

Configure Nexus EVPN-VXLAN Multi-Site with Route Server

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Background Information](#)

[How is Multi-Site Helpful?](#)

[Other Benefits](#)

[Configure](#)

[Network Diagram](#)

[Site 1 Leaf-1 Configuration](#)

[Site 1 Leaf-2 Configuration](#)

[Site 1 Leaf-3 Configuration](#)

[Site 1 Leaf-4 Configuration](#)

[Site 1 Spine-1 Configuration](#)

[Site 1 Border Gateway-1 Configuration](#)

[Site 1 Border Gateway-2 Configuration](#)

[Router Server](#)

[Site 2 Border Gateway-1 Configuration](#)

[Site 2 Border Gateway-2 Configuration](#)

[Site 2 Spine-1 Configuration](#)

[Site 2 Leaf-1 Configuration](#)

[Site 2 Leaf-2 Configuration](#)

[Site 2 Leaf-3 Configuration](#)

[Site 2 Leaf-4 Configuration](#)

[Verify](#)

[Troubleshoot](#)

Introduction

This document describes how to configure and verify the Ethernet VPN/Virtual Extensible LAN (EVPN/VxLAN) Multi-Site environment on Cisco Nexus 9000 switches. It involves virtual fabric peering in vPC leaf nodes.

For site-to-site connectivity, the route server concept is explained.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Multiprotocol Label Switching (MPLS) Layer 3 VPN
- Multiprotocol-Border Gateway Protocol (MP-BGP)
- EVPN

Components Used

The information in this document is based on these software and hardware versions:

All Site Leafs	N9K-C9336C-FX2	NXOS: 10.2(3)
S1_Spine1	N9K-C9364C	NXOS: 10.2(4)
S1_Spine2	N9K-C9364C	NXOS 9.3(5)
S1_Border Gateway1, S2_Border Gateway2, S2_Border Gateway1	N9K-C9332C	NXOS: 9.3(9)
S1_Border Gateway2	N9K-C9332C	NXOS: 10.2(4)
Route Server	N9K-C9396PX	NXOS: 9.2(2)
Host 1	N3K-C3264C-E	NXOS: 9.3(5)
Host 2 & Host 3	N3K-C3264C-E	NXOS: 9.2(2)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

The data center is a resource pool that contains computational power, storage, and necessary applications to support any business environment. Proper planning of the data center infrastructure design is vital. This document covers critical requirements, such as for hospital networks, and how to meet or exceed those requirements. Modern IT infrastructure and data center deployments need high availability (HA), the ability to scale at a faster rate, and high performance on all the time.

A few explored vital requirements in the DC design/architecture space include:

- Port Density is improved by Fabric Extender (FEX).
- Compute Capacity is improved by Hardware Virtualization (UCS).
- Access layer uplink bandwidth is improved by port-channel.
- Chassis-Level Redundancy is improved by vPC.
- Software-Defined Networking (SDN) fabric is improved by Application Centric Infrastructure (ACI) - automates underlay and overlay in a fabric.
- Rapid deployment and support of new services are improved by Data Center Network Manager (DCNM).
- The bandwidth requirement for long-haul applications is improved by dark fiber or wavelength service.
- Most of all, geographical redundancy and scaling are key attributes for throbbing/scaling out the data center environment. Multi-Site VxLAN/EVPN helps us to have better Data Center Interconnect (DCI) solutions.

How is Multi-Site Helpful?

External connectivity includes the connection of the data center to the rest of the network: to the Internet, the WAN, or the campus. All options provided for external connectivity are multi-tenant aware and focus on Layer 3 (L3) transport to the external network domains.

- EVPN is a next-generation all-in-one VPN solution.
- It not only does the job of many other VPN technologies, but is better also.

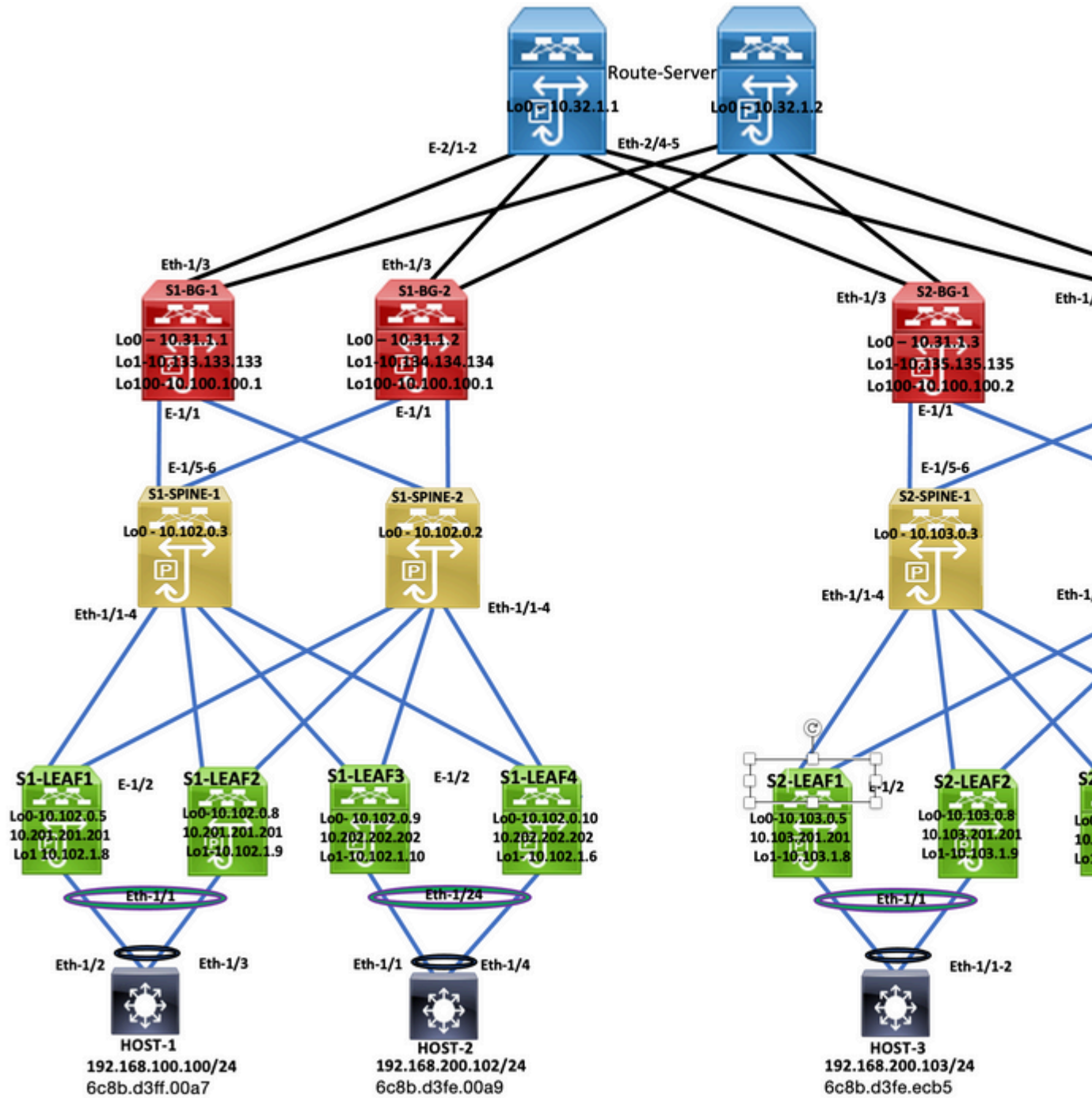
- Integration with legacy networks.
- Selective advertisement/extension:
 - Extend the only Layer 2 (L2) - specific VLANs/subnets that can be extended with Type-2 routes.
 - Extend the only L3 - specific L3 domains can be extended with Type-5 routes.
- Auto-discovery of redundancy group with Type-4 routes.
- Aliasing, mass withdraw of addresses, Split Horizon (SH) Multi Homing (MH) indication with Type-1 routes.
- Auto-discovery of multicast tunnel endpoints and multicast (MCAST) tunnel type with Type-3 routes.

Other Benefits

- Workload balancing across data centers and clouds.
- Proactive response to disruptions “ mitigates risks of approaching disasters, such as hurricanes and floods.
- Data center maintenance and migrations - planned events scheduled over a period of time and integration with legacy networks.
- Backup and disaster recovery as-a-service (aaS).

Configure

Network Diagram



Topology

Site 1 Leaf-1 Configuration

```

feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay
  
```

```
fabric forwarding anycast-gateway-mac 0000.1111.2222

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8
ip igmp snooping vxlan

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2001
    vn-segment 4000502

vrf context L3VNI4000999
    vni 4000999
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn
vrf context vrf_1
    vni 4000501
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_2
    vni 4000502
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn
vpc domain 100
    peer-switch
    peer-keepalive destination 10.197.214.54 source 10.197.214.53
    virtual peer-link destination 10.102.1.9 source 10.102.1.8 dscp 56
    delay restore 150
    peer-gateway
    ip arp synchronize

interface Vlan100
    no shutdown
    mtu 9216
    vrf member vrf_2
    no ip redirects
    ip address 192.168.100.254/24
    no ipv6 redirects
    fabric forwarding mode anycast-gateway

interface Vlan200
```

```
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan301
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.11.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan302
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.12.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan303
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.13.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects

interface port-channel10
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-350,2001
spanning-tree port type network
vpc peer-link

interface port-channel100
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
mtu 9216
vpc 100

interface nve1
no shutdown
host-reachability protocol bgp
advertise virtual-rmac
```

```
source-interface loopback1
member vni 4000100
  suppress-arp
  mcast-group 231.0.0.1
member vni 4000200
  suppress-arp
  mcast-group 231.0.0.2
member vni 4000502 associate-vrf

interface Ethernet1/1
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
mtu 9216
channel-group 100
no shutdown

interface Ethernet1/2
mtu 9216
port-type fabric
medium p2p
ip address 192.168.17.12/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface loopback0
ip address 10.102.0.5/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.102.1.8/32
ip address 10.201.201.201/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

router ospf 100
router-id 10.102.0.5
router bgp 100
router-id 10.102.0.5
log-neighbor-changes
address-family l2vpn evpn
  advertise-pip
neighbor 10.102.0.2
  remote-as 100
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  send-community
  send-community extended
address-family l2vpn evpn
  send-community
  send-community extended
neighbor 10.102.0.3
  remote-as 100
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  send-community
  send-community extended
```

```

address-family l2vpn evpn
  send-community
  send-community extended

evpn
vni 4000100 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto
  route-target export auto

```

Site 1 Leaf-2 Configuration

```

feature nxapi
feature sftp-server
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay
fabric forwarding anycast-gateway-mac 0000.1111.2222

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001

vlan 100
  vn-segment 4000100
vlan 200
  vn-segment 4000200
vlan 301
  vn-segment 4000301
vlan 302
  vn-segment 4000302
vlan 303
  vn-segment 4000303

```



```
vlan 350
  name L3-VNI
  vn-segment 4000999
vlan 2001
  vn-segment 4000502

vrf context L3VNI4000999
  vni 4000999
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_1
  vni 4000501
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_2
  vni 4000502
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vpc domain 100
  peer-switch
  peer-keepalive destination 10.197.214.53 source 10.197.214.54
  virtual-peer-link destination 10.102.1.8 source 10.102.1.9 dscp 56
  delay restore 150
  peer-gateway
  ip arp synchronize

interface Vlan100
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.100.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan200
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.200.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan301
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.11.254/24
  no ipv6 redirects

  fabric forwarding mode anycast-gateway
```

```
interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects

interface port-channel10
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-350,2001
  spanning-tree port type network
  vpc peer-link

interface port-channel100
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200
  mtu 9216
  vpc 100

interface nve1
  no shutdown
  host-reachability protocol bgp
  advertise virtual-rmac
  source-interface loopback1
  member vni 4000100
    suppress-arp
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf

interface Ethernet1/1
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200
  mtu 9216
  channel-group 100
  no shutdown
```

```
interface Ethernet1/2
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.18.12/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown

interface loopback0
  ip address 10.102.0.8/32
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode

interface loopback1
  ip address 10.102.1.9/32
  ip address 10.201.201.201/32 secondary
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  icam monitor scale

router ospf 100
  router-id 10.102.0.8
router bgp 100
  router-id 10.102.0.8
  log-neighbor-changes
  address-family l2vpn evpn
    advertise-pip
  neighbor 10.102.0.2
    remote-as 100
    update-source loopback0
    address-family ipv4 unicast
    address-family ipv6 unicast
      send-community
      send-community extended
    address-family l2vpn evpn
      send-community
      send-community extended
  neighbor 10.102.0.3
    remote-as 100
    update-source loopback0
    address-family ipv4 unicast
    address-family ipv6 unicast
      send-community
      send-community extended
    address-family l2vpn evpn
      send-community
      send-community extended
evpn
  vni 4000100 l2
    rd auto
    route-target import auto
    route-target export auto
  vni 4000200 l2
    rd auto
    route-target import auto
    route-target export auto
  vni 4000301 l2
    rd auto
    route-target import auto
    route-target export auto
```

```
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto
  route-target export auto
```

Site 1 Leaf-3 Configuration

```
feature nxapi
feature bash-shell
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay
feature ngoam

fabric forwarding anycast-gateway-mac 0000.1111.2222

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001

vlan 100
  vn-segment 4000100
vlan 200
  vn-segment 4000200
vlan 301
  vn-segment 4000301
vlan 302
  vn-segment 4000302
vlan 303
  vn-segment 4000303
vlan 350
  name L3-VNI
  vn-segment 4000999
vlan 2001
  vn-segment 4000502

vrf context L3VNI4000999
  vni 4000999
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_1
  vni 4000501
```

```
rd auto
address-family ipv4 unicast
  route-target both auto
  route-target both auto evpn

vrf context vrf_2
vni 4000502
rd auto
address-family ipv4 unicast
  route-target both auto
  route-target both auto evpn

vpc domain 100
peer-switch
peer-keepalive destination 10.197.214.56 source 10.197.214.55
virtual peer-link destination 10.102.0.10 source 10.102.0.9 dscp 56
delay restore 150
peer-gateway
layer3 peer-router
ip arp synchronize

interface Vlan100
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.100.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan200
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects

interface port-channel2
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
vpc 2

interface port-channel10
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-500,2001
spanning-tree port type network
vpc peer-link

interface nve1
```

```
no shutdown
host-reachability protocol bgp
advertise virtual-rmac
source-interface loopback1
member vni 4000100
    suppress-arp
    mcast-group 231.0.0.1
member vni 4000200
    suppress-arp
    mcast-group 231.0.0.2
member vni 4000502 associate-vrf

interface Ethernet1/1
switchport
switchport mode trunk
switchport trunk allowed vlan 200,300-305
mtu 9216
no shutdown

interface Ethernet1/2
mtu 9216
port-type fabric
medium p2p
ip address 192.168.19.12/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/24
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
channel-group 2 mode active
no shutdown

interface loopback0
ip address 10.102.0.9/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.102.1.10/32
ip address 10.202.202.202/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback100
vrf member vrf_2
ip address 10.15.100.2/24

router ospf 100
router-id 10.102.0.9
router bgp 100
router-id 10.102.0.9
log-neighbor-changes
address-family l2vpn evpn
    advertise-pip
neighbor 10.102.0.2
remote-as 100
update-source loopback0
address-family ipv4 unicast
```

```

address-family ipv6 unicast
  send-community
  send-community extended
address-family l2vpn evpn
  send-community
  send-community extended
neighbor 10.102.0.3
remote-as 100
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
  send-community
  send-community extended
address-family l2vpn evpn
  send-community
  send-community extended
  vrf vrf_2
address-family ipv4 unicast
  network 10.15.100.2/32
  network 192.168.100.0/24
neighbor 192.168.100.253
remote-as 65111
update-source loopback100
ebgp-multihop 10
address-family ipv4 unicast
evpn
vni 4000100 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto
  route-target export auto

```

Site 1 Leaf-4 Configuration

```

feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based

```

```
feature lACP
feature vPC
feature nv overlay
feature ngoam

fabric forwarding anycast-gateway-mac 0000.1111.2222

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001

vlan 100
  vn-segment 4000100
vlan 200
  vn-segment 4000200
vlan 301
  vn-segment 4000301
vlan 302
  vn-segment 4000302
vlan 303
  vn-segment 4000303
vlan 350
  name L3-VNI
  vn-segment 4000999
vlan 2001
  vn-segment 4000502

vrf context L3VNI4000999
  vni 4000999
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_1
  vni 4000501
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_2
  vni 4000502
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vpc domain 100
  peer-switch
  peer-keepalive destination 10.197.214.55 source 10.197.214.56
  virtual peer-link destination 10.102.0.9 source 10.102.0.10 dscp 56
  delay restore 150
  peer-gateway
  layer3 peer-router
  ip arp synchronize

interface Vlan100
  no shutdown
  mtu 9216
```



```
vrf member vrf_2
no ip redirects
ip address 192.168.100.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan200
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects

interface port-channel2
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
vpc 2

interface port-channel10
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-500,2001
spanning-tree port type network
vpc peer-link

interface nve1
no shutdown
host-reachability protocol bgp
advertise virtual-rmac
source-interface loopback1
member vni 4000100
  suppress-arp
  mcast-group 231.0.0.1
member vni 4000200
  suppress-arp
  mcast-group 231.0.0.2
member vni 4000502 associate-vrf

interface Ethernet1/1
switchport
switchport mode trunk
switchport trunk allowed vlan 200,300-305
mtu 9216
no shutdown

interface Ethernet1/2
mtu 9216
port-type fabric
medium p2p
ip address 192.168.20.12/24
```

```
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/24
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200
channel-group 2 mode active
no shutdown

interface loopback0
ip address 10.102.0.10/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.102.1.6/32
ip address 10.202.202.202/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback100
vrf member vrf_2
ip address 10.15.100.1/24

router ospf 100
router-id 10.102.0.10
router bgp 100
router-id 10.102.0.10
log-neighbor-changes
address-family ipv4 unicast
address-family ipv4 mvpn
address-family l2vpn evpn
advertise-pip
neighbor 10.102.0.2
remote-as 100
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.102.0.3
remote-as 100
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
vrf vrf_2
address-family ipv4 unicast
network 10.15.100.1/32
network 192.168.100.0/24
```

```
neighbor 192.168.100.253
  remote-as 65111
  update-source loopback100
  ebgp-multihop 3
  address-family ipv4 unicast
evpn
vni 4000100 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 12
  rd auto
  route-target import auto
  route-target export auto
```

Site 1 Spine-1 Configuration

```
feature nxapi
nv overlay evpn
feature ospf
feature bgp
feature pim
feature interface-vlan
feature vn-segment-vlan-based
feature lacp

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1

interface Ethernet1/1
  mtu 9216
  medium p2p
  ip address 192.168.17.11/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown

interface Ethernet1/2
  mtu 9216
  medium p2p
  ip address 192.168.18.11/24
  ip ospf network point-to-point
```

```
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/3
mtu 9216
port-type fabric
medium p2p
ip address 192.168.19.11/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/4
mtu 9216
medium p2p
ip address 192.168.20.11/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/5
mtu 9216
medium p2p
ip address 192.168.15.11/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/6
mtu 9216
medium p2p
ip address 192.168.16.11/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface loopback0
description "anycast RP address"
ip address 10.102.0.2/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
router-id 10.102.0.2
router bgp 100
router-id 10.102.0.2
log-neighbor-changes
address-family ipv4 unicast
address-family ipv6 unicast
address-family l2vpn evpn
neighbor 10.31.1.1
remote-as 100
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
```

```
    send-community
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.31.1.2
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
    send-community
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.102.0.5
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
    send-community
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.102.0.8
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
    send-community
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.102.0.9
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
    send-community
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.102.0.10
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
    send-community
```

```
    send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
neighbor 10.133.133.133
    remote-as 100
    update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
    send-community
send-community extended
    route-reflector-client
address-family l2vpn evpn
    send-community
    send-community extended
    route-reflector-client
```

Site 1 Border Gateway-1 Configuration

```
S1-Bg1# show run
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature nv overlay
evpn multisite border-gateway 100
    delay-restore time 300

fabric forwarding anycast-gateway-mac 0000.1111.2222

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001

vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2001
    vn-segment 4000502
```

```
route-map REDIST-T0-SITE-EXT-DCI permit 10
  match tag 54321
route-map RETAIN-NEXT-HOP permit 10
  set ip next-hop unchanged
```

```
vrf context L3VNI4000999
  vni 4000999
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
```

```
vrf context vrf_1
  vni 4000501
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
```

```
vrf context vrf_2
  vni 4000502
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
```

```
interface Vlan100
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.100.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan200
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.200.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan301
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.11.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects
```

```
interface nve1
  no shutdown
  host-reachability protocol bgp
  source-interface loopback1
  multisite border-gateway interface loopback100
  member vni 4000100
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf
```

```
interface Ethernet1/1
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.15.12/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown
  evpn multisite fabric-tracking
```

```
interface Ethernet1/3
  mtu 9216
  ip address 10.150.150.1/24 tag 54321
  ip router ospf 100 area 0.0.0.0
  no shutdown
  evpn multisite dci-tracking
```

```
interface loopback0
  ip address 10.31.1.1/32 tag 54321
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
```

```
interface loopback1
  ip address 10.133.133.133/32 tag 54321
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
```

```
interface loopback100
```



```

description "Multi-site VIP"
ip address 10.100.100.1/32 tag 54321
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
  router-id 10.31.1.1
router bgp 100
  router-id 10.31.1.1
  log-neighbor-changes
  address-family ipv4 unicast
    redistribute direct route-map REDIST-T0-SITE-EXT-DCI
  address-family ipv4 mvpn
  address-family l2vpn evpn
  neighbor 10.32.1.1
    remote-as 300
    update-source loopback0
    ebgp-multihop 5
    peer-type fabric-external
    address-family ipv4 mvpn
      send-community
      send-community extended
      rewrite-rt-asn
    address-family l2vpn evpn
      send-community
      send-community extended
      rewrite-evpn-rt-asn
  neighbor 10.102.0.2
    remote-as 100
    update-source loopback0
    address-family ipv4 unicast
    address-family ipv6 unicast
    address-family ipv4 mvpn
      send-community
      send-community extended
    address-family l2vpn evpn
      send-community
      send-community extended
  neighbor 10.150.150.2
    remote-as 300
    address-family ipv4 unicast

evpn
vni 4000100 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto

```

```
route-target export auto
```

Site 1 Border Gateway-2 Configuration

```
S1_B2#
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature nv overlay
evpn multisite border-gateway 100
    delay-restore time 300

fabric forwarding anycast-gateway-mac 0000.2222.4444

ip pim rp-address 10.102.0.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2001
    vn-segment 4000502

route-map REDIST-T0-SITE-EXT-DCI permit 10
    match tag 54321
route-map RETAIN-NEXT-HOP permit 10
    set ip next-hop unchanged

vrf context L3VNI4000999
    vni 4000999
    rd auto
address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_1
    vni 4000501
    rd auto
address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
```

```
vrf context vrf_2
  vni 4000502
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

interface Vlan100
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.100.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan200
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.200.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan301
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.11.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway

interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects
```

```

interface nve1
  no shutdown
  host-reachability protocol bgp
  source-interface loopback1
  multisite border-gateway interface loopback100
  member vni 4000100
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf

interface Ethernet1/1
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.16.12/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown
  evpn multisite fabric-tracking

interface Ethernet1/3
  mtu 9216
  ip address 10.150.151.1/24 tag 54321
  ip router ospf 100 area 0.0.0.0
  no shutdown
  evpn multisite dci-tracking

interface loopback0
  ip address 10.31.1.2/32 tag 54321
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode

interface loopback1
  ip address 10.134.134.134/32 tag 54321
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode

interface loopback100
  description "Multi-site VIP"
  ip address 10.100.100.1/32 tag 54321
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  icam monitor scale

router ospf 100
  router-id 10.31.1.2
router bgp 100
  router-id 10.31.1.2
  log-neighbor-changes
  address-family ipv4 unicast
    redistribute direct route-map REDIST-T0-SITE-EXT-DCI
  address-family ipv4 mvpn
  address-family l2vpn evpn
  neighbor 10.32.1.1
    remote-as 300
  update-source loopback0

```

```
ebgp-multihop 5
peer-type fabric-external
address-family ipv4 mvpn
  send-community
  send-community extended
  rewrite-rt-asn
address-family l2vpn evpn
  send-community
  send-community extended
  rewrite-evpn-rt-asn
neighbor 10.102.0.2
  remote-as 100
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  send-community
  send-community extended
  address-family l2vpn evpn
  send-community
  send-community extended
neighbor 10.150.151.2
  remote-as 300
  address-family ipv4 unicast
evpn
vni 4000100 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto
  route-target export auto
S1_B2#
```

Router Server

```
Router_Server#
nv overlay evpn
feature ospf
feature bgp
feature pim
feature interface-vlan

vlan 1

route-map REDIST-T0-SITE-EXT-DCI permit 10
```

```
match tag 54321
route-map RETAIN-NEXT-HOP permit 10
set ip next-hop unchanged
```

```
interface Ethernet2/1
no switchport
ip address 10.150.150.2/24
no shutdown
```

```
interface Ethernet2/2
no switchport
ip address 10.150.151.2/24
no shutdown
```

```
interface Ethernet2/4
no switchport
ip address 10.150.152.2/24
no shutdown
```

```
interface Ethernet2/5
no switchport
mtu 9216
ip address 10.150.153.2/24
no shutdown
```

```
interface loopback0
ip address 10.32.1.1/32 tag 54321
```

```
router bgp 300
router-id 10.32.1.1
address-family ipv4 unicast
redistribute direct route-map REDIST-T0-SITE-EXT-DCI
maximum-paths 2
retain route-target all
address-family l2vpn evpn
retain route-target all
neighbor 10.31.1.1
remote-as 100
update-source loopback0
ebgp-multihop 5
address-family ipv4 unicast
send-community
send-community extended
route-map RETAIN-NEXT-HOP out
rewrite-rt-asn
address-family l2vpn evpn
send-community
send-community extended
route-map RETAIN-NEXT-HOP out
rewrite-evpn-rt-asn
neighbor 10.31.1.2
remote-as 100
update-source loopback0
ebgp-multihop 5
address-family ipv4 unicast
send-community
send-community extended
route-map RETAIN-NEXT-HOP out
rewrite-rt-asn
address-family l2vpn evpn
send-community
```

```

    send-community extended
    route-map RETAIN-NEXT-HOP out
    rewrite-evpn-rt-asn
neighbor 10.31.1.3
  remote-as 200
  update-source loopback0
  ebgp-multihop 5
  address-family ipv4 unicast
    send-community
    send-community extended
    route-map RETAIN-NEXT-HOP out
    rewrite-rt-asn
  address-family l2vpn evpn
    send-community
    send-community extended
    route-map RETAIN-NEXT-HOP out
    rewrite-evpn-rt-asn
neighbor 10.31.1.4
  remote-as 200
  update-source loopback0
  ebgp-multihop 5
  address-family ipv4 unicast
  address-family ipv4 mvpn
    send-community
    send-community extended
    route-map RETAIN-NEXT-HOP out
    rewrite-rt-asn
  address-family l2vpn evpn
    send-community
    send-community extended
    route-map RETAIN-NEXT-HOP out
    rewrite-evpn-rt-asn
neighbor 10.150.150.1
  remote-as 100
  address-family ipv4 unicast
neighbor 10.150.151.1
  remote-as 100
  address-family ipv4 unicast
neighbor 10.150.152.1
  remote-as 200
  address-family ipv4 unicast
neighbor 10.150.153.1
  remote-as 200
  address-family ipv4 unicast
Router_Server#

```

Site 2 Border Gateway-1 Configuration

```

cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature nv overlay

```

```
evpn multisite border-gateway 200

fabric forwarding anycast-gateway-mac 0000.2222.4444

ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2000-2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2000
    vn-segment 2000
vlan 2001
    vn-segment 4000502

route-map REDIST-T0-SITE-EXT-DCI permit 10
    match tag 54321
route-map RETAIN-NEXT-HOP permit 10
    set ip next-hop unchanged

vrf context L3VNI4000999
    vni 4000999
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_1
    vni 4000501
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_2
    vni 4000502
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

interface Vlan100
    no shutdown
    mtu 9216
    vrf member vrf_2
    no ip redirects
    ip address 192.168.100.254/24
    no ipv6 redirects
    fabric forwarding mode anycast-gateway

interface Vlan200
```



```
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
```

```
interface Vlan301
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.11.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
```

```
interface Vlan302
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.12.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
```

```
interface Vlan303
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.13.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
```

```
interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects
```

```
interface nve1
no shutdown
host-reachability protocol bgp
source-interface loopback1
multisite border-gateway interface loopback100
member vni 4000100
  suppress-arp
  mcast-group 231.0.0.1
member vni 4000200
  suppress-arp
  mcast-group 231.0.0.2
member vni 4000502 associate-vrf
```

```
interface Ethernet1/1
mtu 9216
port-type fabric
medium p2p
ip address 192.168.17.12/24
```

```
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown
evpn multisite fabric-tracking

interface Ethernet1/3
mtu 9216
ip address 10.150.152.1/24 tag 54321
ip router ospf 200 area 0.0.0.0
no shutdown
evpn multisite dci-tracking

interface loopback0
ip address 10.31.1.3/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.135.135.135/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode

interface loopback100
description "Multi-site VIP"
ip address 10.100.100.2/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 200
router bgp 200
router-id 10.31.1.3
log-neighbor-changes
address-family ipv4 unicast
redistribute direct route-map REDIST-TO-SITE-EXT-DCI
address-family l2vpn evpn
neighbor 10.32.1.1
remote-as 300
update-source loopback0
ebgp-multihop 5
peer-type fabric-external
send-community
send-community extended
rewrite-rt-asn
address-family l2vpn evpn
send-community
send-community extended
rewrite-evpn-rt-asn
neighbor 10.103.0.3
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.150.152.2
remote-as 300
address-family ipv4 unicast
```

```
evpn
vni 4000100 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 12
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 12
  rd auto
  route-target import auto
  route-target export auto
```

Site 2 Border Gateway-2 Configuration

```
S2-BG2#
cfs ipv4 distribute
feature ngmvpn
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature lldp
feature bfd
feature nv overlay
evpn multisite border-gateway 200
  delay-restore time 300

fabric forwarding anycast-gateway-mac 0000.2222.4444
ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,301-303,350,2000-2001
vlan 100
  vn-segment 4000100
vlan 200
  vn-segment 4000200
vlan 301
  vn-segment 4000301
vlan 302
  vn-segment 4000302
vlan 303
  vn-segment 4000303
vlan 350
  name L3-VNI
```

```
vn-segment 4000999
vlan 2000
vn-segment 2000
vlan 2001
vn-segment 4000502

route-map REDIST-T0-SITE-EXT-DCI permit 10
match tag 54321
route-map RETAIN-NEXT-HOP permit 10
set ip next-hop unchanged

vrf context L3VNI4000999
vni 4000999
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

vrf context vrf_1
vni 4000501
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

vrf context vrf_2
vni 4000502
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

interface Vlan100
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.100.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan200
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan301
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.11.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway
```

```
interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects
```

```
interface nve1
  no shutdown
  host-reachability protocol bgp
  source-interface loopback1
  multisite border-gateway interface loopback100
  member vni 4000100
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    multisite ingress-replication
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf
```

```
interface Ethernet1/1
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.18.12/24
  ip ospf network point-to-point
  ip router ospf 200 area 0.0.0.0
  ip pim sparse-mode
  no shutdown
  evpn multisite fabric-tracking
```

```
interface Ethernet1/3
  mtu 9216
  ip address 10.150.153.1/24 tag 54321
  ip router ospf 200 area 0.0.0.0
  no shutdown
  evpn multisite dci-tracking
```

```
interface loopback0
```

```
ip address 10.31.1.4/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.136.136.136/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode

interface loopback100
description "Multi-site VIP"
ip address 10.100.100.2/32 tag 54321
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 200
router bgp 200
router-id 10.31.1.4
log-neighbor-changes
address-family ipv4 unicast
redistribute direct route-map REDIST-T0-SITE-EXT-DCI
address-family l2vpn evpn
neighbor 10.32.1.1
remote-as 300
update-source loopback0
ebgp-multihop 5
peer-type fabric-external
send-community
send-community extended
rewrite-rt-asn
address-family l2vpn evpn
send-community
send-community extended
rewrite-evpn-rt-asn
neighbor 10.103.0.3
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.150.153.2
remote-as 300
address-family ipv4 unicast

evpn
vni 4000100 l2
rd auto
route-target import auto
route-target export auto
vni 4000200 l2
rd auto
route-target import auto
route-target export auto
vni 4000301 l2
rd auto
route-target import auto
route-target export auto
vni 4000302 l2
```

```
rd auto
route-target import auto
route-target export auto
vni 4000303 12
rd auto
route-target import auto
route-target export auto
S2-BG2#
```

Site 2 Spine-1 Configuration

```
S2-Spine1#
feature nxapi
cfs ipv4 distribute
cfs eth distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature ngoam

ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

interface Ethernet1/1
mtu 9216
medium p2p
ip address 192.168.0.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/2
mtu 9216
medium p2p
ip address 192.168.1.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/3
mtu 9216
medium p2p
ip address 192.168.2.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/4
mtu 9216
```

```
medium p2p
ip address 192.168.3.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/5
mtu 9216
medium p2p
ip address 192.168.17.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/6
mtu 9216
medium p2p
ip address 192.168.18.11/24
ip ospf network point-to-point
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface loopback0
description "anycast RP address"
ip address 10.103.0.3/32
ip router ospf 200 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 200
router-id 10.202.0.3
router bgp 200
router-id 10.103.0.3
log-neighbor-changes
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
address-family l2vpn evpn
neighbor 10.31.1.3
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.31.1.4
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.103.0.5
```



```
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
  send-community
  send-community extended
route-reflector-client
address-family l2vpn evpn
  send-community
  send-community extended
route-reflector-client
neighbor 10.103.0.8
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  send-community
  send-community extended
  route-reflector-client
address-family l2vpn evpn
  send-community
  send-community extended
route-reflector-client
neighbor 10.103.0.9
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  address-family ipv4 mvpn
  send-community
  send-community extended
  route-reflector-client
address-family l2vpn evpn
  send-community
  send-community extended
route-reflector-client
neighbor 10.103.0.10
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  address-family ipv4 mvpn
  send-community
  send-community extended
  route-reflector-client
address-family l2vpn evpn
  send-community
  send-community extended
route-reflector-client
S2-Spine1#
```

Site 2 Leaf-1 Configuration

```
feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
```

```
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay

fabric forwarding anycast-gateway-mac 0000.1111.2222
ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2001
    vn-segment 4000502

route-map DIRECT permit 10
    match tag 12345
route-map DIRECT deny 90
vrf context L3VNI4000999
    vni 4000999
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_1
    vni 4000501
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_2
    vni 4000502
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vpc domain 100
    peer-switch
    peer-keepalive destination 10.197.214.63
    virtual peer-link destination 10.103.1.9 source 10.103.1.8 dscp 56
    delay restore 150
    peer-gateway
    ip arp synchronize
```

```
interface Vlan100
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.100.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan200
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.200.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan301
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.11.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects
```

```
interface port-channel10
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-500
  spanning-tree port type network
```

```
vpc peer-link

interface port-channel100
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-305
  mtu 9216
  vpc 100

interface nve1
  no shutdown
  host-reachability protocol bgp
  advertise virtual-rmac
  source-interface loopback1
  member vni 4000100
    suppress-arp
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf

interface Ethernet1/1
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-305
  mtu 9216
  channel-group 100
  no shutdown

interface Ethernet1/2
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.0.12/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown

interface loopback0
  ip address 10.103.0.5/32
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode

interface loopback1
  ip address 10.103.1.8/32
  ip address 10.103.201.201/32 secondary
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  icam monitor scale

router ospf 100
  router-id 10.102.0.5
router bgp 200
  router-id 10.103.0.5
  log-neighbor-changes
  address-family ipv4 mvpn
  address-family l2vpn evpn
    advertise-pip
  neighbor 10.103.0.2
    remote-as 200
```

```

update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
  send-community
  send-community extended
address-family l2vpn evpn
  send-community
  send-community extended
neighbor 10.103.0.3
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  send-community
  send-community extended
address-family l2vpn evpn
  send-community
  send-community extended
evpn
vni 4000100 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000200 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000301 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000302 l2
  rd auto
  route-target import auto
  route-target export auto
vni 4000303 l2
  rd auto
  route-target import auto
  route-target export auto

```

Site 2 Leaf-2 Configuration

```

S2-Leaf2#
feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay

fabric forwarding anycast-gateway-mac 0000.1111.2222
ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4

```

```
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
vlan 2001
    vn-segment 4000502

vrf context L3VNI4000999
    vni 4000999
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_1
    vni 4000501
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vrf context vrf_2
    vni 4000502
    rd auto
    address-family ipv4 unicast
        route-target both auto
        route-target both auto evpn

vpc domain 100
    peer-switch
    peer-keepalive destination 10.197.214.62
    virtual peer-link destination 10.103.1.8 source 10.103.1.9 dscp 56
    delay restore 150
    peer-gateway
    ip arp synchronize

interface Vlan100
    no shutdown
    mtu 9216
    vrf member vrf_2
    no ip redirects
    ip address 192.168.100.254/24
    no ipv6 redirects
    fabric forwarding mode anycast-gateway

interface Vlan200
```

```
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan301
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.11.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan302
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.12.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan303
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.13.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects

interface port-channel10
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-500
spanning-tree port type network
vpc peer-link

interface port-channel100
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
vpc 100

interface nve1
no shutdown
host-reachability protocol bgp
advertise virtual-rmac
```

```

source-interface loopback1
member vni 4000100
  suppress-arp
  mcast-group 231.0.0.1
member vni 4000200
  suppress-arp
  mcast-group 231.0.0.2
member vni 4000502 associate-vrf

interface Ethernet1/1
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
channel-group 100
no shutdown

interface Ethernet1/2
mtu 9216
port-type fabric
medium p2p
ip address 192.168.1.12/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface loopback0
ip address 10.103.0.8/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.103.1.9/32
ip address 10.103.201.201/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
router-id 10.102.0.8
router bgp 200
router-id 10.103.0.8
log-neighbor-changes
address-family l2vpn evpn
  advertise-pip
neighbor 10.103.0.2
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
    send-community
    send-community extended
  address-family l2vpn evpn
    send-community
    send-community extended
neighbor 10.103.0.3
  remote-as 200
  update-source loopback0
  address-family ipv4 unicast
  address-family ipv6 unicast
  address-family ipv4 mvpn

```



```
        send-community
        send-community extended
address-family l2vpn evpn
        send-community
        send-community extended
evpn
vni 4000100 l2
    rd auto
    route-target import auto
    route-target export auto
vni 4000200 l2
    rd auto
    route-target import auto
    route-target export auto
vni 4000301 l2
    rd auto
    route-target import auto
    route-target export auto
vni 4000302 l2
    rd auto
    route-target import auto
    route-target export auto
vni 4000303 l2
    rd auto
    route-target import auto
    route-target export auto
S2-Leaf2#
```

Site 2 Leaf-3 Configuration

```
S2-leaf3#
feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay

fabric forwarding anycast-gateway-mac 0000.1111.2222
ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
```

```
vn-segment 4000303
vlan 350
name L3-VNI
vn-segment 4000999
vlan 2001
vn-segment 4000502

vrf context L3VNI4000999
vni 4000999
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

vrf context vrf_1
vni 4000501
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

vrf context vrf_2
vni 4000502
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn

vpc domain 100
peer-switch
peer-keepalive destination 10.197.214.65
virtual peer-link destination 10.103.1.6 source 10.103.1.10 dscp 56
delay restore 150
peer-gateway
ip arp synchronize

interface Vlan100
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.100.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan200
no shutdown
mtu 9216
vrf member vrf_2
no ip redirects
ip address 192.168.200.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan301
no shutdown
mtu 9216
vrf member vrf_1
```

```
no ip redirects
ip address 172.16.11.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan302
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.12.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan303
no shutdown
mtu 9216
vrf member vrf_1
no ip redirects
ip address 172.16.13.254/24
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan2001
no shutdown
mtu 9000
vrf member vrf_2
no ip redirects
ip forward
ipv6 address use-link-local-only
no ipv6 redirects

interface port-channel10
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-500
spanning-tree port type network
vpc peer-link

interface port-channel100
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
vpc 100

interface nve1
no shutdown
host-reachability protocol bgp
advertise virtual-rmac
source-interface loopback1
member vni 4000100
    suppress-arp
    mcast-group 231.0.0.1
member vni 4000200
    suppress-arp
    mcast-group 231.0.0.2
member vni 4000502 associate-vrf

interface Ethernet1/2
mtu 9216
port-type fabric
```

```
medium p2p
ip address 192.168.2.12/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/23
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
channel-group 100
no shutdown

interface Ethernet1/24
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
channel-group 100
no shutdown

interface loopback0
ip address 10.103.0.9/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.103.1.10/32
ip address 10.103.202.202/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
router-id 10.102.0.9
router bgp 200
router-id 10.103.0.9
log-neighbor-changes
address-family ipv4 mvpn
address-family l2vpn evpn
advertise-pip
neighbor 10.103.0.2
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.103.0.3
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
```

```
        send-community
        send-community extended
evpn
vni 4000100 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000200 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000301 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000302 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000303 12
    rd auto
    route-target import auto
    route-target export auto
```

Site 2 Leaf-4 Configuration

```
S2-Leaf4#
feature nxapi
cfs ipv4 distribute
nv overlay evpn
feature ospf
feature bgp
feature pim
feature fabric forwarding
feature interface-vlan
feature vn-segment-vlan-based
feature lacp
feature vpc
feature nv overlay

fabric forwarding anycast-gateway-mac 0000.1111.2222
ip pim rp-address 10.103.0.3 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

vlan 1,100,200,300-350,2001
vlan 100
    vn-segment 4000100
vlan 200
    vn-segment 4000200
vlan 301
    vn-segment 4000301
vlan 302
    vn-segment 4000302
vlan 303
    vn-segment 4000303
vlan 350
    name L3-VNI
    vn-segment 4000999
```

```
vlan 2001
  vn-segment 4000502

vrf context L3VNI4000999
  vni 4000999
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_1
  vni 4000501
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vrf context vrf_2
  vni 4000502
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn

vpc domain 100
  peer-switch
  peer-keepalive destination 10.197.214.64
  virtual peer-link destination 10.103.1.10 source 10.103.1.6 dscp 56
  delay restore 150
  peer-gateway
  ip arp synchronize
```

```
interface Vlan100
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.100.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan200
  no shutdown
  mtu 9216
  vrf member vrf_2
  no ip redirects
  ip address 192.168.200.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan301
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.11.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan302
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.12.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan303
  no shutdown
  mtu 9216
  vrf member vrf_1
  no ip redirects
  ip address 172.16.13.254/24
  no ipv6 redirects
  fabric forwarding mode anycast-gateway
```

```
interface Vlan2001
  no shutdown
  mtu 9000
  vrf member vrf_2
  no ip redirects
  ip forward
  ipv6 address use-link-local-only
  no ipv6 redirects
```

```
interface port-channel10
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-500
  spanning-tree port type network
  vpc peer-link
```

```
interface port-channel100
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300-305
  mtu 9216
  vpc 100
```

```
interface nve1
  no shutdown
  host-reachability protocol bgp
  advertise virtual-rmac
  source-interface loopback1
  member vni 4000100
    suppress-arp
    mcast-group 231.0.0.1
  member vni 4000200
    suppress-arp
    mcast-group 231.0.0.2
  member vni 4000502 associate-vrf
```

```
interface Ethernet1/2
  mtu 9216
  port-type fabric
  medium p2p
  ip address 192.168.3.12/24
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
```

```
ip pim sparse-mode
no shutdown

interface Ethernet1/23
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
channel-group 100
no shutdown

interface Ethernet1/24
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300-305
mtu 9216
channel-group 100
no shutdown

interface loopback0
ip address 10.103.0.10/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback1
ip address 10.103.1.6/32
ip address 10.103.202.202/32 secondary
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
router-id 10.102.0.10
router bgp 200
router-id 10.102.0.10
log-neighbor-changes
address-family l2vpn evpn
advertise-pip
neighbor 10.103.0.2
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
address-family ipv4 mvpn
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended
neighbor 10.103.0.3
remote-as 200
update-source loopback0
address-family ipv4 unicast
address-family ipv6 unicast
send-community
send-community extended
address-family l2vpn evpn
send-community
send-community extended

evpn
vni 4000100 l2
rd auto
```



```
    route-target import auto
    route-target export auto
vni 4000200 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000301 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000302 12
    rd auto
    route-target import auto
    route-target export auto
vni 4000303 12
    rd auto
    route-target import auto
    route-target export auto
S2-Leaf4#
```

Verify

Use this section to confirm that your configuration works properly.

The [Cisco CLI Analyzer](#) (registered customers only) supports certain `show` commands. Use the Cisco CLI Analyzer in order to view an analysis of `show` command output.

```
<#root>
```

```
Host2#
```

```
show ip int brief
```

```
IP Interface Status for VRF "default"(1)
Interface          IP Address          Interface Status
Vlan100            192.168.100.102    protocol-up/link-up/admin-up
Vlan200            192.168.200.102    protocol-up/link-up/admin-up
Lo100              10.2.3.4            protocol-up/link-up/admin-up
Host2#
Host2#
```

```
<#root>
```

```
Host2#
```

```
ping 192.168.200.103
```

```
PING 192.168.200.103 (192.168.200.103): 56 data bytes
64 bytes from 192.168.200.103: icmp_seq=0 ttl=254 time=1.21 ms
64 bytes from 192.168.200.103: icmp_seq=1 ttl=254 time=0.627 ms
64 bytes from 192.168.200.103: icmp_seq=2 ttl=254 time=0.74 ms
64 bytes from 192.168.200.103: icmp_seq=3 ttl=254 time=0.737 ms
64 bytes from 192.168.200.103: icmp_seq=4 ttl=254 time=0.542 ms
--- 192.168.200.103 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
```

round-trip min/avg/max = 0.542/0.771/1.21 ms

Host2#

Host2#

Host2#

ping 192.168.100.103

PING 192.168.100.103 (192.168.100.103): 56 data bytes

64 bytes from 192.168.100.103: icmp_seq=0 ttl=254 time=1.195 ms

64 bytes from 192.168.100.103: icmp_seq=1 ttl=254 time=0.613 ms

64 bytes from 192.168.100.103: icmp_seq=2 ttl=254 time=0.575 ms

64 bytes from 192.168.100.103: icmp_seq=3 ttl=254 time=0.522 ms

64 bytes from 192.168.100.103: icmp_seq=4 ttl=254 time=0.534 ms

--- 192.168.100.103 ping statistics ---

5 packets transmitted, 5 packets received, 0.00% packet loss

round-trip min/avg/max = 0.522/0.687/1.195 ms

Host2#

Host2#

Host2#

ping 192.168.100.100

PING 192.168.100.100 (192.168.100.100): 56 data bytes

64 bytes from 192.168.100.100: icmp_seq=0 ttl=254 time=1.029 ms

64 bytes from 192.168.100.100: icmp_seq=1 ttl=254 time=0.561 ms

64 bytes from 192.168.100.100: icmp_seq=2 ttl=254 time=0.579 ms

64 bytes from 192.168.100.100: icmp_seq=3 ttl=254 time=0.511 ms

64 bytes from 192.168.100.100: icmp_seq=4 ttl=254 time=0.496 ms

--- 192.168.100.100 ping statistics ---

5 packets transmitted, 5 packets received, 0.00% packet loss

round-trip min/avg/max = 0.496/0.635/1.029 ms

Host2#

Host2#

Host2#

ping 192.168.200.100

PING 192.168.200.100 (192.168.200.100): 56 data bytes

64 bytes from 192.168.200.100: icmp_seq=0 ttl=254 time=1.263 ms

64 bytes from 192.168.200.100: icmp_seq=1 ttl=254 time=0.816 ms

64 bytes from 192.168.200.100: icmp_seq=2 ttl=254 time=0.735 ms

64 bytes from 192.168.200.100: icmp_seq=3 ttl=254 time=0.659 ms

64 bytes from 192.168.200.100: icmp_seq=4 ttl=254 time=0.634 ms

--- 192.168.200.100 ping statistics ---

5 packets transmitted, 5 packets received, 0.00% packet loss

round-trip min/avg/max = 0.634/0.821/1.263 ms

Host2#

<#root>

HOST_3(config)#

HOST_3(config)#

ping 192.168.100.100

PING 192.168.100.100 (192.168.100.100): 56 data bytes

64 bytes from 192.168.100.100: icmp_seq=0 ttl=254 time=1.319 ms

64 bytes from 192.168.100.100: icmp_seq=1 ttl=254 time=0.77 ms

```
64 bytes from 192.168.100.100: icmp_seq=2 ttl=254 time=0.505 ms
64 bytes from 192.168.100.100: icmp_seq=3 ttl=254 time=0.542 ms
64 bytes from 192.168.100.100: icmp_seq=4 ttl=254 time=0.486 ms
--- 192.168.100.100 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 0.486/0.724/1.319 ms
HOST_3(config)#
```

```
HOST_3(config)#
```

```
ping 192.168.100.102
```

```
PING 192.168.100.102 (192.168.100.102): 56 data bytes
64 bytes from 192.168.100.102: icmp_seq=0 ttl=254 time=1.304 ms
64 bytes from 192.168.100.102: icmp_seq=1 ttl=254 time=0.853 ms
64 bytes from 192.168.100.102: icmp_seq=2 ttl=254 time=0.845 ms
64 bytes from 192.168.100.102: icmp_seq=3 ttl=254 time=0.564 ms
64 bytes from 192.168.100.102: icmp_seq=4 ttl=254 time=0.55 ms
--- 192.168.100.102 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 0.55/0.823/1.304 ms
```

```
HOST_3(config)#
```

```
HOST_3(config)#
```

```
HOST_3(config)#
```

```
ping 192.168.200.102
```

```
PING 192.168.200.102 (192.168.200.102): 56 data bytes
64 bytes from 192.168.200.102: icmp_seq=0 ttl=254 time=0.997 ms
64 bytes from 192.168.200.102: icmp_seq=1 ttl=254 time=0.766 ms
64 bytes from 192.168.200.102: icmp_seq=2 ttl=254 time=0.84 ms
64 bytes from 192.168.200.102: icmp_seq=3 ttl=254 time=0.734 ms
64 bytes from 192.168.200.102: icmp_seq=4 ttl=254 time=0.592 ms
--- 192.168.200.102 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 0.592/0.785/0.997 ms
```

```
HOST_3(config)#
```

```
HOST_3(config)#
```

```
ping 192.168.200.100
```

```
PING 192.168.200.100 (192.168.200.100): 56 data bytes
36 bytes from 192.168.200.103: Destination Host Unreachable
Request 0 timed out
64 bytes from 192.168.200.100: icmp_seq=1 ttl=254 time=1.376 ms
64 bytes from 192.168.200.100: icmp_seq=2 ttl=254 time=0.806 ms
64 bytes from 192.168.200.100: icmp_seq=3 ttl=254 time=0.77 ms
64 bytes from 192.168.200.100: icmp_seq=4 ttl=254 time=0.793 ms
--- 192.168.200.100 ping statistics ---
5 packets transmitted, 4 packets received, 20.00% packet loss
round-trip min/avg/max = 0.77/0.936/1.376 ms
```

```
HOST_3(config)#
```

Troubleshoot

This section provides information you can use to troubleshoot your configuration.

The [Cisco CLI Analyzer](#) (registered customers only) supports certain `show` commands. Use the Cisco CLI Analyzer in order to view an analysis of `show` command output.

<#root>

Host2#

`show ip arp`

Flags: * - Adjacencies learnt on non-active FHRP router
+ - Adjacencies synced via CFSOE
- Adjacencies Throttled for Glean
CP - Added via L2RIB, Control plane Adjacencies
PS - Added via L2RIB, Peer Sync
RO - Re-Originated Peer Sync Entry
D - Static Adjacencies attached to down interface

IP ARP Table for context default

Total number of entries: 8

Address	Age	MAC Address	Interface	Flags
192.168.100.100	00:06:52	6c8b.d3ff.00a7	Vlan100	
192.168.100.103	00:07:54	6c8b.d3fe.ecb5	Vlan100	
192.168.100.104	00:07:01	6c8b.d3fe.df3b	Vlan100	
192.168.100.254	00:08:01	0000.1111.2222	Vlan100	
192.168.200.100	00:14:46	6c8b.d3ff.00a7	Vlan200	
192.168.200.103	00:07:07	6c8b.d3fe.ecb5	Vlan200	
192.168.200.104	00:07:31	6c8b.d3fe.df3b	Vlan200	
192.168.200.254	00:07:07	0000.1111.2222	Vlan200	

Host2#

Host2#

`show 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
* 100	0000.1111.2222	dynamic	0	F	F	Po2
* 100	6c8b.d3fe.df3b	dynamic	0	F	F	Po2
* 100	6c8b.d3fe.ecb5	dynamic	0	F	F	Po2
* 100	6c8b.d3ff.00a7	dynamic	0	F	F	Po2
* 200	0000.1111.2222	dynamic	0	F	F	Po2
* 200	6c8b.d3fe.df3b	dynamic	0	F	F	Po2
* 200	6c8b.d3fe.ecb5	dynamic	0	F	F	Po2
* 200	6c8b.d3ff.00a7	dynamic	0	F	F	Po2
G -	6c8b.d3fe.ff09	static	-	F	F	sup-eth1(R)
G 100	6c8b.d3fe.ff09	static	-	F	F	sup-eth1(R)
G 200	6c8b.d3fe.ff09	static	-	F	F	sup-eth1(R)

Host2#

Host2#

<#root>

HOST_3(config)#

`show ip arp`

Flags: * - Adjacencies learnt on non-active FHRP router
 + - Adjacencies synced via CFSOE
 # - Adjacencies Throttled for Glean
 CP - Added via L2RIB, Control plane Adjacencies
 PS - Added via L2RIB, Peer Sync
 RO - Re-Originated Peer Sync Entry
 D - Static Adjacencies attached to down interface

IP ARP Table for context default

Total number of entries: 8

Address	Age	MAC Address	Interface	Flags
192.168.200.100	00:00:07	6c8b.d3ff.00a7	Vlan200	
192.168.200.102	00:11:41	6c8b.d3fe.ff09	Vlan200	
192.168.200.104	00:18:38	6c8b.d3fe.df3b	Vlan200	
192.168.200.254	00:12:19	0000.1111.2222	Vlan200	
192.168.100.100	00:07:16	6c8b.d3ff.00a7	Vlan100	
192.168.100.102	00:11:51	6c8b.d3fe.ff09	Vlan100	
192.168.100.104	00:15:06	6c8b.d3fe.df3b	Vlan100	
192.168.100.254	00:11:37	0000.1111.2222	Vlan100	

HOST_3(config)#

<#root>

S1-Leaf1#

show bgp l2vpn evpn

BGP routing table information for VRF default, address family L2VPN EVPN

BGP table version is 3291, Local Router ID is 10.102.0.5

Status: s-suppressed, x-deleted, S-stale, d-dampened, h-history, *-valid, >-best

Path type: i-internal, e-external, c-confed, l-local, a-aggregate, r-redist, I-injected

Origin codes: i - IGP, e - EGP, ? - incomplete, | - multipath, & - backup, 2 - best2

Network	Next Hop	Metric	LocPrf	Weight	Path
Route Distinguisher: 100:4000100					
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.3aef]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.100.103]/272	10.100.100.1		100	0	300 200 i

Route Distinguisher: 100:4000200

*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216	10.100.100.1		100	0	300 200 i

```

*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.3aef]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.200.103]/272
    10.100.100.1                    100          0 300 200

Route Distinguisher: 10.31.1.1:32867
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
    10.133.133.133                  100          0

Route Distinguisher: 10.31.1.1:32967
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
    10.133.133.133                  100          0 i

Route Distinguisher: 10.31.1.2:32867
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
    10.134.134.134                  100          0 i

Route Distinguisher: 10.31.1.2:32967
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
    10.134.134.134                  100          0 i

Route Distinguisher: 10.102.0.5:32867 (L2VNI 4000100)
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
    10.133.133.133                  100          0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
    10.134.134.134                  100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202                  100          0 i
*>i
    10.202.202.202                  100          0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216
    10.201.201.201                  100          32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202                  100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.3aef]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.100.100.1                    100          0 300 200 i

```

```

*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216
    10.201.201.201          100      32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202          100           0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.100.103]/272
    10.100.100.1            100      0 300 200 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.202.202.202          100           0 i
*>i
    10.202.202.202          100           0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.100.100]/272
    10.201.201.201          100      32768 i

```

Route Distinguisher: 10.102.0.5:32967 (L2VNI 4000200)

```

*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
    10.133.133.133          100           0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
    10.134.134.134          100           0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i

* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202          100           0 i
*>i
    10.202.202.202          100           0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216
    10.201.201.201          100      32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202          100           0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.3aef]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.100.100.1            100      0 300 200 i
*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216
    10.201.201.201          100      32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202          100           0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.100.100.1            100      0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.200.103]/272
    10.100.100.1            100      0 300 200 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
    10.202.202.202          100           0 i
*>i
    10.202.202.202          100           0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.200.100]/272
    10.201.201.201          100      32768 i

```

Route Distinguisher: 10.102.0.9:5

```

*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202          100           0 i
*>i[5]:[0]:[0]:[24]:[192.168.100.0]/224
    10.102.1.10             100           0 i

```

```

*>i[5]:[0]:[0]:[32]:[10.15.100.2]/224
    10.102.1.10                    100          0 i

Route Distinguisher: 10.102.0.9:32867
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.202.202.202                100          0 i

Route Distinguisher: 10.102.0.9:32967
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
    10.202.202.202                100          0 i

Route Distinguisher: 10.102.0.10:5
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[5]:[0]:[0]:[24]:[192.168.100.0]/224
    10.102.1.6                    100          0 i
*>i[5]:[0]:[0]:[32]:[10.15.100.1]/224
    10.102.1.6                    100          0 i

Route Distinguisher: 10.102.0.10:32867
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.202.202.202                100          0 i

Route Distinguisher: 10.102.0.10:32967
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
    10.202.202.202                100          0 i

Route Distinguisher: 10.102.0.5:5 (L3VNI 4000502)
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216
    10.201.201.201                100          32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.202.202.202                100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
    10.100.100.1                  100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.100.100.1                  100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.100.103]/272
    10.100.100.1                  100          0 300 200 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.200.103]/272
    10.100.100.1                  100          0 300 200 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.202.202.202                100          0 i
*>i
    10.202.202.202                100          0 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272

```



```

                10.202.202.202                100          0 i
*>i             10.202.202.202                100          0 i
* i[5]:[0]:[0]:[24]:[192.168.100.0]/224
                10.102.1.6                    100          0 i
*>i             10.102.1.10                   100          0 i
*>i[5]:[0]:[0]:[32]:[10.15.100.1]/224
                10.102.1.6                    100          0 i
*>i[5]:[0]:[0]:[32]:[10.15.100.2]/224
                10.102.1.10                   100          0 i
S1-Leaf1#

```

<#root>

S1-Leaf1#

show vpc brief

Legend:

(*) - local vPC is down, forwarding via vPC peer-link

```

vPC domain id       : 100
Peer status         : peer adjacency formed ok
vPC keep-alive status : peer is alive
Configuration consistency status : success
Per-vlan consistency status : success
Type-2 consistency status : success
vPC role            : secondary
Number of vPCs configured : 1
Peer Gateway        : Enabled
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status : Disabled
Delay-restore status : Timer is off.(timeout = 150s)
Delay-restore SVI status : Timer is off.(timeout = 10s)
Delay-restore Orphan-port status : Timer is off.(timeout = 0s)
Operational Layer3 Peer-router : Disabled
Virtual-peerlink mode : Enabled

```

vPC Peer-link status

```

-----
id   Port   Status Active vlans
--   -
1    Po10   up    100,200,300-350,2001

```

vPC status

```

-----
Id   Port       Status Consistency Reason           Active vlans
--   -
100  Po100      up    success    success           100,200

```

Please check "show vpc consistency-parameters vpc <vpc-num>" for the consistency reason of down vpc and for type-2 consistency reasons for any vpc.

S1-Leaf1#

<#root>

S1-Leaf1#

S1-Leaf1#

```
show ip int brief
```

```
IP Interface Status for VRF "default"(1)
```

Interface	IP Address	Interface Status
Lo0	10.102.0.5	protocol-up/link-up/admin-up
Lo1	10.102.1.8	protocol-up/link-up/admin-up
Eth1/2	192.168.17.12	protocol-up/link-up/admin-up

```
S1-Leaf1#
```

```
<#root>
```

```
S2-Leaf1#
```

```
show bgp l2vpn evpn
```

```
BGP routing table information for VRF default, address family L2VPN EVPN
```

```
BGP table version is 4016, Local Router ID is 10.103.0.5
```

```
Status: s-suppressed, x-deleted, S-stale, d-dampened, h-history, *-valid, >-best
```

```
Path type: i-internal, e-external, c-confed, l-local, a-aggregate, r-redist, I-injected
```

```
Origin codes: i - IGP, e - EGP, ? - incomplete, | - multipath, & - backup, 2 - best2
```

Network	Next Hop	Metric	LocPrf	Weight	Path
Route Distinguisher: 200:4000100					
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0907]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.100.100]/272	10.100.100.2		100	0 300 100	i

```
Route Distinguisher: 200:4000200
```

*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0907]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216	10.100.100.2		100	0 300 100	i

```

                10.100.100.2                100                0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
                10.100.100.2                100                0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.200.100]/272
                10.100.100.2                100                0 300 100 i

Route Distinguisher: 200:4000502
*>i[5]:[0]:[0]:[24]:[192.168.100.0]/224
                10.100.100.2                100                0 300 100 i
*>i[5]:[0]:[0]:[32]:[10.15.100.1]/224
                10.100.100.2                100                0 300 100 i
*>i[5]:[0]:[0]:[32]:[10.15.100.2]/224
                10.100.100.2                100                0 300 100 i

Route Distinguisher: 10.31.1.3:32867
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
                10.135.135.135            100                0 i

Route Distinguisher: 10.31.1.3:32967
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
                10.135.135.135            100                0 i

Route Distinguisher: 10.31.1.4:32867
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
                10.136.136.136            100                0 i

Route Distinguisher: 10.31.1.4:32967
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
                10.136.136.136            100                0 i

Route Distinguisher: 10.102.0.10:5
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i

Route Distinguisher: 10.102.0.10:32867
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
                10.103.202.202            100                0 i

Route Distinguisher: 10.102.0.10:32967
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
                10.103.202.202            100                0 i

Route Distinguisher: 10.103.0.5:32867 (L2VNI 4000100)
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
                10.136.136.136            100                0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
                10.135.135.135            100                0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
                10.100.100.2                100                0 300 100 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
                10.100.100.2                100                0 300 100 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
                10.103.202.202            100                0 i
*>i
                10.103.202.202            100                0 i

```

```

*>l[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216
    10.103.201.201                    100      32768 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202                    100           0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.103.202.202                    100           0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0907]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.103.201.201                    100      32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
    10.103.202.202                    100           0 i
*>i
    10.103.202.202                    100           0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.100.103]/272
    10.103.201.201                    100      32768 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.100.100]/272
    10.100.100.2                      100           0 300 100 i

Route Distinguisher: 10.103.0.5:32967 (L2VNI 4000200)
*>i[2]:[0]:[0]:[48]:[10b3.d5c7.9fbd]:[0]:[0.0.0.0]/216
    10.136.136.136                    100           0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.3785]:[0]:[0.0.0.0]/216
    10.135.135.135                    100           0 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.383d]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[4ce1.75f7.38c7]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.103.202.202                    100           0 i
*>i
    10.103.202.202                    100           0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[0]:[0.0.0.0]/216
    10.103.201.201                    100      32768 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76c6.a673]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202                    100           0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.103.202.202                    100           0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0907]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.103.201.201                    100      32768 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.0adb]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.118f]:[0]:[0.0.0.0]/216
    10.100.100.2                      100           0 300 100 i

```

```

* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.103.202.202          100          0 i
*>i          10.103.202.202          100          0 i
*>l[2]:[0]:[0]:[48]:[6c8b.d3fe.ecb5]:[32]:[192.168.200.103]/272
    10.103.201.201          100          32768 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
    10.100.100.2           100          0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.200.100]/272
    10.100.100.2           100          0 300 100 i

Route Distinguisher: 10.103.0.9:5
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i

Route Distinguisher: 10.103.0.9:32867
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
    10.103.202.202          100          0 i

Route Distinguisher: 10.103.0.9:32967
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.103.202.202          100          0 i

Route Distinguisher: 10.103.0.5:5 (L3VNI 4000502)
*>i[2]:[0]:[0]:[48]:[cc7f.76d4.2ebf]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[cc7f.76fa.04c3]:[0]:[0.0.0.0]/216
    10.103.202.202          100          0 i
*>l[2]:[0]:[0]:[48]:[cc7f.76fa.0a3f]:[0]:[0.0.0.0]/216
    10.103.201.201          100          32768 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.100.104]/272
    10.103.202.202          100          0 i
*>i          10.103.202.202          100          0 i
* i[2]:[0]:[0]:[48]:[6c8b.d3fe.df3b]:[32]:[192.168.200.104]/272
    10.103.202.202          100          0 i
*>i          10.103.202.202          100          0 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.100.102]/272
    10.100.100.2           100          0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3fe.ff09]:[32]:[192.168.200.102]/272
    10.100.100.2           100          0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.100.100]/272
    10.100.100.2           100          0 300 100 i
*>i[2]:[0]:[0]:[48]:[6c8b.d3ff.00a7]:[32]:[192.168.200.100]/272
    10.100.100.2           100          0 300 100 i
*>i[5]:[0]:[0]:[24]:[192.168.100.0]/224
    10.100.100.2           100          0 300 100 i
*>i[5]:[0]:[0]:[32]:[10.15.100.1]/224
    10.100.100.2           100          0 300 100 i
*>i[5]:[0]:[0]:[32]:[10.15.100.2]/224
    10.100.100.2           100          0 300 100 i

```

S2-Leaf1#