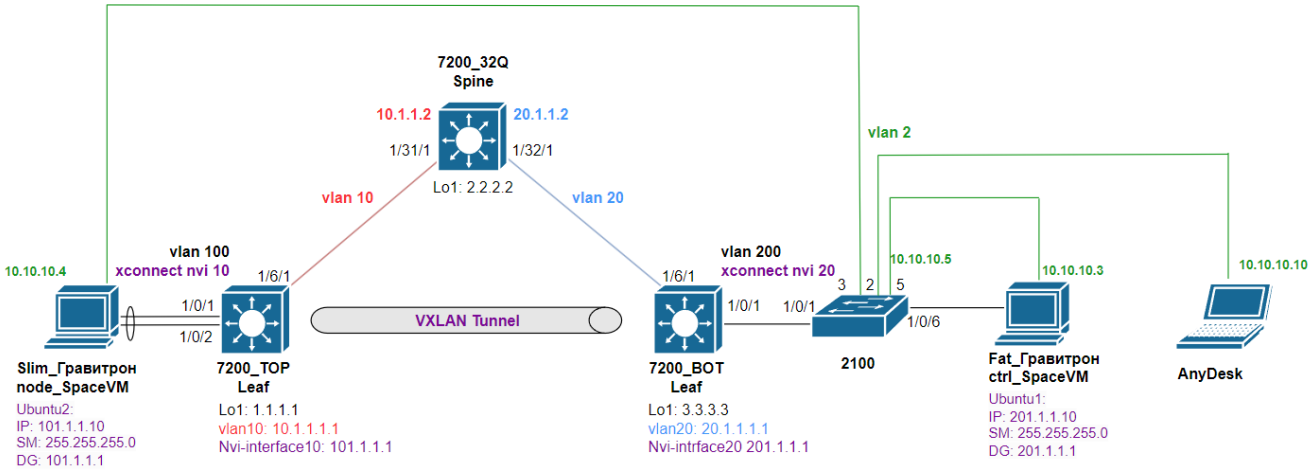
-EVPN VXLAN Distributed Gateway



Spine(7200_32Q):

VLAN:
conf t
no interface vlan 1
vlan 10,20

#Configure interface vlan10, vlan20 and loopback1
interface vlan 10
ip address 10.1.1.2 255.255.255.0
interface vlan 20
ip address 20.1.1.2 255.255.255.0
interface loopback 1
ip address 2.2.2.2 255.255.255.255

#Start the ospf protocol and configure the ospf area to which the interface belongs
router ospf 1
ospf router-id 2.2.2.2
network 2.2.2.2 0.0.0.0 area 0
network 10.1.1.0 0.0.0.255 area 0
network 20.1.1.0 0.0.0.255 area 0

Leaf1(7200_TOP):

VLAN:
conf t
vlan 10
exit
interface ethernet 1/6/1
switchport access vlan 10

```
#Configure interface vlan10 and loopback1
interface vlan 10
ip address 10.1.1.1 255.255.255.0
interface loopback 1
ip address 1.1.1.1 255.255.255.255

#Configure the global nve source address
evpn nve source-address 1.1.1.1

#Disable the automatic learning function of remote MAC/ARP/ND
vxlan remote mac-address-learning disable
vxlan remote arp-learning disable
vxlan remote nd-learning disable

#Configure the service loopback group 1 referenced by vxlan
loopback-group 1
interface ethernet 1/0/3
description FOR_VXLAN_PROXY
loopback-group 1
exit
vxlan proxy loopback-group 1

#Configure virtual switch instance nvi 10 and enable evpn
nvi 10
vxlan-id 10
evpn
rd 1:1
route-target both 1000:1000
enable
exit

#Configure ARP/ND suppression
arp suppression enable
nd suppression enable

#Configure service access
interface ethernet 1/6/1
xconnect nvi 10 mode vlan svid 100

#Configure L3VPN instance and associate with l3-vni 1000
ip vrf vpn1
rd 11:1
route-target both 10:1
l3-vni 1000

#Configure the distributed gateway interface of the virtual switch instance
interface nvi-interface 10
ip vrf forwarding vpn1
mac-address 00-ff-ff-00-00-01
distributed-gateway enable
ipv6 address 1001::1/64
ip address 101.1.1.1 255.255.255.0

#Start the ospf protocol and configure the ospf area to which the interface belongs
router ospf 1
ospf router-id 1.1.1.1
network 1.1.1.1 0.0.0.0 area 0
network 10.1.1.0 0.0.0.255 area 0

#Start the bgp protocol and declare evpn capability to the bgp peer
router bgp 100
neighbor 3.3.3.3 remote-as 100
neighbor 3.3.3.3 update-source 1.1.1.1
address-family l2vpn evpn
neighbor 3.3.3.3 activate
exit-address-family
address-family ipv4 vrf vpn1
redistribute connected
exit-address-family

#
interface ethernet 1/0/1-2
xconnect nvi 10
```

Leaf2(7200_BOT):

```
# VLAN:
conf t
vlan 20
exit
interface ethernet 1/6/1
switchport access vlan 20

#Configure interface vlan20 and loopback1
interface vlan 20
ip address 20.1.1.1 255.255.255.0
interface loopback 1
ip address 3.3.3.3 255.255.255.255

#Configure the global nve source address
evpn nve source-address 3.3.3.3

#Disable the automatic learning function of remote MAC/ARP/ND
vxlan remote mac-address-learning disable
vxlan remote arp-learning disable
vxlan remote nd-learning disable

#Configure the service loopback group 1 referenced by vxlan
loopback-group 1
interface ethernet 1/0/3
description FOR_VXLAN_PROXY
loopback-group 1
exit
vxlan proxy loopback-group 1

#Configure virtual switch instance nvi 20 and enable evpn
nvi 20
vxlan-id 20
evpn
rd 2:2
route-target both 2000:2000
enable
exit

#Configure ARP/ND suppression
arp suppression enable
nd suppression enable

#Configure service access
interface ethernet 1/6/1
xconnect nvi 20 mode vlan svid 100

#Configure L3VPN instance and associate with l3-vni 1000
ip vrf vpn1
rd 11:1
route-target both 10:1
l3-vni 1000

#Configure the distributed gateway interface of the virtual switch instance
interface nvi-interface 20
ip vrf forwarding vpn1
mac-address 00-ff-ff-00-00-02
distributed-gateway enable
ipv6 address 2001::1/64
ip address 201.1.1.1 255.255.0.0

#Start the ospf protocol and configure the ospf area to which the interface belongs
router ospf 1
ospf router-id 3.3.3.3
network 3.3.3.3 0.0.0.0 area 0
network 20.1.1.0 0.0.0.255 area 0

#Start the bgp protocol and declare evpn capability to the bgp peer
router bgp 100
neighbor 1.1.1.1 remote-as 100
neighbor 1.1.1.1 update-source 3.3.3.3
address-family l2vpn evpn
neighbor 1.1.1.1 activate
exit-address-family
address-family ipv4 vrf vpn1
redistribute connected
exit-address-family
```

#
interface ethernet 1/0/1
xconnect nvi 20

7200_32Q

```
7200_32Q#show run
!
service password-encryption
!
hostname 7200_32Q
!
multi config access
authentication logging enable
!
username admin privilege 15 password 7 88ad795fe330411b653d6f18e8e4f4e5
username zakko privilege 15 password 7 cc5f68197114476743ac55440382994e
!
authentication line console login local
!
!
logging executed-commands enable
!
ssh-server enable
ssh-server timeout 600
!
info-center logfile 4 config count 40960 flash logfile.log
info-center logfile 4 output-enable
info-center logfile 4 match level warnings
info-center logfile 4 record-cmd
!
!
lldp enable
spanning-tree
!
!
Interface Ethernet0
 ip address 192.168.255.17 255.255.255.0
!
!
vlan 1;10;20
!
!
Interface Ethernet1/30/1
 description 7200_TOP-100G-down
!
Interface Ethernet1/31/1
 speed-duplex force40g-full
 description TO_7200_TOP
 switchport access vlan 10
!
Interface Ethernet1/32/1
 speed-duplex force40g-full
 description TO_7200_BOT
 switchport access vlan 20
!
interface Vlan10
 ip address 10.1.1.2 255.255.255.0
!
interface Vlan20
 ip address 20.1.1.2 255.255.255.0
!
interface Loopback1
 ip address 2.2.2.2 255.255.255.255
!
```

```
router ospf 1
 ospf router-id 2.2.2.2
 network 2.2.2.2 0.0.0.0 area 0
 network 10.1.1.0 0.0.0.255 area 0
 network 20.1.1.0 0.0.0.255 area 0
!
ip route 0.0.0.0/0 192.168.255.1
ip route 10.0.254.0/23 10.0.1.1
!
!
exec-timeout 30 0
no login
!
end
```

7200_TOP

```
7200_TOP#show running-config
!
service password-encryption
!
hostname 7200_TOP
!
multi config access
authentication logging enable
!
username admin privilege 15 password 7 88ad795fe330411b653d6f18e8e4f4e5
username zakko privilege 15 password 7 cc5f68197114476743ac55440382994e
!
authentication line console login local
!
!
logging executed-commands enable
!
ssh-server enable
ssh-server timeout 600
!
info-center logfile 4 config count 40960 flash logfile.log
info-center logfile 4 output-enable
info-center logfile 4 match level warnings
info-center logfile 3 record-cmd
info-center logfile 4 record-cmd
!
!
lldp enable
spanning-tree
!
!
Interface Ethernet0
 ip address 192.168.255.11 255.255.255.0
!
!
evpn nve source-address 1.1.1.1
!
!
vlan 1;10
!
vxlan remote mac-address-learning disable
vxlan remote arp-learning disable
vxlan remote nd-learning disable
loopback-group 1
!
nvi 10
 vxlan-id 10
 evpn
  rd 1:1
  route-target both 1000:1000
  enable
```

```
  evpn-exit
 arp suppression enable
 nd suppression enable
!
!
Interface Ethernet1/0/1
 speed-duplex force1g-full
 description TO_PC_slim
 no spanning-tree
 switchport access vlan 100
 xconnect nvi 10
!
Interface Ethernet1/0/2
 speed-duplex force1g-full
 description TO_PC_slim
 no spanning-tree
 switchport access vlan 100
 xconnect nvi 10
!
Interface Ethernet1/0/3
 speed-duplex force1g-full
 description FOR_VXLAN_PROXY
 loopback-group 1
!
!
Interface Ethernet1/4/1
 description desc 7200_32Q-100G-down
!
!
Interface Ethernet1/6/1
 speed-duplex force40g-full
 description TO_7200_32Q
 switchport access vlan 10
!
vxlan proxy loopback-group 1
!
ip vrf vpn1
 rd 11:1
 route-target both 10:1
 l3-vni 1000
!
interface Vlan10
 ip address 10.1.1.1 255.255.255.0
!
interface Loopback1
 ip address 1.1.1.1 255.255.255.255
!
interface Nvi-interface10
 ip vrf forwarding vpn1
 mac-address 00-ff-ff-00-00-01
 distributed-gateway enable
 ipv6 address 1001::1/64
 ip address 101.1.1.1 255.255.255.0
!
router ospf 1
 ospf router-id 1.1.1.1
 network 1.1.1.1 0.0.0.0 area 0
 network 10.1.1.0 0.0.0.255 area 0
!
router bgp 100
 neighbor 3.3.3.3 remote-as 100
 neighbor 3.3.3.3 update-source 1.1.1.1
 address-family l2vpn evpn
 neighbor 3.3.3.3 activate
 exit-address-family
 address-family ipv4 vrf vpn1
 redistribute connected
 exit-address-family
!
ip route 0.0.0.0/0 192.168.255.1
ip route 10.0.254.0/23 192.168.255.1
```

```
!
!
exec-timeout 30 0
no login
!
```

7200_BOT

```
7200_BOT#sh run
!
service password-encryption
!
hostname 7200_BOT
!
multi config access
authentication logging enable
!
username admin privilege 15 password 7 88ad795fe330411b653d6f18e8e4f4e5
username zakko privilege 15 password 7 cc5f68197114476743ac55440382994e
!
authentication line console login local
!
!
logging executed-commands enable
!
ssh-server enable
ssh-server timeout 600
!
info-center logfile 4 config count 40960 flash logfile.log
info-center logfile 4 output-enable
info-center logfile 4 match level warnings
info-center logfile 4 record-cmd
!
!
lldp enable
!
!
Interface Ethernet0
 ip address 192.168.255.15 255.255.255.0
!
!
evpn nve source-address 3.3.3.3
!
!
vlan 1;20
!
vxlan remote mac-address-learning disable
vxlan remote arp-learning disable
vxlan remote nd-learning disable
loopback-group 1
!
nvi 20
 vxlan-id 20
 evpn
  rd 2:2
  route-target both 2000:2000
  enable
  evpn-exit
 arp suppression enable
 nd suppression enable
!
!
Interface Ethernet1/0/1
 speed-duplex force1g-full
 description TO_2100_PC
 switchport access vlan 200
 xconnect nvi 20
!
```

```
!
Interface Ethernet1/0/3
 speed-duplex force1g-full
 description FOR_VXLAN_PROXY
 loopback-group 1
!
!
Interface Ethernet1/6/1
 speed-duplex force40g-full
 description TO_7200_32Q
 switchport access vlan 20
!
vxlan proxy loopback-group 1
!
ip vrf vpn1
 rd 11:1
 route-target both 10:1
 l3-vni 1000
!
interface Vlan20
 ip address 20.1.1.1 255.255.255.0
!
interface Loopback1
 ip address 3.3.3.3 255.255.255.255
!
interface Nvi-interface20
 ip vrf forwarding vpn1
 mac-address 00-ff-ff-00-00-02
 distributed-gateway enable
 ipv6 address 2001::1/64
 ip address 201.1.1.1 255.255.0.0
!
router ospf 1
 ospf router-id 3.3.3.3
 network 3.3.3.3 0.0.0.0 area 0
 network 20.1.1.0 0.0.0.255 area 0
!
router bgp 100
 neighbor 1.1.1.1 remote-as 100
 neighbor 1.1.1.1 update-source 3.3.3.3
 address-family l2vpn evpn
 neighbor 1.1.1.1 activate
 exit-address-family
 address-family ipv4 vrf vpn1
 redistribute connected
 exit-address-family
!
ip route 0.0.0.0/0 192.168.255.1
ip route 10.0.254.0/23 192.168.255.1
!
!
exec-timeout 30 0
no login
!
end
```

2100_PC

```
2100_PC#sh run
!
service password-encryption
!
hostname 2100_PC
!
multi config access
authentication logging enable
!
username admin privilege 15 password 7 88ad795fe330411b653d6f18e8e4f4e5
username zakko privilege 15 password 7 cc5f68197114476743ac55440382994e
```

```
username guest privilege 15 password 7 65089d7f8ab310986db84b503c63fb39
username sng privilege 15 password 7 c72f099cc796dd509eca775f2c95800e
username ekoren privilege 15 password 7 d061d2cc6f7b691bb163f89d180e32aa
!
authentication line console login local
!
!
logging executed-commands enable
!
ssh-server enable
ssh-server timeout 600
!
info-center logfile 4 config count 40960 nandflash logfile.log
info-center logfile 4 output-enable
info-center logfile 4 match level warnings
info-center logfile 4 record-cmd
!
!
cpu-protect enable
cpu-protect per-ip limit-speed 200
cpu-protect per-mac limit-speed 200
!
lldp enable
!
spanning-tree
!
!
Interface Ethernet0
 ip address 192.168.255.12 255.255.255.0
!
!
vlan 1
!
vlan 2
 name mgmt_spaceVM
!
!
ethernet cfm global
!
ethernet cfm domain test level 5
 service test pvlan 195 direction down
  mep mepid 100;200;300
  continuity-check enable
  continuity-check receive rmep 200;300
  exit
!
Interface Ethernet1/0/1
 description TO_7200_BOT
!
Interface Ethernet1/0/2
 description AnyDesk
 switchport access vlan 2
!
Interface Ethernet1/0/3
 description PC_SpaceVM_mgmt
 switchport access vlan 2
!
!
Interface Ethernet1/0/5
 description PC_SpaceVM_mgmt
 switchport access vlan 2
!
Interface Ethernet1/0/6
 description PC_SpaceVM_VXLAN
!
!
interface Vlan2
 ip address 10.10.10.5 255.255.255.0
!
!
ip route 0.0.0.0/0 20.20.20.1
```

```
ip route 0.0.0.0/0 192.168.255.2
ip route 0.0.0.0/0 10.10.10.11
ip route 10.0.0.0/8 192.168.255.1
ip route 192.168.0.0/16 192.168.255.1
!
!
exec-timeout 30 0
no login
!
captive-portal
!
end
```

B033.

E-VXLAN_Dis_Gate.cfg

:

7200_TOP/7200_BOT () vrf, .
.

.
.

, , .
nvi , .

:

```
show arp vrf vpn1
show ip route vrf vpn1
show ip bgp neighbors
show interface nve
show evpn nve all
ping 3.3.3.3
ping vrf vpn1 101.1.1.10

clear counters
show interface ethernet counter rate
show interface ethernet counter packet
clear nvi statistics
show nvi statistics

show vxlan mac-address-table
show ip bgp evpn all
show ip bgp evpn type<1-5>
show nvi nve tunnel

su
tshell debug set EVPN_DEBUG 1
debug nsm
no debug all
debug ip icmp
```

7200_TOP:

```
7200_TOP#show arp vrf vpn1
ARP Unicast Items: 2, Valid: 8, Matched: 1, Verifying: 0, Incomplete: 0, Failed: 0, None: 0
Ethernet Manager Port ARP Items: 6
Address          Hardware Addr      Interface              Port                  Flag      Age-time
(sec)     subvlanVID
101.1.1.10       02-ff-f0-24-58-ea  Nvi-interface10        Ethernet1/0/1         Dynamic   1080                0

7200_TOP#show ip route vrf vpn1
Codes: K - kernel, C - connected, S - static, R - RIP, B - BGP
       O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default

C       101.1.1.0/24 is directly connected, Nvi-interface10  tag:0
B       201.1.0.0/16 [200/0] via 3.3.3.3, 00:00:50  tag:0
B       201.1.1.10/32 [200/0] via 3.3.3.3, 00:00:46  tag:0
Total routes are : 3 item(s)




7200_TOP#show ip bgp neighbors
BGP neighbor is 3.3.3.3, remote AS 100, local AS 100, internal link
  BGP version 4, remote router ID 3.3.3.3
  BGP state = Established, up for 00:01:03
  Last read 00:01:03, hold time is 240, keepalive interval is 60 seconds
  Neighbor capabilities:
    Route refresh: advertised and received (old and new)
    Four bytes AS: advertised and received
    Address family IPv4 Unicast: advertised and received
    Address family L2VPN EVPN: advertised and received
  Received 7 messages, 0 notifications, 0 in queue
  Sent 7 messages, 0 notifications, 0 in queue
  Route refresh request: received 0, sent 0
  Minimum time between advertisement runs is 5 seconds
  Update source is 1.1.1.1

 For address family: IPv4 Unicast
  BGP table version 2, neighbor version 2
  Index 1, Offset 0, Mask 0x2
  Community attribute sent to this neighbor (both)
  0 accepted prefixes
  0 announced prefixes

 For address family: L2VPN EVPN
  BGP table version 3, neighbor version 3
  Index 1, Offset 0, Mask 0x2
  Community attribute sent to this neighbor (both)
  4 accepted prefixes
  6 announced prefixes

 Connections established 1; dropped 0
Local host: 1.1.1.1, Local port: 179
Foreign host: 3.3.3.3, Foreign port: 32777
Nexthop: 1.1.1.1
Nexthop global: fe80::1ac3:f4ff:feb0:e2b
Nexthop local: ::
BGP connection: non shared network




7200_TOP#show interface nve
Nve1
  Nve1 is up, line protocol is up, index is 2869
  Time since last status change:0w-0d-0h-1m-11s  (71 seconds)
  Tunnel source 1.1.1.1, destination 3.3.3.3
  Input unicast packets statistics:
    0 input packets, 0 bytes
```

```
  Output unicast packets statistics:
    0 output packets, 0 bytes




7200_TOP#show evpn nve all
 VXLAN ID  Address                                LR

 10        1.1.1.1                                LOCAL



7200_TOP#ping 3.3.3.3
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds.
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/16 ms



7200_TOP#ping vrf vpn1 101.1.1.10
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 101.1.1.10, timeout is 2 seconds.
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/6/16 ms


clear counters
show interface ethernet counter rate
7200_TOP#show interface ethernet counter rate
Interface      IN(pkts/s)      IN(bits/s)      OUT(pkts/s)     OUT(bits/s)
1/0/1     5m   0               79              0               34
          5s   0               0               0               102
1/0/2     5m   0               79              0               34
          5s   0               0               0               102
1/0/3     5m   0               34              0               34
          5s   0               102             0               102
...
1/6/1     5m   0               125             1               653
          5s   0               239             1               832
show interface ethernet counter packet

Interface      Unicast(pkts)       BroadCast(pkts)     MultiCast(pkts)     Err(pkts)
1/0/1     IN   0                   0                   2                   0
          OUT  0                   0                   2                   0
1/0/2     IN   0                   0                   2                   0
          OUT  0                   0                   2                   0
1/0/3     IN   0                   0                   2                   0
          OUT  0                   0                   2                   0
...
1/6/1     IN   2                   0                   7                   0
          OUT  2                   0                   29                  0


7200_TOP#clear nvi statistics



7200_TOP#show nvi statistics
The total number of nvi: 1

nvi 10 vxlan-id 10
Item            Packets                 Bytes
Input           1                       149
Output          1                       153


7200_TOP#show vxlan mac-address-table
Read mac address table....
Nvi-id             Mac Address                Type    Creator   Ports
```

```
----------------- -------------------------- ------- --------  -----------------------------------
10                00-e0-4c-68-07-b0          DYNAMIC Hardware  Ethernet1/0/1
10                00-e0-4c-68-34-2a          DYNAMIC Hardware  Ethernet1/0/2
10                02-ff-f0-24-58-ea          DYNAMIC Hardware  Ethernet1/0/1



7200_TOP#show ip bgp evpn all
BGP local router ID is 1.1.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal, l - local
              S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

network format description
RT-1:[RT][ESI][ETID]
RT-2:[RT][ETID][MAC][IPv4/v6]
RT-3:[RT][ETID][IPv4/v6]
RT-4:[RT][ESI][IPv4/v6]
RT-5:[RT][ETID][Prefix len][Prefix]
Route Distinguisher 1:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>l[2][0][00e0-4c68-07b0][]
                    1.1.1.1                     100        32768  ?

*>l[2][0][00e0-4c68-342a][]
                    1.1.1.1                     100        32768  ?

*>l[2][0][02ff-f024-58ea][]
                    1.1.1.1                     100        32768  ?

*>l[2][0][02ff-f024-58ea][101.1.1.10]
                    1.1.1.1                     100        32768  ?

*>l[3][0][1.1.1.1]
                    1.1.1.1                     100        32768  ?

Route Distinguisher 2:2

   Network          Next Hop         Metric     LocPrf     Weight Path
*>i[2][0][02ff-f024-5043][]
                    3.3.3.3                     100        0      ?

*>i[2][0][02ff-f024-5043][201.1.1.10]
                    3.3.3.3                     100        0      ?

*>i[2][0][8c1f-6436-51c9][]
                    3.3.3.3                     100        0      ?

*>i[3][0][3.3.3.3]
                    3.3.3.3                     100        0      ?

Route Distinguisher 11:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>i[5][0][16][201.1.0.0]
                    3.3.3.3                     100        0      ?

Route Distinguisher 11:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>l[5][0][24][101.1.1.0]
                    1.1.1.1                     100        32768  ?




show ip bgp evpn type<1-5>


7200_TOP#show nvi nve tunnel
```

```
NVI 10 vxlan-id 10
Nve name    state      source            destination
```

7200_BOT:

```
7200_BOT#show arp vrf vpn1
ARP Unicast Items: 2, Valid: 16, Matched: 1, Verifying: 0, Incomplete: 0, Failed: 0, None: 0
Ethernet Manager Port ARP Items: 14
Address          Hardware Addr      Interface              Port                  Flag      Age-time
(sec)     subvlanVID
201.1.1.10       02-ff-f0-24-50-43  Nvi-interface20        Ethernet1/0/1         Dynamic   158                 0
7200_BOT#show ip route vrf vpn1
Codes: K - kernel, C - connected, S - static, R - RIP, B - BGP
       O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default

B       101.1.1.0/24 [200/0] via 1.1.1.1, 00:07:25  tag:0
B       101.1.1.10/32 [200/0] via 1.1.1.1, 00:07:25  tag:0
C       201.1.0.0/16 is directly connected, Nvi-interface20  tag:0
Total routes are : 3 item(s)
7200_BOT#show ip bgp neighbors
BGP neighbor is 1.1.1.1, remote AS 100, local AS 100, internal link
  BGP version 4, remote router ID 1.1.1.1
  BGP state = Established, up for 00:07:27
  Last read 00:07:27, hold time is 240, keepalive interval is 60 seconds
  Neighbor capabilities:
    Route refresh: advertised and received (old and new)
    Four bytes AS: advertised and received
    Address family IPv4 Unicast: advertised and received
    Address family L2VPN EVPN: advertised and received
  Received 14 messages, 0 notifications, 0 in queue
  Sent 15 messages, 0 notifications, 0 in queue
  Route refresh request: received 0, sent 0
  Minimum time between advertisement runs is 5 seconds
  Update source is 3.3.3.3

 For address family: IPv4 Unicast
  BGP table version 212, neighbor version 212
  Index 1, Offset 0, Mask 0x2
  Community attribute sent to this neighbor (both)
  0 accepted prefixes
  0 announced prefixes

 For address family: L2VPN EVPN
  BGP table version 229, neighbor version 229
  Index 1, Offset 0, Mask 0x2
  Community attribute sent to this neighbor (both)
  6 accepted prefixes
  5 announced prefixes

 Connections established 3; dropped 2
Local host: 3.3.3.3, Local port: 32777
Foreign host: 1.1.1.1, Foreign port: 179
Nexthop: 3.3.3.3
Nexthop global: fe80::1ac3:f4ff:feb0:303
Nexthop local: ::
BGP connection: non shared network
```

```
7200_BOT#show interface nve
Nve1
  Nve1 is up, line protocol is up, index is 2869
  Time since last status change:0w-0d-0h-7m-26s  (446 seconds)
  Tunnel source 3.3.3.3, destination 1.1.1.1
  Input unicast packets statistics:
    0 input packets, 0 bytes
  Output unicast packets statistics:
    0 output packets, 0 bytes

7200_BOT#show evpn nve all
 VXLAN ID  Address                                LR

 20        3.3.3.3                                LOCAL

7200_BOT#ping 1.1.1.1
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds.
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

7200_BOT#ping vrf vpn1 201.1.1.10
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 201.1.1.10, timeout is 2 seconds.
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/16 ms

7200_BOT#clear counters

7200_BOT#show interface ethernet counter rate
7200_BOT#show interface ethernet counter rate
Interface      IN(pkts/s)      IN(bits/s)      OUT(pkts/s)     OUT(bits/s)
1/0/1     5m   1               483             0               17
          5s   0               395             0               0
1/0/2     5m   0               0               0               0
          5s   0               0               0               0
1/0/3     5m   0               17              0               17
...
1/6/1     5m   1               563             0               69
          5s   1               533             0               0
7200_BOT#show interface ethernet counter packet
Interface      Unicast(pkts)       BroadCast(pkts)     MultiCast(pkts)     Err(pkts)
1/0/1     IN   0                   0                   24                  0
          OUT  0                   0                   1                   0
1/0/2     IN   0                   0                   0                   0
          OUT  0                   0                   0                   0
1/0/3     IN   0                   0                   1                   0
          OUT  0                   0                   1                   0
...
1/6/1     IN   2                   0                   27                  0
          OUT  2                   0                   5                   0

7200_BOT#clear nvi statistics

7200_BOT#show nvi statistics
The total number of nvi: 1

nvi 20 vxlan-id 20
Item            Packets                 Bytes
Input           6                       744
Output          6                       0

7200_BOT#show vxlan mac-address-table
Read mac address table....
Nvi-id             Mac Address                Type    Creator   Ports
------------------ -------------------------- ------- --------  ------------------------------------
20                 02-ff-f0-24-50-43          DYNAMIC Hardware  Ethernet1/0/1
20                 8c-1f-64-36-51-c9          DYNAMIC Hardware  Ethernet1/0/1
7200_BOT#show ip bgp evpn all
BGP local router ID is 3.3.3.3
```

```
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal, l - local
              S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

network format description
RT-1:[RT][ESI][ETID]
RT-2:[RT][ETID][MAC][IPv4/v6]
RT-3:[RT][ETID][IPv4/v6]
RT-4:[RT][ESI][IPv4/v6]
RT-5:[RT][ETID][Prefix len][Prefix]
Route Distinguisher 1:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>i[2][0][00e0-4c68-07b0][]
                    1.1.1.1                     100        0      ?

*>i[2][0][00e0-4c68-342a][]
                    1.1.1.1                     100        0      ?

*>i[2][0][02ff-f024-58ea][]
                    1.1.1.1                     100        0      ?

*>i[2][0][02ff-f024-58ea][101.1.1.10]
                    1.1.1.1                     100        0      ?

*>i[3][0][1.1.1.1]
                    1.1.1.1                     100        0      ?

Route Distinguisher 2:2

   Network          Next Hop         Metric     LocPrf     Weight Path
*>l[2][0][02ff-f024-5043][]
                    3.3.3.3                     100        32768  ?

*>l[2][0][02ff-f024-5043][201.1.1.10]
                    3.3.3.3                     100        32768  ?

*>l[2][0][8c1f-6436-51c9][]
                    3.3.3.3                     100        32768  ?

*>l[3][0][3.3.3.3]
                    3.3.3.3                     100        32768  ?

Route Distinguisher 11:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>i[5][0][24][101.1.1.0]
                    1.1.1.1                     100        0      ?

Route Distinguisher 11:1

   Network          Next Hop         Metric     LocPrf     Weight Path
*>l[5][0][16][201.1.0.0]
                    3.3.3.3                     100        32768  ?


7200_BOT#show nvi nve tunnel

NVI 20 vxlan-id 20
Nve name    state      source            destination
```

2100:

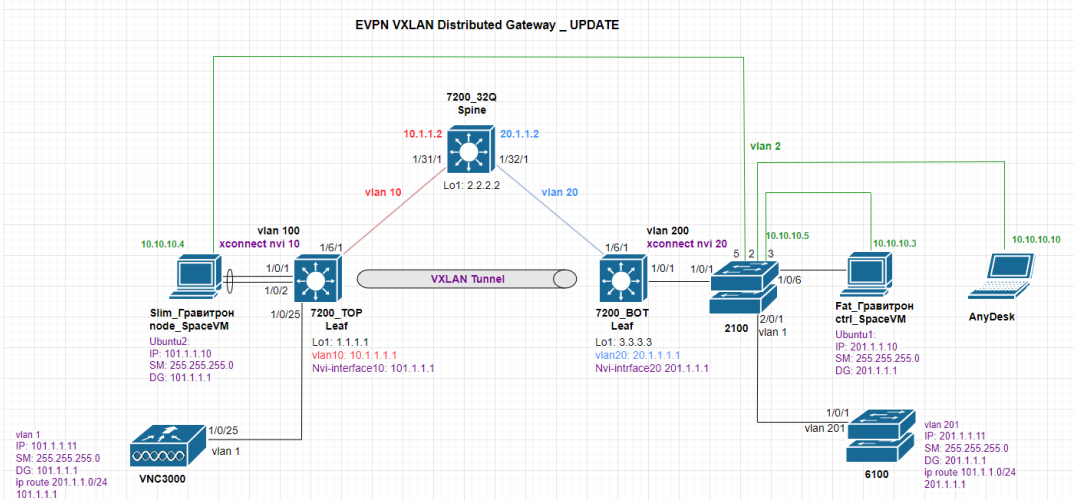
```
1/0/1       UP/UP       a-1G   a-FULL  1    G-TX        TO_7200_BOT
1/0/2       DOWN/DOWN   auto   auto    2    G-TX          AnyDesk
1/0/3       UP/UP       a-1G   a-FULL  2    G-TX        PC_SpaceVM_mgmt
1/0/4       DOWN/DOWN   auto   auto    1    G-TX          to_Core
1/0/5       UP/UP       a-1G   a-FULL  2    G-TX        PC_SpaceVM_mgmt
1/0/6       UP/UP       a-1G   a-FULL  1    G-TX        PC_SpaceVM_VXLAN
1/0/7       DOWN/DOWN   auto   auto    1    G-TX          PC_SpaceVM_VXLAN
...
1/0/15      UP/UP       a-1G   a-FULL  195  G-TX
```

.

```
1    02-ff-f0-24-50-43        DYNAMIC Hardware Ethernet1/0/6
1    a8-63-7d-41-f7-aa        DYNAMIC Hardware Ethernet1/0/6

1    18-c3-f4-b0-03-04        DYNAMIC Hardware Ethernet1/0/1


2    02-ff-f0-2f-84-c3        DYNAMIC Hardware Ethernet1/0/3
2    f0-d7-af-92-9b-44        DYNAMIC Hardware Ethernet1/0/3

2    02-ff-f0-b1-d2-5d        DYNAMIC Hardware Ethernet1/0/5
2    f0-d7-af-92-8f-bf        DYNAMIC Hardware Ethernet1/0/5

195  8c-1f-64-36-51-ca        DYNAMIC Hardware Ethernet1/0/15
195  8c-1f-64-36-51-d6        DYNAMIC Hardware Ethernet1/0/15
```

management 31 .

.
2100_PC, 2100-24P-stack.
VNC3000 6100-stack.



:

```
VNC-3000#ping 201.1.1.11
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 201.1.1.11, timeout is 2 seconds.
..!..

6100#ping 101.1.1.11
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 101.1.1.11, timeout is 2 seconds.
...!.
Success rate is 20 percent (1/5), round-trip min/avg/max = 0/0/0 ms
```

0.0.0.0/0 ,

ip route 101.1.1.0/24 201.1.1.1
ip route 201.1.1.0/24 101.1.1.1

:

```
6100#ping 101.1.1.11
Type ^c to abort.
Sending 5 56-byte ICMP Echos to 101.1.1.11, timeout is 2 seconds.
!!!!!

6100#traceroute 101.1.1.11
Type ^c to abort.
Traceroute to host 101.1.1.11, maxhops is 30, timeout is 2000ms.
 1   20ms    201.1.1.1
 2    *      request timed out
 3   20ms    101.1.1.11
```