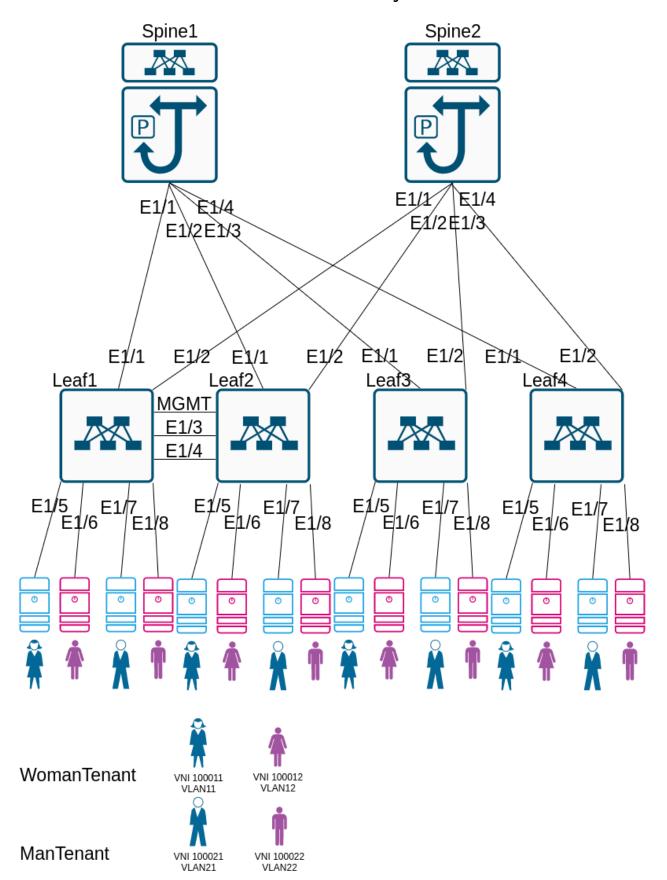Cisco Data Center Class
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Scenario Name: VXLAN BGP EVPN-Anycast-Multi Tenant

Spine1

Spine2

E1/1   E1/4
E1/2 E1/3

E1/1   E1/4
E1/2 E1/3

E1/1   E1/2   E1/1   E1/2   E1/1   E1/2   E1/1   E1/2

Leaf1   Leaf2   Leaf3   Leaf4

MGMT
E1/3
E1/4

E1/5   E1/7   E1/5   E1/7   E1/5   E1/7   E1/5   E1/7
E1/6   E1/8   E1/6   E1/8   E1/6   E1/8   E1/6   E1/8

WomanTenant

VNI 100011   VNI 100012
VLAN11   VLAN12

ManTenant

VNI 100021   VNI 100022
VLAN21   VLAN22

Leaf1 Configuration:

```
Leaf1(config)# feature bgp
Leaf1(config)# feature pim
Leaf1(config)# feature interface-vlan
Leaf1(config)# feature vn-segment-vlan-based
Leaf1(config)# feature nv overlay

Leaf1(config)# fabric forwarding anycast-gateway-mac 0001.0001.0001

Leaf1(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Leaf1(config)# vlan 100,11,12,200,21,22

Leaf1(config-vlan)# vlan 100
Leaf1(config-vlan)# name L3-VNI-VLAN-100
Leaf1(config-vlan)# vn-segment 1000100

Leaf1(config-vlan)# vlan 11
Leaf1(config-vlan)# vn-segment 100011

Leaf1(config-vlan)# vlan 12
Leaf1(config-vlan)# vn-segment 100012

Leaf1(config-vlan)# vlan 200
Leaf1(config-vlan)# name L3-VNI-VLAN-200
Leaf1(config-vlan)# vn-segment 1000200

Leaf1(config-vlan)# vlan 21
Leaf1(config-vlan)# vn-segment 100021

Leaf1(config-vlan)# vlan 22
Leaf1(config-vlan)# vn-segment 100022

Leaf1(config-vlan)# vrf context WomanTenant
Leaf1(config-vrf)# vni 1000100
Leaf1(config-vrf)# rd auto
Leaf1(config-vrf)# address-family ipv4 unicast
Leaf1(config-vrf-af-ipv4)# route-target both auto
Leaf1(config-vrf-af-ipv4)# route-target both auto evpn

Leaf1(config-vrf-af-ipv4)# vrf context ManTenant
Leaf1(config-vrf)# vni 1000200
Leaf1(config-vrf)# rd auto
Leaf1(config-vrf)# address-family ipv4 unicast
Leaf1(config-vrf-af-ipv4)# route-target both auto
Leaf1(config-vrf-af-ipv4)# route-target both auto evpn

Leaf1(config-vrf-af-ipv4)# interface Vlan100
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member WomanTenant
Leaf1(config-if)# ip forward
```

```
Leaf1(config-if)# interface Vlan11
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member WomanTenant
Leaf1(config-if)# ip address 192.168.11.1/24
Leaf1(config-if)# fabric forwarding mode anycast-gateway

Leaf1(config-if)# interface Vlan12
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member WomanTenant
Leaf1(config-if)# ip address 192.168.12.1/24
Leaf1(config-if)# fabric forwarding mode anycast-gateway

Leaf1(config-if)# interface Vlan200
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member ManTenant
Leaf1(config-if)# ip forward

Leaf1(config-if)# interface Vlan21
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member ManTenant
Leaf1(config-if)# ip address 192.168.21.1/24
Leaf1(config-if)# fabric forwarding mode anycast-gateway

Leaf1(config-if)# interface Vlan22
Leaf1(config-if)# no shutdown
Leaf1(config-if)# vrf member ManTenant
Leaf1(config-if)# ip address 192.168.22.1/24
Leaf1(config-if)# fabric forwarding mode anycast-gateway

Leaf1(config-if)# interface nve1
Leaf1(config-if-nve)# no shutdown
Leaf1(config-if-nve)# source-interface loopback1
Leaf1(config-if-nve)# host-reachability protocol bgp

Leaf1(config-if-nve)# member vni 1000100 associate-vrf
Leaf1(config-if-nve-vni)# member vni 100011
Leaf1(config-if-nve-vni)# mcast-group 239.1.1.11
Leaf1(config-if-nve-vni)# exit
Leaf1(config-if-nve)# member vni 100012
Leaf1(config-if-nve-vni)# mcast-group 239.1.1.12
Leaf1(config-if-nve-vni)# exit

Leaf1(config-if-nve)# member vni 1000200 associate-vrf
Leaf1(config-if-nve-vni)# member vni 100021
Leaf1(config-if-nve-vni)# mcast-group 239.1.1.21
Leaf1(config-if-nve-vni)# exit
Leaf1(config-if-nve)# member vni 100022
Leaf1(config-if-nve-vni)# mcast-group 239.1.1.22
Leaf1(config-if-nve-vni)# exit
```

```
Leaf1(config-if-nve)# interface Ethernet1/1-2
Leaf1(config-if-range)# no switchport
Leaf1(config-if-range)# medium p2p
Leaf1(config-if-range)# ip unnumbered loopback1
Leaf1(config-if-range)# ip router ospf 1 area 0.0.0.0
Leaf1(config-if-range)# ip pim sparse-mode
Leaf1(config-if-range)# no shutdown

Leaf1(config-if-range)# interface Ethernet1/5
Leaf1(config-if)# switchport
Leaf1(config-if)# switchport mode access
Leaf1(config-if)# switchport access vlan 11

Leaf1(config-if)# interface Ethernet1/6
Leaf1(config-if)# switchport
Leaf1(config-if)# switchport mode access
Leaf1(config-if)# switchport access vlan 12

Leaf1(config-if)# interface Ethernet1/7
Leaf1(config-if)# switchport
Leaf1(config-if)# switchport mode access
Leaf1(config-if)# switchport access vlan 21

Leaf1(config-if)# interface Ethernet1/8
Leaf1(config-if)# switchport
Leaf1(config-if)# switchport mode access
Leaf1(config-if)# switchport access vlan 22

Leaf1(config-if)# interface loopback1
Leaf1(config-if)# ip address 11.11.11.11/32
Leaf1(config-if)# ip router ospf 1 area 0.0.0.0
Leaf1(config-if)# ip pim sparse-mode

Leaf1(config-if)# router ospf 1
Leaf1(config-router)# router-id 11.11.11.11

Leaf1(config)# router bgp 1
Leaf1(config-router)# router-id 11.11.11.11
Leaf1(config-router)# address-family ipv4 unicast
Leaf1(config-router-af)# address-family l2vpn evpn

Leaf1(config-router-af)# vrf WomanTenant
Leaf1(config-router-vrf)# address-family ipv4 unicast
Leaf1(config-router-vrf-af)# advertise l2vpn evpn

Leaf1(config-router-vrf-af)# vrf ManTenant
Leaf1(config-router-vrf)# address-family ipv4 unicast
Leaf1(config-router-vrf-af)# advertise l2vpn evpn
```

```
Leaf1(config-router-vrf-af)# template peer Spine-Peers
Leaf1(config-router-neighbor)# remote-as 1
Leaf1(config-router-neighbor)# update-source loopback1
Leaf1(config-router-neighbor)# address-family ipv4 unicast
Leaf1(config-router-neighbor-af)# address-family l2vpn evpn
Leaf1(config-router-neighbor-af)# send-community extended

Leaf1(config-router-neighbor-af)# neighbor 21.21.21.21
Leaf1(config-router-neighbor)# inherit peer Spine-Peers

Leaf1(config-router-neighbor)# neighbor 22.22.22.22
Leaf1(config-router-neighbor)# inherit peer Spine-Peers


Leaf1(config-router-vrf-neighbor)# evpn
Leaf1(config-evpn)# vni 100011 l2
Leaf1(config-evpn-evi)# rd auto
Leaf1(config-evpn-evi)# route-target import auto
Leaf1(config-evpn-evi)# route-target export auto

Leaf1(config-evpn-evi)# evpn
Leaf1(config-evpn)# vni 100012 l2
Leaf1(config-evpn-evi)# rd auto
Leaf1(config-evpn-evi)# route-target import auto
Leaf1(config-evpn-evi)# route-target export auto

Leaf1(config-evpn-evi)# evpn
Leaf1(config-evpn)# vni 100021 l2
Leaf1(config-evpn-evi)# rd auto
Leaf1(config-evpn-evi)# route-target import auto
Leaf1(config-evpn-evi)# route-target export auto

Leaf1(config-evpn-evi)# evpn
Leaf1(config-evpn)# vni 100022 l2
Leaf1(config-evpn-evi)# rd auto
Leaf1(config-evpn-evi)# route-target import auto
Leaf1(config-evpn-evi)# route-target export auto
```

Leaf2 Configuration:

Leaf2(config)# feature bgp
Leaf2(config)# feature pim
Leaf2(config)# feature interface-vlan
Leaf2(config)# feature vn-segment-vlan-based
Leaf2(config)# feature nv overlay

Leaf2(config)# fabric forwarding anycast-gateway-mac 0001.0001.0001

Leaf2(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Leaf2(config)# vlan 100,11,12,200,21,22

Leaf2(config-vlan)# vlan 100
Leaf2(config-vlan)# name L3-VNI-VLAN-100
Leaf2(config-vlan)# vn-segment 1000100

Leaf2(config-vlan)# vlan 11
Leaf2(config-vlan)# vn-segment 100011

Leaf2(config-vlan)# vlan 12
Leaf2(config-vlan)# vn-segment 100012

Leaf2(config-vlan)# vlan 200
Leaf2(config-vlan)# name L3-VNI-VLAN-200
Leaf2(config-vlan)# vn-segment 1000200

Leaf2(config-vlan)# vlan 21
Leaf2(config-vlan)# vn-segment 100021

Leaf2(config-vlan)# vlan 22
Leaf2(config-vlan)# vn-segment 100022

Leaf2(config-vlan)# vrf context WomanTenant
Leaf2(config-vrf)# vni 1000100
Leaf2(config-vrf)# rd auto
Leaf2(config-vrf)# address-family ipv4 unicast
Leaf2(config-vrf-af-ipv4)# route-target both auto
Leaf2(config-vrf-af-ipv4)# route-target both auto evpn

Leaf2(config-vrf-af-ipv4)# vrf context ManTenant
Leaf2(config-vrf)# vni 1000200
Leaf2(config-vrf)# rd auto
Leaf2(config-vrf)# address-family ipv4 unicast
Leaf2(config-vrf-af-ipv4)# route-target both auto
Leaf2(config-vrf-af-ipv4)# route-target both auto evpn

Leaf2(config-vrf-af-ipv4)# interface Vlan100
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member WomanTenant
Leaf2(config-if)# ip forward

```
Leaf2(config-if)# interface Vlan11
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member WomanTenant
Leaf2(config-if)# ip address 192.168.11.1/24
Leaf2(config-if)# fabric forwarding mode anycast-gateway

Leaf2(config-if)# interface Vlan12
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member WomanTenant
Leaf2(config-if)# ip address 192.168.12.1/24
Leaf2(config-if)# fabric forwarding mode anycast-gateway

Leaf2(config-if)# interface Vlan200
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member ManTenant
Leaf2(config-if)# ip forward

Leaf2(config-if)# interface Vlan21
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member ManTenant
Leaf2(config-if)# ip address 192.168.21.1/24
Leaf2(config-if)# fabric forwarding mode anycast-gateway

Leaf2(config-if)# interface Vlan22
Leaf2(config-if)# no shutdown
Leaf2(config-if)# vrf member ManTenant
Leaf2(config-if)# ip address 192.168.22.1/24
Leaf2(config-if)# fabric forwarding mode anycast-gateway

Leaf2(config-if)# interface nve1
Leaf2(config-if-nve)# no shutdown
Leaf2(config-if-nve)# source-interface loopback1
Leaf2(config-if-nve)# host-reachability protocol bgp

Leaf2(config-if-nve)# member vni 1000100 associate-vrf
Leaf2(config-if-nve-vni)# member vni 100011
Leaf2(config-if-nve-vni)# mcast-group 239.1.1.11
Leaf2(config-if-nve-vni)# exit
Leaf2(config-if-nve)# member vni 100012
Leaf2(config-if-nve-vni)# mcast-group 239.1.1.12
Leaf2(config-if-nve-vni)# exit

Leaf2(config-if-nve)# member vni 1000200 associate-vrf
Leaf2(config-if-nve-vni)# member vni 100021
Leaf2(config-if-nve-vni)# mcast-group 239.1.1.21
Leaf2(config-if-nve-vni)# exit
Leaf2(config-if-nve)# member vni 100022
Leaf2(config-if-nve-vni)# mcast-group 239.1.1.22
Leaf2(config-if-nve-vni)# exit
```

```
Leaf2(config-if-nve)# interface Ethernet1/1-2
Leaf2(config-if-range)# no switchport
Leaf2(config-if-range)# medium p2p
Leaf2(config-if-range)# ip unnumbered loopback1
Leaf2(config-if-range)# ip router ospf 1 area 0.0.0.0
Leaf2(config-if-range)# ip pim sparse-mode
Leaf2(config-if-range)# no shutdown

Leaf2(config-if-range)# interface Ethernet1/5
Leaf2(config-if)# switchport
Leaf2(config-if)# switchport mode access
Leaf2(config-if)# switchport access vlan 11

Leaf2(config-if)# interface Ethernet1/6
Leaf2(config-if)# switchport
Leaf2(config-if)# switchport mode access
Leaf2(config-if)# switchport access vlan 12

Leaf2(config-if)# interface Ethernet1/7
Leaf2(config-if)# switchport
Leaf2(config-if)# switchport mode access
Leaf2(config-if)# switchport access vlan 21

Leaf2(config-if)# interface Ethernet1/8
Leaf2(config-if)# switchport
Leaf2(config-if)# switchport mode access
Leaf2(config-if)# switchport access vlan 22

Leaf2(config-if)# interface loopback1
Leaf2(config-if)# ip address 12.12.12.12/32
Leaf2(config-if)# ip router ospf 1 area 0.0.0.0
Leaf2(config-if)# ip pim sparse-mode

Leaf2(config-if)# router ospf 1
Leaf2(config-router)# router-id 12.12.12.12

Leaf2(config)# router bgp 1
Leaf2(config-router)# router-id 12.12.12.12
Leaf2(config-router)# address-family ipv4 unicast
Leaf2(config-router-af)# address-family l2vpn evpn

Leaf2(config-router-af)# vrf WomanTenant
Leaf2(config-router-vrf)# address-family ipv4 unicast
Leaf2(config-router-vrf-af)# advertise l2vpn evpn

Leaf2(config-router-vrf-af)# vrf ManTenant
Leaf2(config-router-vrf)# address-family ipv4 unicast
Leaf2(config-router-vrf-af)# advertise l2vpn evpn
```

```
Leaf2(config-router-vrf-af)# template peer Spine-Peers
Leaf2(config-router-neighbor)# remote-as 1
Leaf2(config-router-neighbor)# update-source loopback1
Leaf2(config-router-neighbor)# address-family ipv4 unicast
Leaf2(config-router-neighbor-af)# address-family l2vpn evpn
Leaf2(config-router-neighbor-af)# send-community extended

Leaf2(config-router-neighbor-af)# neighbor 21.21.21.21
Leaf2(config-router-neighbor)# inherit peer Spine-Peers

Leaf2(config-router-neighbor)# neighbor 22.22.22.22
Leaf2(config-router-neighbor)# inherit peer Spine-Peers

Leaf2(config-router-vrf-neighbor)# evpn
Leaf2(config-evpn)# vni 100011 l2
Leaf2(config-evpn-evi)# rd auto
Leaf2(config-evpn-evi)# route-target import auto
Leaf2(config-evpn-evi)# route-target export auto

Leaf2(config-evpn-evi)# evpn
Leaf2(config-evpn)# vni 100012 l2
Leaf2(config-evpn-evi)# rd auto
Leaf2(config-evpn-evi)# route-target import auto
Leaf2(config-evpn-evi)# route-target export auto

Leaf2(config-evpn-evi)# evpn
Leaf2(config-evpn)# vni 100021 l2
Leaf2(config-evpn-evi)# rd auto
Leaf2(config-evpn-evi)# route-target import auto
Leaf2(config-evpn-evi)# route-target export auto

Leaf2(config-evpn-evi)# evpn
Leaf2(config-evpn)# vni 100022 l2
Leaf2(config-evpn-evi)# rd auto
Leaf2(config-evpn-evi)# route-target import auto
Leaf2(config-evpn-evi)# route-target export auto
```

Leaf3 Configuration:

Leaf3(config)# feature bgp
Leaf3(config)# feature pim
Leaf3(config)# feature interface-vlan
Leaf3(config)# feature vn-segment-vlan-based
Leaf3(config)# feature nv overlay

Leaf3(config)# fabric forwarding anycast-gateway-mac 0001.0001.0001

Leaf3(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Leaf3(config)# vlan 100,11,12,200,21,22

Leaf3(config-vlan)# vlan 100
Leaf3(config-vlan)# name L3-VNI-VLAN-100
Leaf3(config-vlan)# vn-segment 1000100

Leaf3(config-vlan)# vlan 11
Leaf3(config-vlan)# vn-segment 100011

Leaf3(config-vlan)# vlan 12
Leaf3(config-vlan)# vn-segment 100012

Leaf3(config-vlan)# vlan 200
Leaf3(config-vlan)# name L3-VNI-VLAN-200
Leaf3(config-vlan)# vn-segment 1000200

Leaf3(config-vlan)# vlan 21
Leaf3(config-vlan)# vn-segment 100021

Leaf3(config-vlan)# vlan 22
Leaf3(config-vlan)# vn-segment 100022

Leaf3(config-vlan)# vrf context WomanTenant
Leaf3(config-vrf)# vni 1000100
Leaf3(config-vrf)# rd auto
Leaf3(config-vrf)# address-family ipv4 unicast
Leaf3(config-vrf-af-ipv4)# route-target both auto
Leaf3(config-vrf-af-ipv4)# route-target both auto evpn

Leaf3(config-vrf-af-ipv4)# vrf context ManTenant
Leaf3(config-vrf)# vni 1000200
Leaf3(config-vrf)# rd auto
Leaf3(config-vrf)# address-family ipv4 unicast
Leaf3(config-vrf-af-ipv4)# route-target both auto
Leaf3(config-vrf-af-ipv4)# route-target both auto evpn

Leaf3(config-vrf-af-ipv4)# interface Vlan100
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member WomanTenant
Leaf3(config-if)# ip forward

```
Leaf3(config-if)# interface Vlan11
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member WomanTenant
Leaf3(config-if)# ip address 192.168.11.1/24
Leaf3(config-if)# fabric forwarding mode anycast-gateway

Leaf3(config-if)# interface Vlan12
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member WomanTenant
Leaf3(config-if)# ip address 192.168.12.1/24
Leaf3(config-if)# fabric forwarding mode anycast-gateway

Leaf3(config-if)# interface Vlan200
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member ManTenant
Leaf3(config-if)# ip forward

Leaf3(config-if)# interface Vlan21
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member ManTenant
Leaf3(config-if)# ip address 192.168.21.1/24
Leaf3(config-if)# fabric forwarding mode anycast-gateway

Leaf3(config-if)# interface Vlan22
Leaf3(config-if)# no shutdown
Leaf3(config-if)# vrf member ManTenant
Leaf3(config-if)# ip address 192.168.22.1/24
Leaf3(config-if)# fabric forwarding mode anycast-gateway

Leaf3(config-if)# interface nve1
Leaf3(config-if-nve)# no shutdown
Leaf3(config-if-nve)# source-interface loopback1
Leaf3(config-if-nve)# host-reachability protocol bgp

Leaf3(config-if-nve)# member vni 1000100 associate-vrf
Leaf3(config-if-nve-vni)# member vni 100011
Leaf3(config-if-nve-vni)# mcast-group 239.1.1.11
Leaf3(config-if-nve-vni)# exit
Leaf3(config-if-nve)# member vni 100012
Leaf3(config-if-nve-vni)# mcast-group 239.1.1.12
Leaf3(config-if-nve-vni)# exit

Leaf3(config-if-nve)# member vni 1000200 associate-vrf
Leaf3(config-if-nve-vni)# member vni 100021
Leaf3(config-if-nve-vni)# mcast-group 239.1.1.21
Leaf3(config-if-nve-vni)# exit
Leaf3(config-if-nve)# member vni 100022
Leaf3(config-if-nve-vni)# mcast-group 239.1.1.22
Leaf3(config-if-nve-vni)# exit
```

```
Leaf3(config-if-nve)# interface Ethernet1/1-2
Leaf3(config-if-range)# no switchport
Leaf3(config-if-range)# medium p2p
Leaf3(config-if-range)# ip unnumbered loopback1
Leaf3(config-if-range)# ip router ospf 1 area 0.0.0.0
Leaf3(config-if-range)# ip pim sparse-mode
Leaf3(config-if-range)# no shutdown

Leaf3(config-if-range)# interface Ethernet1/5
Leaf3(config-if)# switchport
Leaf3(config-if)# switchport mode access
Leaf3(config-if)# switchport access vlan 11

Leaf3(config-if)# interface Ethernet1/6
Leaf3(config-if)# switchport
Leaf3(config-if)# switchport mode access
Leaf3(config-if)# switchport access vlan 12

Leaf3(config-if)# interface Ethernet1/7
Leaf3(config-if)# switchport
Leaf3(config-if)# switchport mode access
Leaf3(config-if)# switchport access vlan 21

Leaf3(config-if)# interface Ethernet1/8
Leaf3(config-if)# switchport
Leaf3(config-if)# switchport mode access
Leaf3(config-if)# switchport access vlan 22

Leaf3(config-if)# interface loopback1
Leaf3(config-if)# ip address 13.13.13.13/32
Leaf3(config-if)# ip router ospf 1 area 0.0.0.0
Leaf3(config-if)# ip pim sparse-mode

Leaf3(config-if)# router ospf 1
Leaf3(config-router)# router-id 13.13.13.13

Leaf3(config)# router bgp 1
Leaf3(config-router)# router-id 13.13.13.13
Leaf3(config-router)# address-family ipv4 unicast
Leaf3(config-router-af)# address-family l2vpn evpn

Leaf3(config-router-af)# vrf WomanTenant
Leaf3(config-router-vrf)# address-family ipv4 unicast
Leaf3(config-router-vrf-af)# advertise l2vpn evpn

Leaf3(config-router-vrf-af)# vrf ManTenant
Leaf3(config-router-vrf)# address-family ipv4 unicast
Leaf3(config-router-vrf-af)# advertise l2vpn evpn
```

```
Leaf3(config-router-vrf-af)# template peer Spine-Peers
Leaf3(config-router-neighbor)# remote-as 1
Leaf3(config-router-neighbor)# update-source loopback1
Leaf3(config-router-neighbor)# address-family ipv4 unicast
Leaf3(config-router-neighbor-af)# address-family l2vpn evpn
Leaf3(config-router-neighbor-af)# send-community extended

Leaf3(config-router-neighbor-af)# neighbor 21.21.21.21
Leaf3(config-router-neighbor)# inherit peer Spine-Peers

Leaf3(config-router-neighbor)# neighbor 22.22.22.22
Leaf3(config-router-neighbor)# inherit peer Spine-Peers

Leaf3(config-router-vrf-neighbor)# evpn
Leaf3(config-evpn)# vni 100011 l2
Leaf3(config-evpn-evi)# rd auto
Leaf3(config-evpn-evi)# route-target import auto
Leaf3(config-evpn-evi)# route-target export auto

Leaf3(config-evpn-evi)# evpn
Leaf3(config-evpn)# vni 100012 l2
Leaf3(config-evpn-evi)# rd auto
Leaf3(config-evpn-evi)# route-target import auto
Leaf3(config-evpn-evi)# route-target export auto

Leaf3(config-evpn-evi)# evpn
Leaf3(config-evpn)# vni 100021 l2
Leaf3(config-evpn-evi)# rd auto
Leaf3(config-evpn-evi)# route-target import auto
Leaf3(config-evpn-evi)# route-target export auto

Leaf3(config-evpn-evi)# evpn
Leaf3(config-evpn)# vni 100022 l2
Leaf3(config-evpn-evi)# rd auto
Leaf3(config-evpn-evi)# route-target import auto
Leaf3(config-evpn-evi)# route-target export auto
```

Leaf4 Configuration:

Leaf4(config)# feature bgp
Leaf4(config)# feature pim
Leaf4(config)# feature interface-vlan
Leaf4(config)# feature vn-segment-vlan-based
Leaf4(config)# feature nv overlay

Leaf4(config)# fabric forwarding anycast-gateway-mac 0001.0001.0001

Leaf4(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Leaf4(config)# vlan 100,11,12,200,21,22

Leaf4(config-vlan)# vlan 100
Leaf4(config-vlan)# name L3-VNI-VLAN-100
Leaf4(config-vlan)# vn-segment 1000100

Leaf4(config-vlan)# vlan 11
Leaf4(config-vlan)# vn-segment 100011

Leaf4(config-vlan)# vlan 12
Leaf4(config-vlan)# vn-segment 100012

Leaf4(config-vlan)# vlan 200
Leaf4(config-vlan)# name L3-VNI-VLAN-200
Leaf4(config-vlan)# vn-segment 1000200

Leaf4(config-vlan)# vlan 21
Leaf4(config-vlan)# vn-segment 100021

Leaf4(config-vlan)# vlan 22
Leaf4(config-vlan)# vn-segment 100022

Leaf4(config-vlan)# vrf context WomanTenant
Leaf4(config-vrf)# vni 1000100
Leaf4(config-vrf)# rd auto
Leaf4(config-vrf)# address-family ipv4 unicast
Leaf4(config-vrf-af-ipv4)# route-target both auto
Leaf4(config-vrf-af-ipv4)# route-target both auto evpn

Leaf4(config-vrf-af-ipv4)# vrf context ManTenant
Leaf4(config-vrf)# vni 1000200
Leaf4(config-vrf)# rd auto
Leaf4(config-vrf)# address-family ipv4 unicast
Leaf4(config-vrf-af-ipv4)# route-target both auto
Leaf4(config-vrf-af-ipv4)# route-target both auto evpn

Leaf4(config-vrf-af-ipv4)# interface Vlan100
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member WomanTenant
Leaf4(config-if)# ip forward

```
Leaf4(config-if)# interface Vlan11
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member WomanTenant
Leaf4(config-if)# ip address 192.168.11.1/24
Leaf4(config-if)# fabric forwarding mode anycast-gateway

Leaf4(config-if)# interface Vlan12
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member WomanTenant
Leaf4(config-if)# ip address 192.168.12.1/24
Leaf4(config-if)# fabric forwarding mode anycast-gateway

Leaf4(config-if)# interface Vlan200
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member ManTenant
Leaf4(config-if)# ip forward

Leaf4(config-if)# interface Vlan21
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member ManTenant
Leaf4(config-if)# ip address 192.168.21.1/24
Leaf4(config-if)# fabric forwarding mode anycast-gateway

Leaf4(config-if)# interface Vlan22
Leaf4(config-if)# no shutdown
Leaf4(config-if)# vrf member ManTenant
Leaf4(config-if)# ip address 192.168.22.1/24
Leaf4(config-if)# fabric forwarding mode anycast-gateway

Leaf4(config-if)# interface nve1
Leaf4(config-if-nve)# no shutdown
Leaf4(config-if-nve)# source-interface loopback1
Leaf4(config-if-nve)# host-reachability protocol bgp

Leaf4(config-if-nve)# member vni 1000100 associate-vrf
Leaf4(config-if-nve-vni)# member vni 100011
Leaf4(config-if-nve-vni)# mcast-group 239.1.1.11
Leaf4(config-if-nve-vni)# exit
Leaf4(config-if-nve)# member vni 100012
Leaf4(config-if-nve-vni)# mcast-group 239.1.1.12
Leaf4(config-if-nve-vni)# exit

Leaf4(config-if-nve)# member vni 1000200 associate-vrf
Leaf4(config-if-nve-vni)# member vni 100021
Leaf4(config-if-nve-vni)# mcast-group 239.1.1.21
Leaf4(config-if-nve-vni)# exit
Leaf4(config-if-nve)# member vni 100022
Leaf4(config-if-nve-vni)# mcast-group 239.1.1.22
Leaf4(config-if-nve-vni)# exit
```

```
Leaf4(config-if-nve)# interface Ethernet1/1-2
Leaf4(config-if-range)# no switchport
Leaf4(config-if-range)# medium p2p
Leaf4(config-if-range)# ip unnumbered loopback1
Leaf4(config-if-range)# ip router ospf 1 area 0.0.0.0
Leaf4(config-if-range)# ip pim sparse-mode
Leaf4(config-if-range)# no shutdown

Leaf4(config-if-range)# interface Ethernet1/5
Leaf4(config-if)# switchport
Leaf4(config-if)# switchport mode access
Leaf4(config-if)# switchport access vlan 11

Leaf4(config-if)# interface Ethernet1/6
Leaf4(config-if)# switchport
Leaf4(config-if)# switchport mode access
Leaf4(config-if)# switchport access vlan 12

Leaf4(config-if)# interface Ethernet1/7
Leaf4(config-if)# switchport
Leaf4(config-if)# switchport mode access
Leaf4(config-if)# switchport access vlan 21

Leaf4(config-if)# interface Ethernet1/8
Leaf4(config-if)# switchport
Leaf4(config-if)# switchport mode access
Leaf4(config-if)# switchport access vlan 22

Leaf4(config-if)# interface loopback1
Leaf4(config-if)# ip address 12.12.12.12/32
Leaf4(config-if)# ip router ospf 1 area 0.0.0.0
Leaf4(config-if)# ip pim sparse-mode

Leaf4(config-if)# router ospf 1
Leaf4(config-router)# router-id 12.12.12.12

Leaf4(config)# router bgp 1
Leaf4(config-router)# router-id 14.14.14.14
Leaf4(config-router)# address-family ipv4 unicast
Leaf4(config-router-af)# address-family l2vpn evpn

Leaf4(config-router-af)# vrf WomanTenant
Leaf4(config-router-vrf)# address-family ipv4 unicast
Leaf4(config-router-vrf-af)# advertise l2vpn evpn

Leaf4(config-router-vrf-af)# vrf ManTenant
Leaf4(config-router-vrf)# address-family ipv4 unicast
Leaf4(config-router-vrf-af)# advertise l2vpn evpn
```

```
Leaf4(config-router-vrf-af)# template peer Spine-Peers
Leaf4(config-router-neighbor)# remote-as 1
Leaf4(config-router-neighbor)# update-source loopback1
Leaf4(config-router-neighbor)# address-family ipv4 unicast
Leaf4(config-router-neighbor-af)# address-family l2vpn evpn
Leaf4(config-router-neighbor-af)# send-community extended

Leaf4(config-router-neighbor-af)# neighbor 21.21.21.21
Leaf4(config-router-neighbor)# inherit peer Spine-Peers

Leaf4(config-router-neighbor)# neighbor 22.22.22.22
Leaf4(config-router-neighbor)# inherit peer Spine-Peers

Leaf4(config-router-vrf-neighbor)# evpn
Leaf4(config-evpn)# vni 100011 l2
Leaf4(config-evpn-evi)# rd auto
Leaf4(config-evpn-evi)# route-target import auto
Leaf4(config-evpn-evi)# route-target export auto

Leaf4(config-evpn-evi)# evpn
Leaf4(config-evpn)# vni 100012 l2
Leaf4(config-evpn-evi)# rd auto
Leaf4(config-evpn-evi)# route-target import auto
Leaf4(config-evpn-evi)# route-target export auto

Leaf4(config-evpn-evi)# evpn
Leaf4(config-evpn)# vni 100021 l2
Leaf4(config-evpn-evi)# rd auto
Leaf4(config-evpn-evi)# route-target import auto
Leaf4(config-evpn-evi)# route-target export auto

Leaf4(config-evpn-evi)# evpn
Leaf4(config-evpn)# vni 100022 l2
Leaf4(config-evpn-evi)# rd auto
Leaf4(config-evpn-evi)# route-target import auto
Leaf4(config-evpn-evi)# route-target export auto
```

Spine1 Configuration:

```
Spine1(config)# nv overlay evpn
Spine1(config)# feature ospf
Spine1(config)# feature bgp
Spine1(config)# feature pim

Spine1(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Spine1(config)# interface loopback 0
Spine1(config-if)# ip address 10.10.10.10/32
Spine1(config-if)# ip router ospf 1 area 0.0.0.0
Spine1(config-if)# ip pim sparse-mode

Spine1(config-if)# interface loopback 1
Spine1(config-if)# ip address 21.21.21.21/32
Spine1(config-if)# ip router ospf 1 area 0.0.0.0
Spine1(config-if)# ip pim sparse-mode

Spine1(config)# interface Ethernet1/1-4
Spine1(config-if-range)# no switchport
Spine1(config-if-range)# medium p2p
Spine1(config-if-range)# ip unnumbered loopback1
Spine1(config-if-range)# ip router ospf 1 area 0.0.0.0
Spine1(config-if-range)# ip pim sparse-mode
Spine1(config-if-range)# no shutdown

Spine1(config-if)# router ospf 1
Spine1(config-router)# router-id 21.21.21.21

Spine1(config-router)# router bgp 1
Spine1(config-router)# router-id 21.21.21.21
Spine1(config-router)# address-family ipv4 unicast
Spine1(config-router-af)# address-family l2vpn evpn

Spine1(config-router-af)# template peer Leaf-Peers
Spine1(config-router-neighbor)# remote-as 1
Spine1(config-router-neighbor)# update-source loopback 1
Spine1(config-router-neighbor)# address-family ipv4 unicast
Spine1(config-router-neighbor-af)# send-community both
Spine1(config-router-neighbor-af)# route-reflector-client
Spine1(config-router-neighbor-af)# address-family l2vpn evpn
Spine1(config-router-neighbor-af)# send-community both
Spine1(config-router-neighbor-af)# route-reflector-client

Spine1(config-router-neighbor-af)# neighbor 11.11.11.11
Spine1(config-router-neighbor)# inherit peer Leaf-Peers

Spine1(config-router-neighbor)# neighbor 12.12.12.12
Spine1(config-router-neighbor)# inherit peer Leaf-Peers
```

```
Spine1(config-router-neighbor)# neighbor 13.13.13.13
Spine1(config-router-neighbor)# inherit peer Leaf-Peers

Spine1(config-router-neighbor)# neighbor 14.14.14.14
Spine1(config-router-neighbor)# inherit peer Leaf-Peers
```

Spine2 Configuration:

Spine2(config)# nv overlay evpn
Spine2(config)# feature ospf
Spine2(config)# feature bgp
Spine2(config)# feature pim

Spine2(config)# ip pim rp-address 10.10.10.10 group-list 224.0.0.0/4

Spine2(config)# interface Ethernet1/1-4
Spine2(config-if-range)# no switchport
Spine2(config-if-range)# medium p2p
Spine2(config-if-range)# ip unnumbered loopback1
Spine2(config-if-range)# ip router ospf 1 area 0.0.0.0
Spine2(config-if-range)# ip pim sparse-mode
Spine2(config-if-range)# no shutdown

Spine2(config-if-range)# interface loopback 0
Spine2(config-if)# ip address 10.10.10.10/32
Spine2(config-if)# ip router ospf 1 area 0.0.0.0
Spine2(config-if)# ip pim sparse-mode

Spine2(config-if)# interface loopback 1
Spine2(config-if)# ip address 22.22.22.22/32
Spine2(config-if)# ip router ospf 1 area 0.0.0.0
Spine2(config-if)# ip pim sparse-mode

Spine2(config-if)# router ospf 1
Spine2(config-router)# router-id 22.22.22.22

Spine2(config-router)# router bgp 1
Spine2(config-router)# router-id 22.22.22.22
Spine2(config-router)# address-family ipv4 unicast
Spine2(config-router-af)# address-family l2vpn evpn

Spine2(config-router-af)# template peer Leaf-Peers
Spine2(config-router-neighbor)# remote-as 1
Spine2(config-router-neighbor)# update-source loopback 1
Spine2(config-router-neighbor)# address-family ipv4 unicast
Spine2(config-router-neighbor-af)# send-community both
Spine2(config-router-neighbor-af)# route-reflector-client
Spine2(config-router-neighbor-af)# address-family l2vpn evpn
Spine2(config-router-neighbor-af)# send-community both
Spine2(config-router-neighbor-af)# route-reflector-client

Spine2(config-router-neighbor-af)# neighbor 11.11.11.11
Spine2(config-router-neighbor)# inherit peer Leaf-Peers

Spine2(config-router-neighbor)# neighbor 12.12.12.12
Spine2(config-router-neighbor)# inherit peer Leaf-Peers

```
Spine2(config-router-neighbor)# neighbor 13.13.13.13
Spine2(config-router-neighbor)# inherit peer Leaf-Peers

Spine2(config-router-neighbor)# neighbor 14.14.14.14
Spine2(config-router-neighbor)# inherit peer Leaf-Peers
```

Monitoring Command

Leaf1# show ip ospf neighbors
Leaf1# show ip bgp summary
Leaf1# show vxlan
Leaf1# show nve vni
Leaf1# show nve interface
Leaf1# show nve peers
Leaf1# show bgp l2vpn evpn
Leaf1# show bgp l2vpn evpn vni-id 100011
Leaf1# show bgp l2vpn evpn vni-id 100012
Leaf1# show bgp l2vpn evpn vni-id 100021
Leaf1# show bgp l2vpn evpn vni-id 100022
Leaf1# sh nve internal platform interface nve1 detail
Leaf1# show l2route evpn mac-ip all

Spine1# show bgp l2vpn evpn