
0 jumbo packets  
0 output error 0 collision 0 deferred 0 late collision  
0 lost carrier 0 no carrier 0 babble 0 output discard  
0 Tx pause

dipan-hw1#

dipan-hw1# sh run interface eth1/33

!Command: show running-config interface Ethernet1/33  
!Running configuration last done at: Mon Jul 29 00:09:07 2019  
!Time: Mon Jul 29 04:59:04 2019

version 9.3(1) Bios:version 05.19

interface Ethernet1/33  
switchport  
switchport access vlan 1000  
no shutdown

```
dipan-hw1# sh interface eth1/33
Ethernet1/33 is up
admin state is up, Dedicated Interface
  Hardware: 100/1000/10000/25000 Ethernet, address: 00de.fb9d.0ec8 (bia
00de.fb9d.0ec8)
  MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, medium is broadcast
  Port mode is access
  full-duplex, 10 Gb/s, media type is 10G
  Beacon is turned off
  Auto-Negotiation is turned on FEC mode is Auto
  Input flow-control is off, output flow-control is off
  Auto-mdix is turned off
  Rate mode is dedicated
  Switchport monitor is off
  EtherType is 0x8100
  EEE (efficient-ethernet) : n/a
    admin fec state is auto, oper fec state is off
  Last link flapped 2d17h
  Last clearing of "show interface" counters never
  1 interface resets
  Load-Interval #1: 30 seconds
    30 seconds input rate 808 bits/sec, 0 packets/sec
    30 seconds output rate 1152 bits/sec, 1 packets/sec
    input rate 808 bps, 0 pps; output rate 1.15 Kbps, 1 pps
  Load-Interval #2: 5 minute (300 seconds)
    300 seconds input rate 792 bits/sec, 1 packets/sec
    300 seconds output rate 1048 bits/sec, 1 packets/sec
    input rate 792 bps, 1 pps; output rate 1.05 Kbps, 1 pps
RX
  131965 unicast packets 7936 multicast packets 668 broadcast packets
  140569 input packets 14249714 bytes
  0 jumbo packets 0 storm suppression bytes
  0 runts 0 giants 0 CRC 0 no buffer
  0 input error 0 short frame 0 overrun 0 underrun 0 ignored
  0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
  0 input with dribble 0 input discard
  0 Rx pause
TX
  131906 unicast packets 129960 multicast packets 138 broadcast packets
  262000 output packets 24125810 bytes
  0 jumbo packets
  0 output error 0 collision 0 deferred 0 late collision
  0 lost carrier 0 no carrier 0 babble 0 output discard
  0 Tx pause
```

```
dipan-hw1#
```

```
dipan-hw1# sh interface nve 1
```

```

nve1 is up
admin state is up, Hardware: NVE
MTU 9216 bytes
Encapsulation VXLAN
Auto-mdix is turned off
RX
  ucast: 128661 pkts, 19419634 bytes - mcast: 176 pkts, 20942 bytes
TX
  ucast: 128659 pkts, 19419406 bytes - mcast: 269 pkts, 34265 bytes

```

```
dipan-hw1#
```

```

dipan-hw1# sh nve peers
Interface Peer-IP                               State LearnType Uptime  Router-Mac
-----
nve1    2.2.2.2                               Up   DP    2d08h  n/a

```

```

dipan-hw1# sh nve vni
Codes: CP - Control Plane    DP - Data Plane
      UC - Unconfigured      SA - Suppress ARP
      SU - Suppress Unknown Unicast
      Xconn - Crossconnect
      MS-IR - Multisite Ingress Replication

```

```

Interface VNI    Multicast-group  State Mode Type [BD/VRF]  Flags
-----
nve1    5000    UnicastStatic  Up   DP  L2 [1000]

```

```
dipan-hw1# sh mac address-table
```

```
Legend:
```

```

* - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC
age - seconds since last seen,+ - primary entry using vPC Peer-Link,
(T) - True, (F) - False, C - ControlPlane MAC, ~ - vsan

```

```

VLAN    MAC Address    Type    age    Secure NTFY Ports
-----+-----+-----+-----+-----
* 1000   000c.2942.b0f2  dynamic 0      F    F    nve1(2.2.2.2)
* 1000   000c.298b.746d  dynamic 0      F    F    Eth1/33
G  -    00de.fb9d.0ea7  static  -      F    F    sup-eth1(R)
dipan-hw1#

```

```
SW2:
```

```
=====
```

```
=====
```

```
dipan-hw2# sh run nv overlay
```

!Command: show running-config nv overlay  
!Running configuration last done at: Mon Jul 29 00:02:23 2019  
!Time: Mon Jul 29 05:02:09 2019

version 9.3(1) Bios:version 05.31  
feature nv overlay

```
interface nve1
  no shutdown
  source-interface loopback0
  member vni 5000
  ingress-replication protocol static
  peer-ip 1.1.1.1
```

dipan-hw2#

dipan-hw2# sh run interface loopback 0

!Command: show running-config interface loopback0  
!Running configuration last done at: Mon Jul 29 00:02:23 2019  
!Time: Mon Jul 29 05:02:42 2019

version 9.3(1) Bios:version 05.31

```
interface loopback0
  ip address 2.2.2.2/32
```

```
dipan-hw2# sh interface loopback 0
loopback0 is up
admin state is up,
  Hardware: Loopback
  Internet Address is 2.2.2.2/32
  MTU 1500 bytes, BW 8000000 Kbit, DLY 5000 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation LOOPBACK, medium is broadcast
  Auto-mdix is turned off
    15 packets input 1260 bytes
    0 multicast frames 0 compressed
    0 input errors 0 frame 0 overrun 0 fifo
    10 packets output 840 bytes 0 underruns
    0 output errors 0 collisions 0 fifo
    0 out_carrier_errors
```

```
dipan-hw2# sh ip route
IP Route Table for VRF "default"
'*' denotes best ucast next-hop
'***' denotes best mcast next-hop
'[x/y]' denotes [preference/metric]
'%<string>' in via output denotes VRF <string>
```

1.1.1.1/32, ubest/mbest: 1/0  
\*via 192.168.100.1, [1/0], 2d08h, static  
2.2.2.2/32, ubest/mbest: 2/0, attached  
\*via 2.2.2.2, Lo0, [0/0], 2d09h, local  
\*via 2.2.2.2, Lo0, [0/0], 2d09h, direct  
192.168.100.0/30, ubest/mbest: 1/0, attached  
\*via 192.168.100.2, Eth1/34, [0/0], 2d09h, direct  
192.168.100.2/32, ubest/mbest: 1/0, attached  
\*via 192.168.100.2, Eth1/34, [0/0], 2d09h, local

dipan-hw2# sh lldp neighbors interface eth1/34

Capability codes:

(R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device

(W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other

Device ID	Local Intf	Hold-time	Capability	Port ID
dipan-hw1	Eth1/34	120	BR	Ethernet1/34

Total entries displayed: 1

dipan-hw2#

dipan-hw2# sh run interface eth1/34

!Command: show running-config interface Ethernet1/34

!Running configuration last done at: Mon Jul 29 00:02:23 2019

!Time: Mon Jul 29 05:06:42 2019

version 9.3(1) Bios:version 05.31

interface Ethernet1/34

ip address 192.168.100.2/30

no shutdown

dipan-hw2# sh interface eth1/34

Ethernet1/34 is up

admin state is up, Dedicated Interface

Hardware: 100/1000/10000/25000 Ethernet, address: 00de.fb9d.7987 (bia 00de.fb9d.79a9)

Internet Address is 192.168.100.2/30

MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec

reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, medium is broadcast

full-duplex, 10 Gb/s, media type is 10G

Beacon is turned off

Auto-Negotiation is turned on FEC mode is Auto

Input flow-control is off, output flow-control is off

Auto-mdix is turned off

Rate mode is dedicated

Switchport monitor is off

EtherType is 0x8100

EEE (efficient-ethernet) : n/a

admin fec state is auto, oper fec state is off

Last link flapped 2d09h  
Last clearing of "show interface" counters never  
3 interface resets  
Load-Interval #1: 30 seconds  
30 seconds input rate 1272 bits/sec, 0 packets/sec  
30 seconds output rate 1272 bits/sec, 0 packets/sec  
input rate 1.27 Kbps, 0 pps; output rate 1.27 Kbps, 0 pps  
Load-Interval #2: 5 minute (300 seconds)  
300 seconds input rate 1208 bits/sec, 0 packets/sec  
300 seconds output rate 1208 bits/sec, 0 packets/sec  
input rate 1.21 Kbps, 0 pps; output rate 1.21 Kbps, 0 pps  
RX  
133420 unicast packets 18138 multicast packets 11 broadcast packets  
151569 input packets 23897111 bytes  
0 jumbo packets 0 storm suppression bytes  
0 runs 0 giants 0 CRC 0 no buffer  
0 input error 0 short frame 0 overrun 0 underrun 0 ignored  
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop  
0 input with dribble 0 input discard  
0 Rx pause  
TX  
133373 unicast packets 17452 multicast packets 9 broadcast packets  
150834 output packets 23821944 bytes  
0 jumbo packets  
0 output error 0 collision 0 deferred 0 late collision  
0 lost carrier 0 no carrier 0 babble 0 output discard  
0 Tx pause

dipan-hw2#  
dipan-hw2# sh run interface eth1/33

!Command: show running-config interface Ethernet1/33  
!Running configuration last done at: Mon Jul 29 00:02:23 2019  
!Time: Mon Jul 29 05:06:55 2019

version 9.3(1) Bios:version 05.31

interface Ethernet1/33  
switchport  
switchport access vlan 1000  
no shutdown

dipan-hw2# sh interface eth1/33  
Ethernet1/33 is up  
admin state is up, Dedicated Interface  
Hardware: 100/1000/10000/25000 Ethernet, address: 00de.fb9d.79a8 (bia 00de.fb9d.79a8)  
MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation ARPA, medium is broadcast



Port mode is access  
 full-duplex, 10 Gb/s, media type is 10G  
 Beacon is turned off  
 Auto-Negotiation is turned on FEC mode is Auto  
 Input flow-control is off, output flow-control is off  
 Auto-mdix is turned off  
 Rate mode is dedicated  
 Switchport monitor is off  
 EtherType is 0x8100  
 EEE (efficient-ethernet) : n/a  
   admin fec state is auto, oper fec state is off  
 Last link flapped 2d17h  
 Last clearing of "show interface" counters never  
 1 interface resets  
 Load-Interval #1: 30 seconds  
   30 seconds input rate 856 bits/sec, 0 packets/sec  
   30 seconds output rate 1280 bits/sec, 1 packets/sec  
   input rate 856 bps, 0 pps; output rate 1.28 Kbps, 1 pps  
 Load-Interval #2: 5 minute (300 seconds)  
   300 seconds input rate 840 bits/sec, 0 packets/sec  
   300 seconds output rate 1064 bits/sec, 1 packets/sec  
   input rate 840 bps, 0 pps; output rate 1.06 Kbps, 1 pps

RX  
 132498 unicast packets 7845 multicast packets 1641 broadcast packets  
 141983 input packets 14849082 bytes  
 0 jumbo packets 0 storm suppression bytes  
 0 runts 0 giants 0 CRC 0 no buffer  
 0 input error 0 short frame 0 overrun 0 underrun 0 ignored  
 0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop  
 0 input with dribble 0 input discard  
 0 Rx pause  
 TX  
 132434 unicast packets 130229 multicast packets 618 broadcast packets  
 263277 output packets 24235441 bytes  
 0 jumbo packets  
 0 output error 0 collision 0 deferred 0 late collision  
 0 lost carrier 0 no carrier 0 babble 0 output discard  
 0 Tx pause

dipan-hw2#

dipan-hw2# sh nve peers

Interface	Peer-IP	State	LearnType	Uptime	Router-Mac
nve1	1.1.1.1	Up	DP	2d08h	n/a

dipan-hw2# sh nve v

vni           vrf           vxlan-params

dipan-hw2# sh nve vni

Codes: CP - Control Plane       DP - Data Plane

UC - Unconfigured      SA - Suppress ARP  
SU - Suppress Unknown Unicast  
Xconn - Crossconnect  
MS-IR - Multisite Ingress Replication

Interface	VNI	Multicast-group	State	Mode	Type [BD/VRF]	Flags
nve1	5000	UnicastStatic	Up	DP	L2 [1000]	