

# 멀티 사이트 환경에서 EVPN/VxLAN 구성 및 확인

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## 소개

이 문서에서는 Cisco Nexus 9000 Series 스위치로 이더넷 VPN/VXLAN 멀티사이트 환경을 구성하고 확인하는 방법에 대해 설명합니다.

## 사전 요구 사항

### 요구 사항

다음 주제에 대한 지식을 보유하고 있으면 유용합니다.

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

### 사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

리프1#	N5K-C5672UP-16G-SUP	시스템: 버전 7.3(0)N1(1)
리프2#	N9K-C92160YC-X	NXOS: 버전 9.2(3)
spine1#	N9K-C9396PX	NXOS: 버전 9.2(3)
spine2#	N9K-C9396PX	NXOS: 버전 9.2(3)

멀티사이트BG1#	N9K-C93108TC-EX	NXOS: 버전 9.2(3)
멀티사이트BG2#	N9K-C93108TC-FX	NXOS: 버전 9.3(1)
멀티사이트스파인 2#	N9K-C9372TX-E	NXOS: 버전 9.2(3)
멀티스테스파인1#	N9K-C92160YC-X	NXOS: 버전 9.2(3)
MultisteLeaf1#	N9K-C93108TC-EX	NXOS: 버전 7.0(3)I7(5)

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우 모든 명령의 잠재적인 영향을 미리 숙지하시기 바랍니다.

## 관련 제품

최소 소프트웨어 및 하드웨어 요구 사항 EVPN Multi-Site border gateway

항목	요건
Cisco Nexus 하드웨어	• Cisco Nexus 9300 EX 플랫폼
	• Cisco Nexus 9300 FX 플랫폼
	• Cisco Nexus 9332C 플랫폼
	• Cisco Nexus 9364C 플랫폼
	• X9700-EX 라인 카드가 장착된 Cisco Nexus 9500 플랫폼
	• X9700-FX 라인 카드가 장착된 Cisco Nexus 9500 플랫폼
Cisco NX-OS 소프트웨어	Cisco NX-OS Software 릴리스 7.0(3)I7(1) 이상

VXLAN(Virtual Extensible LAN) BGP EVPN 사이트의 사이트 내부 노드에 대한 하드웨어 및 소프트웨어 요구 사항은 EVPN Multi-Site BGW가 없는 것과 동일합니다

## 배경 정보

데이터 센터는 모든 비즈니스 환경을 지원하는 데 필요한 컴퓨팅 능력, 스토리지 및 애플리케이션을 포함하는 리소스 풀입니다. 데이터 센터 인프라 설계에 대한 적절한 계획이 필수적입니다. 이제 중요한 요구 사항이 무엇이고 어떻게 해결하는지 알아보십시오. 최신 IT 인프라 및 데이터 센터 구축에는 HA, 더 빠른 속도로 확장 가능, 고성능, 상시 가동 기능이 필요합니다.

DC 설계/아키텍처 분야의 몇 가지 핵심 요구 사항을 살펴보았습니다.

- 포트 밀도, FEX에 의해 개선됩니다.
- 컴퓨팅 용량은 UCS(Hardware Virtualization)를 통해 향상됩니다.
- 액세스 레이어 업링크 대역폭은 FI, Port-Channel에 의해 개선됩니다.
- 샤프트 레벨 이중화는 vPC에 의해 개선됩니다.

- SDN 패브릭은 ACI를 통해 향상됩니다. 즉 패브릭에서 언더레이와 오버레이를 자동화합니다.
- DCNM을 통해 신속한 구축 및 새로운 서비스 지원이 향상됩니다.
- 다크 파이버(dark fiber) 또는 파장 서비스에 의해 롱홀(long haul) 애플리케이션의 대역폭 요건이 개선됩니다.
- 모든 지리적 이중화 및 확장은 데이터 센터 환경을 throbbing/scaling out하기 위한 핵심 특성이며, Multi-Site VxLAN/EVPN은 더 나은 DCI 솔루션을 제공하는 데 도움이 됩니다.

## 멀티 사이트가 어떤 도움이 됩니까?

외부 연결에는 네트워크의 나머지 부분(인터넷, WAN 또는 캠퍼스)에 대한 데이터 센터 연결이 포함됩니다. 외부 연결을 위해 제공되는 모든 옵션은 멀티테넌트를 인식하고 외부 네트워크 도메인으로의 레이어 3 전송에 중점을 둡니다.

- EVPN은 차세대 올인원(all-in-one) VPN 솔루션입니다.
- 다른 여러 VPN 기술의 작업을 수행할 뿐만 아니라 더 우수합니다.
- 레거시 네트워크와의 통합.
- 선택적 광고/확장:
  - Type-2 경로를 사용하여 확장할 수 있는 L2 - 특정 VLAN/서브넷만 확장합니다.
  - L3만 확장 - 특정 L3 도메인은 Type-5 경로를 사용하여 확장할 수 있습니다.
- Type-4 경로를 사용하여 이중화 그룹을 자동으로 검색합니다.
- 별칭 사용, 주소의 대량 철회, Type-1 경로를 사용하는 SH/AA MH 표시
- Type-3 경로를 사용하여 멀티캐스트 터널 엔드포인트 및 MCAST 터널 유형을 자동으로 검색합니다.

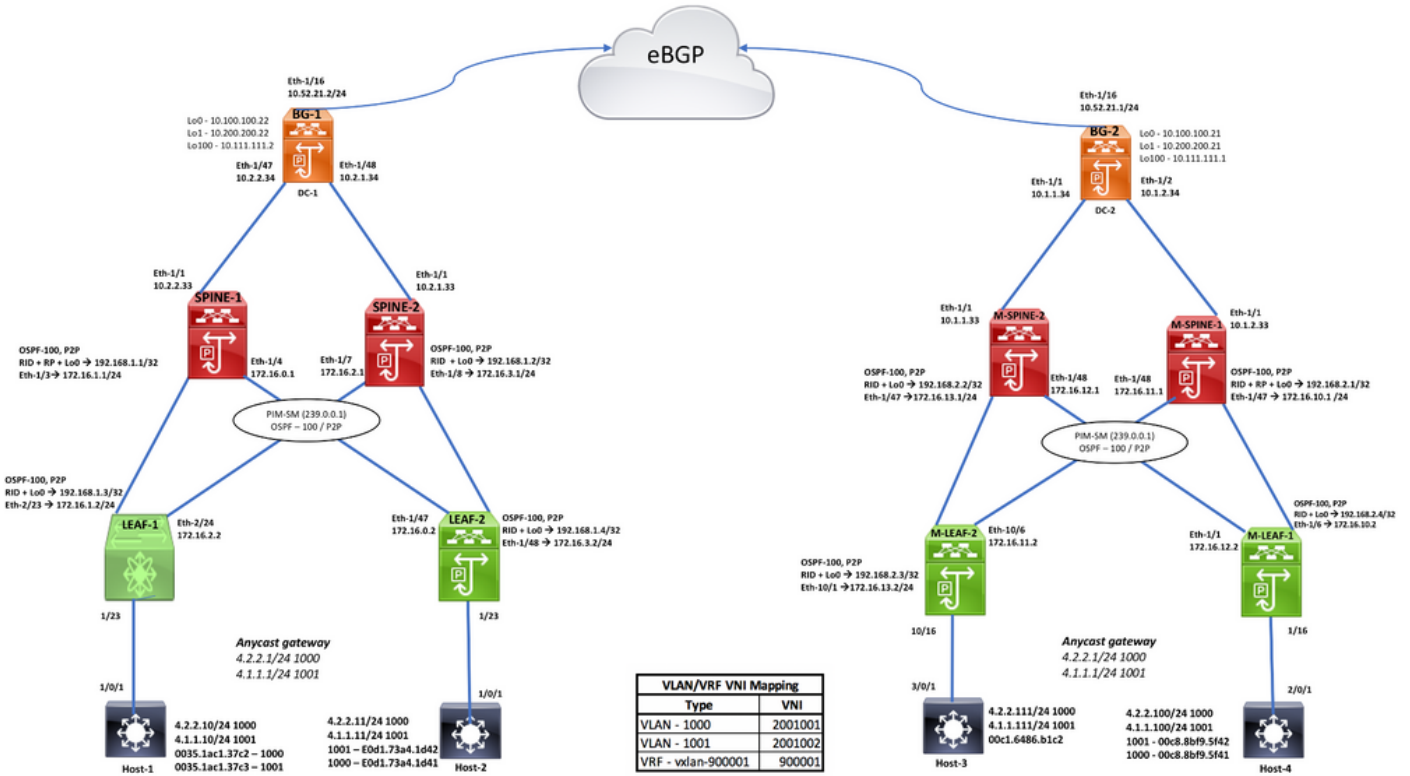
## 기타 혜택

- 데이터 센터 및 클라우드 간 워크로드 밸런싱
- 장애에 대한 사전 대응적 대응 - 재난, 태풍, 홍수 등의 위험 완화
- 데이터 센터 유지 보수 및 마이그레이션 - 일정 기간 예정된 이벤트, 기존 네트워크와의 통합
- 백업 및 재해 복구

## 지원되는 토폴로지

- BGW 대 클라우드 모델
- 스파인과 슈퍼 스파인 모델 간의 BGW
- 스파인 모델의 BGW
- BGW 연속 모델

## 토폴로지



## 구성

```

DC-1, LEAF-1 CONFIGURATION

Enable Features
install feature-set fabric
feature-set fabric
hostname leaf1
feature fabric forwarding
nv overlay evpn
feature ospf
feature bgp
feature pim
feature interface-vlan
feature fabric access
feature nv overlay
feature vn-segment-vlan-based

Enabling Store-and-Forward Switching
switching-mode store-forward

Interface towards HOST
interface Ethernet1/23
switchport mode trunk
switchport trunk allowed vlan 1000-1001
speed 1000

VLAN-VNI Mapping
vlan 1
vlan 101
vn-segment 900001
vlan 1000
vn-segment 2001002
vlan 1001
vn-segment 2001001

VLAN Config
interface Vlan101
no shutdown
vrf member vxlan-900001
ip forward

interface Vlan1000
no shutdown
mtu 9216
vrf member vxlan-900001
ip address 4.2.2.1/24
ipv6 address 4:2:0::1/64
fabric forwarding mode anycast-gateway

interface Vlan1001
no shutdown
mtu 9216
vrf member vxlan-900001
ip address 4.1.1.1/24
ipv6 address 4:1:0::1/64
fabric forwarding mode anycast-gateway

Anycast GW mapping
fabric forwarding anycast-gateway-mac 0000.2222.3333

Static RP Config
ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim rp-address 192.168.1.2 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8
ip multicast multipath none

VTEP Config
interface vne1
no shutdown
source-interface loopback0
host-reachability protocol bgp
member vni 900001 associate-vrf
member vni 2001001
suppress-arp
mcast-group 239.0.0.1
member vni 2001002
suppress-arp
mcast-group 239.0.0.1

LEAF to SPINE interfaces/OSPF Config
interface Ethernet2/23
no switchport
ip address 172.16.1.2/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface Ethernet2/24
no switchport
ip address 172.16.2.2/24
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

interface loopback0
ip address 192.168.1.3/24
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

router ospf 100
router-id 192.168.1.3

BGP Config
router bgp 200
router-id 192.168.1.3
address-family ipv4 unicast
neighbor 192.168.1.1
remote-as 200
update-source loopback0
address-family ipv4 unicast
neighbor 192.168.1.2
remote-as 200
update-source loopback0
address-family ipv4 unicast
neighbor 192.168.1.1
remote-as 200
update-source loopback0
address-family ipv4 unicast
neighbor 192.168.1.1
remote-as 200
update-source loopback0

evpn
vni 2001001 l2 <<<<<< L2VNI Config
rd auto
route-target import auto
route-target export auto
vni 2001002 l2
rd auto
route-target import auto
route-target export auto

vrf context vxlan-900001
vni 900001 <<<<<< L3VNI Config
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn
address-family ipv6 unicast
route-target both auto
route-target both auto evpn
  
```

## DC-1 SPINE -1 Configuration

Enabling Features, RP Config	OSPF Configuration	BGP/EVPN Configuration
<pre>hostname spine1 boot n90s bootflash:/n90s-9.2.3.bin  nv overlay evpn feature ospf feature bgp feature pim feature interface-vlan feature vn-segment-vlan-based feature nv overlay  ip pim rp-address 192.168.1.1 group-list 234.0.0.0/4</pre>	<pre>interface Ethernet1/1 no switchport ip address 10.2.2.33/30 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/3 no switchport ip address 172.16.1.1/24 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/4 no switchport ip address 172.16.0.1/24 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 192.168.1.1/32 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode  router ospf 100 router-id 192.168.1.1</pre>	<pre>router bgp 200 router-id 192.168.1.1 address-family ipv4 unicast address-family l2vpn evpn neighbor 10.100.100.22 remote-as 200 update-source loopback0 address-family ipv4 unicast address-family l2vpn evpn send-community send-community extended route-reflector-client neighbor 192.168.1.3 remote-as 200 update-source loopback0 address-family ipv4 unicast send-community extended route-reflector-client address-family l2vpn evpn send-community extended route-reflector-client neighbor 192.168.1.4 remote-as 200 update-source loopback0 address-family ipv4 unicast send-community extended route-reflector-client address-family l2vpn evpn send-community extended route-reflector-client</pre>

DC-1 Border Gateway-1 Configuration			
Enabling Features, RouteMap, B-G Config	VLAN,VNI,VTEP Config	OSPF Configuration	BGP/EVPN Configuration
hostname MultisiteBG1 boot nxos bootflash:/nxos.9.2.3.bin nv overlay evpn feature ospf feature bgp feature pim feature fabric forwarding feature interface-vlan feature vn-segment-vlan-based feature lldp feature nv overlay evpn multisite border-gateway 200 delay-restore time 300 route-map RMAP-REDIST-DIRECT permit 10 match tag 54321	<b>VLAN-VNI Mapping</b> vlan 101 vn-segment 900001 vlan 1000 vn-segment 2001002 vlan 1001 vn-segment 2001001	interface Ethernet1/47 ip address 10.2.2.34/30 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode evpn multisite fabric-tracking no shutdown	router bgp 200 router-id 10.100.100.22 address-family ipv4 unicast redistribute direct route-map RMAP-REDIST-DIRECT neighbor 10.52.21.1 remote-as 100 update-source Ethernet1/16 address-family ipv4 unicast neighbor 10.100.100.21 remote-as 100 update-source loopback0 ebgp-multihop 5 peer-type fabric-external address-family l2vpn evpn send-community send-community extended rewrite-evpn-rt-asn neighbor 192.168.1.1 remote-as 200 update-source loopback0 address-family l2vpn evpn send-community send-community extended neighbor 192.168.1.2 remote-as 200 update-source loopback0 address-family l2vpn evpn send-community send-community extended
	<b>VTEP Config</b> interface nve1 no shutdown host-reachability protocol bgp source-interface loopback1 multisite border-gateway interface loopback100 member vni 900001 associate-vrf member vni 2001001 multisite ingress-replication ingress-replication protocol bgp member vni 2001002 multisite ingress-replication ingress-replication protocol bgp	<b>Core-Facing Interface Config</b> interface Ethernet1/16 mtu 9216 ip address 10.52.21.2/30 tag 54321 evpn multisite dc1-tracking no shutdown	interface loopback0 ip address 10.100.100.22/32 tag 54321 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode interface loopback1 ip address 10.200.200.22/32 tag 54321 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode interface loopback100 ip address 10.111.111.2/32 tag 54321 ip router ospf 100 area 0.0.0.0 router ospf 100 router-id 10.100.100.22

DC-2 Border Gateway-2 Configuration			
Enabling Features, RouteMap, B-G Config	VLAN,VNI,VTEP Config	OSPF Configuration	BGP/EVPN Configuration
boot nxos bootflash:/nxos.9.3.0.221.bin hostname MultisiteBG2 nv overlay evpn feature ospf feature bgp feature pim feature fabric forwarding feature interface-vlan feature vn-segment-vlan-based feature lldp feature nv overlay evpn multisite border-gateway 100 delay-restore time 300 vlan 1,101,1000-1001 vlan 101 vn-segment 900001 vlan 1000 vn-segment 2001002 vlan 1001 vn-segment 2001001 route-map RMAP-REDIST-DIRECT permit 10 match tag 54321 interface Ethernet1/16 mtu 9216 ip address 10.52.21.1/30 tag 54321 evpn multisite dc1-tracking no shutdown	interface Vlan101 no shutdown vrf member vxlan-900001 ip forward interface nve1 no shutdown host-reachability protocol bgp source-interface loopback1 multisite border-gateway interface loopback100 member vni 900001 associate-vrf member vni 2001001 multisite ingress-replication ingress-replication protocol bgp member vni 2001002 multisite ingress-replication ingress-replication protocol bgp vrf context vxlan-900001 vni 900001 rd auto address-family ipv4 unicast route-target both auto route-target both auto evpn address-family ipv6 unicast route-target both auto route-target both auto evpn	interface Ethernet1/1 description SITE-INTERNAL INTERFACE mtu 9216 medium p2p ip address 10.1.1.34/30 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode evpn multisite fabric-tracking no shutdown interface Ethernet1/2 description SITE-INTERNAL INTERFACE mtu 9216 medium p2p ip address 10.1.2.34/30 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode evpn multisite fabric-tracking no shutdown interface loopback0 description RID AND BGP PEERING ip address 10.100.100.21/32 tag 54321 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode interface loopback1 description NVE INTERFACE (PIP VTEP) ip address 10.200.200.21/32 tag 54321 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode interface loopback100 description MULTI-SITE INTERFACE (VIP VTEP) ip address 10.111.111.1/32 tag 54321 ip router ospf 100 area 0.0.0.0 router ospf 100 router-id 10.100.100.21	router bgp 100 router-id 10.100.100.21 address-family ipv4 unicast redistribute direct route-map RMAP-REDIST-DIRECT maximum-paths 4 neighbor 10.52.21.2 remote-as 200 update-source Ethernet1/16 address-family ipv4 unicast neighbor 10.100.100.22 remote-as 200 update-source loopback0 ebgp-multihop 5 peer-type fabric-external address-family l2vpn evpn send-community send-community extended rewrite-evpn-rt-asn neighbor 192.168.2.1 remote-as 100 update-source loopback0 address-family l2vpn evpn send-community send-community extended neighbor 192.168.2.2 remote-as 100 update-source loopback0 address-family l2vpn evpn send-community send-community extended evpn vni 2001001 l2 rd auto route-target import auto route-target export auto vni 2001002 l2 rd auto route-target import auto route-target export auto

## DC-2 SPINE -1 Configuration

Enabling Features, RP Config	OSPF Configuration	BGP/EVPN Configuration
<pre>boot nxos bootflash:/nxos.9.2.3.bin hostname MultisteSpine1 nv overlay evpn feature ospf feature bgp feature pim feature interface-vlan feature vn-segment-vlan-based feature nv overlay  ip pim rp-address 192.168.2.1 group-list 224.0.0.0/4</pre>	<pre>interface Ethernet1/1 mtu 9216 ip address 10.1.2.33/30 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/47 ip address 172.16.10.1/24 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/48 ip address 172.16.11.1/24 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 192.168.2.1/32 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode  router ospf 100 router-id 192.168.2.1</pre>	<pre>router bgp 100 router-id 192.168.2.1 address-family ipv4 unicast address-family l2vpn evpn neighbor 10.100.100.21 remote-as 100 update-source loopback0 address-family l2vpn evpn send-community send-community extended route-reflector-client neighbor 192.168.2.3 remote-as 100 update-source loopback0 address-family ipv4 unicast send-community extended route-reflector-client address-family l2vpn evpn send-community extended route-reflector-client neighbor 192.168.2.4 remote-as 100 update-source loopback0 address-family ipv4 unicast send-community extended route-reflector-client address-family l2vpn evpn send-community extended route-reflector-client</pre>

## DC-2, LEAF -1 Configuration

Enabling Features, RP, VTEP Config	VLAN,VNI Configuration	OSPF Configuration	BGP/EVPN Configuration
<pre>boot nxos bootflash:/nxos.7.0.3.17.5.bin hostname MultisteLeaf1 nv overlay evpn feature ospf feature bgp feature pim feature fabric forwarding feature interface-vlan feature vn-segment-vlan-based feature lldp feature nv overlay  fabric forwarding anycast-gateway-mac 0000.2222.3333 ip pim rp-address 192.168.2.1 group-list 224.0.0.0/4  interface nve1 no shutdown host-reachability-protocol bgp source-interface loopback0 member vni 900001 associate-vrf member vni 2001001 suppress-arp mcast-group 239.0.0.1 member vni 2001002 suppress-arp mcast-group 239.0.0.1</pre>	<pre>vlan 101 vn-segment 900001 vlan 1000 vn-segment 2001002 vlan 1001 vn-segment 2001001  interface Vlan101 no shutdown vrf member vxlan-900001 ip forward  interface Vlan1000 no shutdown vrf member vxlan-900001 ip address 4.2.2.1/24 ipv6 address 4:2:0:1::1/64 fabric forwarding mode anycast-gateway  interface Vlan1001 no shutdown vrf member vxlan-900001 ip address 4.1.1.1/24 ipv6 address 4:1:0:1::1/64 fabric forwarding mode anycast-gateway  vrf context vxlan-900001 vni 900001 rd auto address-family ipv4 unicast route-target both auto route-target both auto evpn address-family ipv6 unicast route-target both auto route-target both auto evpn</pre>	<pre>interface Ethernet1/1 ip address 172.16.12.2/24 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/6 ip address 172.16.10.2/24 ip ospf network point-to-point ip router ospf 100 area 0.0.0.0 ip pim sparse-mode no shutdown  interface Ethernet1/16 switchport switchport mode trunk no shutdown  interface loopback0 ip address 192.168.2.4/32 ip router ospf 100 area 0.0.0.0 ip pim sparse-mode  router ospf 100 router-id 192.168.2.4</pre>	<pre>router bgp 100 router-id 192.168.2.4 address-family ipv4 unicast address-family l2vpn evpn neighbor 192.168.2.1 remote-as 100 update-source loopback0 address-family ipv4 unicast address-family l2vpn evpn send-community extended neighbor 192.168.2.2 remote-as 100 update-source loopback0 address-family ipv4 unicast address-family l2vpn evpn send-community extended  evpn vni 2001001 l2 rd auto route-target import auto route-target export auto vni 2001002 l2 rd auto route-target import auto route-target export auto</pre>



# 다음을 확인합니다.

## LEAF-1 VERIFICATION

<pre>leaf1# show cdp neighbors Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route                   S - Switch, H - Host, I - IGMP, r - Repeater,                   V - VoIP-Phone, D - Remotely-Managed-Device,                   s - Supports-STP-Dispute  Device-ID         Local Intrfce Hldtme Capability Platform MX066-H-01-SM.cisco.com mgmt0             142    S I    WS-C2960X-48T  ToLeaf1           Eth1/23    163    S I    WS-C3750X-24S  spine1(SAL1948U4Y1) Eth2/23    156    R S s  N9K-C9396PX  spine2(SAL1949UELD) Eth2/24    152    R S s  N9K-C9396PX  leaf1#  leaf1# sh ip int brief   exclude down IP Interface Status for VRF "default"(1) Interface      IP Address      Interface Status Lo0            192.168.1.3    protocol-up/link-up/admin-up Eth2/23       172.16.1.2    protocol-up/link-up/admin-up Eth2/24       172.16.2.2    protocol-up/link-up/admin-up leaf1#  leaf1# sh nve vrf VRF-Name      VNI      Interface Gateway-MAC ----- vxlan-900001 900001   nve1      00de.fb01.9fc1  leaf1# sh nve vxlan-params VxLAN Dest. UDP Port: 4789</pre>	<pre>leaf1# show ip pim rp PIM RP Status Information for VRF "default" BSR disabled Auto-RP disabled BSR RP Candidate policy: None BSR RP policy: None Auto-RP Announcement policy: None Auto-RP Discovery policy: None  RP: 192.168.1.1, (0), uptime: 3w1d priority: 0, RP-source: (local), group ranges: 224.0.0.0/4  RP: 192.168.1.2, (0), uptime: 3w1d priority: 0, RP-source: (local), group ranges: 224.0.0.0/4  leaf1#  leaf1# sh nve interface Interface: nve1, State: Up, encapsulation: VXLAN VPC Capability: VPC-VFP-Only [not-notified] Local Router MAC: 00de.fb01.9fc1 Host Learning Mode: Control-Plane Source-Interface: loopback0 (primary: 192.168.1.3, secondary: 0)  leaf1#</pre>	<pre>leaf1# sh nve peers Interface Peer-IP      State LearnType Uptime  Router-Mac ----- nve1 10.111.111.2 Up CP 3w1d 0200.0a6f.6f02 nve1 10.200.200.22 Up CP 3w1d n/a nve1 192.168.1.4 Up CP 3w1d 7079.b33e.8123  leaf1#  leaf1# show nve vni Codes: CP - Control Plane DP - Data Plane UC - Unconfigured SA - Suppress ARP SU - Suppress Unknown Unicast  Interface VNI      Multicast-group State Mode Type [BD/VRF]  Flags ----- nve1 900001 n/a Up CP L3 [vxlan-900001] nve1 2001001 239.0.0.1 Up CP L2 [1001] SA nve1 2001002 239.0.0.1 Up CP L2 [1000] SA  leaf1#  leaf1# sh vrf vxlan-900001 DETAIL VRF-Name: vxlan-900001, VRF-ID: 3, State: Up VFNID: unknown RD: 192.168.1.3:3 VNI: 900001, State: Up Max Routes: 0 Mid-Threshold: 0 Table-ID: 0x80000003, AF: IPv6, Fwd-ID: 0x80000003, State: Up Table-ID: 0x00000003, AF: IPv4, Fwd-ID: 0x00000003, State: Up</pre>
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## CONTROL PLANE LEARNING: Destination Prefix is 4.2.2.100 <====> 00c8.8bf9.5f41 <====> Vlan1000 <====> VNI2001002

<pre>Destination Prefix is learnt on host-connected LEAF 192.168.2.4 MultiteLeaf1# sh ip route 4.2.2.100 vrf vxlan-900001 IP Route Table for VRF "vxlan-900001" *** denotes best ucast next-hop *** denotes best mcast next-hop [x/y/z] denotes [preference/metric] %&lt;string&gt; in via output denotes VRF &lt;string&gt;  4.2.2.100/32, ubest/mbest: 1/0, attached     via 4.2.2.100, Vlan1000, [190/0], 4w2d, hhm  MultiteLeaf1# sh bgp l2vpn evpn summary BGP summary information for VRF default, address family L2VPN EVPN BGP router identifier 192.168.2.4, local AS number 100 BGP table version is 56, L2VPN EVPN config peers 2, capable peers 2 36 network entries and 50 paths using 7968 bytes of memory BGP attribute entries (26/4160), BGP AS path entries (1/6) BGP community entries (0/0), BGP clusterlist entries (2/8)  Neighbor      V  AS  MgP/RdW MgP/Est  TblVer  Inq  OutQ  Up/Down  State/PfxRcd 192.168.2.1  4  100  44038  44029   56    0    0  4w2d 14 192.168.2.2  4  100  44037  44030   56    0    0  4w2d 14  MultiteLeaf1#  MultiteLeaf1# sh nve peers Interface Peer-IP      State LearnType Uptime  Router-Mac ----- nve1 10.111.111.1 Up CP 4w2d 0200.0a6f.6f01 nve1 10.200.200.21 Up CP 4w2d n/a  MultiteLeaf1# show nve vni Codes: CP - Control Plane DP - Data Plane UC - Unconfigured SA - Suppress ARP SU - Suppress Unknown Unicast SC - Crossconnect MS-IR - Multisite Ingress Replication  Interface VNI      Multicast-group State Mode Type [BD/VRF]  Flags ----- nve1 900001 n/a Up CP L3 [vxlan-900001] nve1 2001001 239.0.0.1 Up CP L2 [1001] SA nve1 2001002 239.0.0.1 Up CP L2 [1000] SA  MultiteLeaf1#</pre>	<pre>Host-Connected Leaf is advertising this prefix to its SPINE (192.168.2.1) MultiteLeaf1# sh bgp l2vpn evpn neighbors 192.168.2.1 advertised-routes Peer 192.168.2.1 routes for address family L2VPN EVPN: BGP table version is 56, Local Router ID is 192.168.2.4 Status: s=suppressed, x=deleted, S=stale, d=dampened, h=history, *-valid, &gt;best Path type: i=internal, e=external, c=confed, l=local, a=aggregate, r=redist, I= njected Origin codes: i - IGP, e - EGP, ? - incomplete, ! - multipath, &amp; - backup  Network      Next Hop      Metric  LocPrf  Weight Path Route Distinguisher: 10.100.100.21:33767 Route Distinguisher: 10.100.100.21:33768 Route Distinguisher: 10.100.100.22:33767 Route Distinguisher: 10.100.100.22:33768 Route Distinguisher: 192.168.1.3:33767 Route Distinguisher: 192.168.1.3:33768 Route Distinguisher: 192.168.1.4:33767 Route Distinguisher: 192.168.1.4:33768 Route Distinguisher: 192.168.2.4:33767 (L2VNI 2001002) &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f41):(0):(0.0.0.0)/216     192.168.2.4 100 32768 i &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f41):(32):(4.2.2.100)/272     192.168.2.4 100 32768 i Route Distinguisher: 192.168.2.4:33768 (L2VNI 2001001) &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f42):(0):(0.0.0.0)/216     192.168.2.4 100 32768 i &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f42):(32):(4.1.1.100)/272     192.168.2.4 100 32768 i Route Distinguisher: 192.168.2.4:3 (L3VNI 900001) &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f42):(32):(4.1.1.100)/272     192.168.2.4 100 32768 i  MultiteLeaf1#</pre>	<pre>SPINE is advertising the same prefix to Border Gateway (BG-2== 10.100.100.21) MultiteSpine1# sh bgp l2vpn evpn neighbors 10.100.100.21 advertised-routes Peer: 10.100.100.21 routes for address family L2VPN EVPN: BGP table version is 26, Local Router ID is 192.168.2.1 Status: s=suppressed, x=deleted, S=stale, d=dampened, h=history, *-valid, &gt;best Path type: i=internal, e=external, c=confed, l=local, a=aggregate, r=redist, I= njected Origin codes: i - IGP, e - EGP, ? - incomplete, ! - multipath, &amp; - backup, 2 - b est2  Network      Next Hop      Metric  LocPrf  Weight Path Route Distinguisher: 10.100.100.21:27001 Route Distinguisher: 10.100.100.21:33767 Route Distinguisher: 10.100.100.21:33767 Route Distinguisher: 10.100.100.21:33768 Route Distinguisher: 10.100.100.22:33767 Route Distinguisher: 10.100.100.22:33768 Route Distinguisher: 192.168.1.3:33767 Route Distinguisher: 192.168.1.3:33768 Route Distinguisher: 192.168.1.4:33767 Route Distinguisher: 192.168.1.4:33768 Route Distinguisher: 192.168.2.4:33767 &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f41):(0):(0.0.0.0)/216     192.168.2.4 100 0 i &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f41):(32):(4.2.2.100)/272     192.168.2.4 100 0 i Route Distinguisher: 192.168.2.4:33768 &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f42):(0):(0.0.0.0)/216     192.168.2.4 100 0 i &gt;&gt;i(2):(0):(0):(48):(00c8.8bf9.5f42):(32):(4.1.1.100)/272     192.168.2.4 100 0 i  MultiteSpine1#</pre>
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**eBGP Neighborship between Border Gateways**

MultisiteBG2# sh bgp l2vpn evpn summary												MultisiteBG1# sh bgp l2vpn evpn summary																																																																																											
BGP summary information for VRF default, address family L2VPN EVPN												BGP summary information for VRF default, address family L2VPN EVPN																																																																																											
BGP router identifier 10.100.100.21, local AS number 100												BGP router identifier 10.100.100.22, local AS number 200																																																																																											
BGP table version is 60, L2VPN EVPN config peers 3, capable peers 3												BGP table version is 82, L2VPN EVPN config peers 3, capable peers 3																																																																																											
43 network entries and 47 paths using 8160 bytes of memory												37 network entries and 45 paths using 7296 bytes of memory																																																																																											
BGP attribute entries [37/6068], BGP AS path entries [1/6]												BGP attribute entries [37/6068], BGP AS path entries [1/6]																																																																																											
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*>i[2]:[0]:[0]:[48]:[00c8.8bf9.5f42]:[0]:[0.0.0.0]/216	192.168.2.4	100		0	i																																																																																																																																																																																																																																																																																																
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Route Distinguisher: 10.100.100.21:3 (L3VNI 900001)																																																																																																																																																																																																																																																																																																					
Network	Next Hop	Metric	LocPrf	Weight	Path																																																																																																																																																																																																																																																																																																
Route Distinguisher: 10.100.100.21:33767																																																																																																																																																																																																																																																																																																					
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Route Distinguisher: 10.100.100.22:27001 (ES [0300.0000.0000.c800.0309 0])																																																																																																																																																																																																																																																																																																					
*>l[4]:[0300.0000.0000.c800.0309]:[32]:[10.200.200.22]/136	10.200.200.22	100		32768	i																																																																																																																																																																																																																																																																																																
Route Distinguisher: 10.100.100.22:33767 (L2VNI 2001002)																																																																																																																																																																																																																																																																																																					
*>l[2]:[0]:[0]:[48]:[6cb2.ae91.38bf]:[0]:[0.0.0.0]/216	10.200.200.22	100		32768	i																																																																																																																																																																																																																																																																																																
*>l[3]:[0]:[32]:[10.200.200.22]/88	10.200.200.22	100		32768	i																																																																																																																																																																																																																																																																																																
Route Distinguisher: 10.100.100.22:33768 (L2VNI 2001001)																																																																																																																																																																																																																																																																																																					
*>l[2]:[0]:[0]:[48]:[6cb2.ae91.38bf]:[0]:[0.0.0.0]/216	10.200.200.22	100		32768	i																																																																																																																																																																																																																																																																																																
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*>e[2]:[0]:[0]:[48]:[00c8.8bf9.5f41]:[0]:[0.0.0.0]/216	10.111.111.1	2000		0	100 i																																																																																																																																																																																																																																																																																																
*>e[2]:[0]:[0]:[48]:[00c8.8bf9.5f41]:[32]:[4.2.2.100]/272	10.111.111.1	2000		0	100 i																																																																																																																																																																																																																																																																																																
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*>e[2]:[0]:[0]:[48]:[00c8.8bf9.5f42]:[0]:[0.0.0.0]/216	10.111.111.1	2000		0	100 i																																																																																																																																																																																																																																																																																																
*>e[2]:[0]:[0]:[48]:[00c8.8bf9.5f42]:[32]:[4.1.1.100]/272	10.111.111.1	2000		0	100 i																																																																																																																																																																																																																																																																																																
MultisiteBG2#												MultisiteBG1#																																																																																																																																																																																																																																																																																									

**CONTROL PLANE VERIFICATION AT DC-1 (Spine-1, Leaf-1): Destination Prefix is 4.2.2.100 <====> 00c8.8bf9.5f41 <====> Vlan1000 <====> VNI2001002**

**spine1# sh bgp ipv4 unicast summary**

```
BGP summary information for VRF default, address family IPv4 Unicast
BGP router identifier 192.168.1.1, local AS number 200
BGP table version is 3, IPv4 Unicast config peers 3, capable peers 2
0 network entries and 0 paths using 0 bytes of memory
BGP attribute entries [0/0], BGP AS path entries [0/0]
BGP community entries [0/0], BGP clusterlist entries [0/0]
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.100.100.22	4	200	43997	43988	0	0	0	4w2d 0	(No Cap)
192.168.1.3	4	200	43986	43984	3	0	0	4w2d 0	
192.168.1.4	4	200	43990	43987	3	0	0	4w2d 0	

**spine1# sh ip route 10.100.100.22**

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

10.100.100.22/32, ubest/mbest: 1/0
 *via 10.2.2.34, Eth1/1, [110/41], 4w2d, ospf-100, intra
spine1#
```

**spine1# sh bgp l2vpn evpn summary**

```
BGP summary information for VRF default, address family L2VPN EVPN
BGP router identifier 192.168.1.1, local AS number 200
BGP table version is 31, L2VPN EVPN config peers 3, capable peers 3
19 network entries and 19 paths using 4256 bytes of memory
BGP attribute entries [17/2788], BGP AS path entries [1/6]
BGP community entries [0/0], BGP clusterlist entries [0/0]
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.100.100.22	4	200	44002	43993	31	0	0	4w2d 11	
192.168.1.3	4	200	43991	43989	31	0	0	4w2d 4	
192.168.1.4	4	200	43996	43992	31	0	0	4w2d 4	

**spine1# sh bgp l2vpn evpn 00c8.8bf9.5f41**

```
BGP routing table information for VRF default, address family L2VPN EVPN
Route Distinguisher: 192.168.2.4:33767
BGP routing table entry for [2]:[0]:[0]:[48]:[00c8.8bf9.5f41]:[0]:[0.0.0.0]/216,
version 27
Paths: (1 available, best #1)
Flags: (0x000202) (high32 00000000) on xmit-list, is not in l2rib/evpn, is not i
n HW
Multipath: SBGP
```

```
Advertised path-id 1
Path type: internal, path is valid, is best path, no labeled nexthop
AS-Path: 100 , path sourced external to AS
10.111.111.2 (metric 41) from 10.100.100.22 (10.100.100.22)
Received label 2001002
Extcommunity: RT:200:2001002 ENCAP:8

Path-id 1 advertised to peers:
192.168.1.3 192.168.1.4
BGP routing table entry for [2]:[0]:[0]:[48]:[00c8.8bf9.5f41]:[32]:[4.2.2.100]/2
72, version 29
Paths: (1 available, best #1)
Flags: (0x000202) (high32 00000000) on xmit-list, is not in l2rib/evpn, is not i
n HW
Multipath: SBGP
```

```
Advertised path-id 1
Path type: internal, path is valid, is best path, no labeled nexthop
AS-Path: 100 , path sourced external to AS
10.111.111.2 (metric 41) from 10.100.100.22 (10.100.100.22)
Origin IGP, MED 2000, localpref 100, weight 0
Received label 2001002 900001
Extcommunity: RT:200:900001 RT:200:2001002 ENCAP:8 Router MAC:0200.0a6f.6f
2

Path-id 1 advertised to peers:
192.168.1.3 192.168.1.4
spine1#
```

**leaf1# sh bgp l2vpn evpn summary**

```
BGP summary information for VRF default, address family L2VPN EVPN
BGP router identifier 192.168.1.1, local AS number 200
BGP table version is 52, L2VPN EVPN config peers 2, capable peers 2
36 network entries and 50 paths using 4864 bytes of memory
BGP attribute entries [32/4408], BGP AS path entries [1/6]
BGP community entries [0/0], BGP clusterlist entries [4/16]
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
192.168.1.1	4	200	42565	42552	52	0	0	4w1d 14	
192.168.1.2	4	200	42565	42552	52	0	0	4w1d 14	

**leaf1# show bgp ip unicast 4.2.2.100 vrf vxlan-900001**

```
BGP routing table information for VRF vxlan-900001, address family IPv4 Unicast
BGP routing table entry for 4.2.2.100/32, version 7
Paths: (1 available, best #1)
Flags: (0x00041a) on xmit-list, is in urib, is best urib route, is in HW,
vgnl version 7, (0x100002) on xmit-list

Advertised path-id 1, VPN AF advertised path-id 1
Path type: internal, path is valid, is best path
Imported from 192.168.2.4:33767:[2]:[0]:[0]:[48]:[00c8.8bf9.5f41]:[
32]:[4.2.2.100]/272
AS-Path: 100 , path sourced external to AS
10.111.111.2 (metric 41) from 192.168.1.1 (192.168.1.1)
Origin IGP, MED 2000, localpref 100, weight 0
Received label 2001002 900001
Extcommunity:
RT:200:900001
RT:200:2001002
ENCAP:8
Router MAC:0200.0a6f.6f02
Originator: 10.100.100.22 Cluster list: 192.168.1.1
```

```
VRF advertise information:
Path-id 1 not advertised to any peer

VPN AF advertise information:
Path-id 1 not advertised to any peer
leaf1#
```

**Reachability Verification from DC-1 Leaf-1**

```
leaf1# show mac address-table | i 00c8.8bf9.5f41 | *Type
VLAN MAC Address Type age Secure NFFP Ports/SWID.SSID.LID
* 1000 00c8.8bf9.5f41 dynamic 0 F F vsw1/10.111.111.2
leaf1#
```

**leaf1# show ip interface bri vrf all**

```
IP Interface Status for VRF "default"(1)
Interface IP Address Interface Status
Lo0 192.168.1.3 protocol-up/link-up/admin-up
Eth1/18 1.1.1.1 protocol-down/link-down/admin-dc
Eth2/23 172.16.1.2 protocol-up/link-up/admin-up
Eth2/24 172.16.2.2 protocol-up/link-up/admin-up

IP Interface Status for VRF "management"(2)
Interface IP Address Interface Status
mgmt0 10.31.121.19 protocol-up/link-up/admin-up

IP Interface Status for VRF "vxlan-900001"(3)
Interface IP Address Interface Status
Vlan101 forward-enabled protocol-up/link-up/admin-up
Vlan1000 4.2.2.1 protocol-up/link-up/admin-up
Vlan1001 4.1.1.1 protocol-up/link-up/admin-up
leaf1#
```

**leaf1# show ip route vrf vxlan-900001 4.2.2.100**

```
IP Route Table for VRF "vxlan-900001"
*** denotes best ucast next-hop
*** denotes best mcast next-hop
'[x/y]' denotes [preference/metric]
'*<string>' in via output denotes VRF <string>

4.2.2.100/32, ubest/mbest: 1/0
 *via 10.111.111.2&default, [200/2000], 4w2d, bgp-200, internal, tag 100, (m
pls-vpn)seqid 900001 tunnel: 175075074 encap: 1
leaf1#

leaf1# traceroute 10.111.111.2
traceroute to 10.111.111.2 (10.111.111.2), 30 hops max, 40 byte packets
1 172.16.1.1 (172.16.1.1) 1.066 ms 0.816 ms 0.664 ms
2 10.111.111.2 (10.111.111.2) 1 ms 0.74 ms 0.693 ms
leaf1#
```

**leaf1# show ip arp vrf vxlan-900001**

```
IP ARP Table for context vxlan-900001
Total number of entries: 2
Address Age MAC Address Interface
4.1.1.1.10 00:03:156 0035.lac1.37c3 Vlan1001
4.2.2.10 00:13:10 0035.lac1.37c2 Vlan1000
leaf1#
```

**leaf1# show l2route evpn mac-ip evi 1000**

```
Mac Address Prod Host IP Next Hop (s)
-----
0035.lac1.37c2 HMM 4.2.2.10 N/A
00c8.8bf9.5f41 BGP 4.2.2.100 10.111.111.2
e0d1.73a4.1d61 BGP 4.2.2.11 192.168.1.4
leaf1#
```

**leaf1# show nve internal bgp rnh database | i Encap|10.111.111.2**

```
VNI Peer-IP Peer-Mac Tunnel-ID Encap (A/S) Flags
900001 10.111.111.2 0200.0a6f.6f02 0xa6f6f02 vxlan (1/0) 0
200100110.111.111.2 0000.0000.0000 0x0 vxlan (1/0) 0
200100210.111.111.2 0000.0000.0000 0x0 vxlan (1/0) 0
leaf1#
```

**Host Reachability Verification from DC-1 to DC-2**

```
ToLeaf1# show ip int br | e down
Interface IP-Address OK? Method Status Protocol
Vlan1000 4.2.2.10 YES NVRAM up up
Vlan1001 4.1.1.10 YES NVRAM up up
GigabitEthernet1/0/1 unassigned YES unset up up
ToLeaf1#
```

**ToLeaf1# ping 4.2.2.100**

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 4.2.2.100, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/4/9 ms
ToLeaf1#
```

**ToLeaf1# show ip arp 4.2.2.100**

Protocol	Address	Age (min)	Hardware Addr	Type	Interface
Internet	4.2.2.100	54	00c8.8bf9.5f41	ARPA	Vlan1000

**toMultisiteLeaf1# sh ip interf bri | ex down**

Interface	IP-Address	OK?	Method	Status	Protocol
Vlan1000	4.2.2.100	YES	NVRAM	up	up
Vlan1001	4.1.1.100	YES	NVRAM	up	up
GigabitEthernet2/0/1	unassigned	YES	unset	up	up

**toMultisiteLeaf1# sh ip arp 4.2.2.100**

Protocol	Address	Age (min)	Hardware Addr	Type	Interface
Internet	4.2.2.100	-	00c8.8bf9.5f41	ARPA	Vlan1000

```

Leaf-1 MAC Address Verification
leaf1# sh mac address-table vlan 1000
Legend:
 * - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC
 age - seconds since last seen,+ - primary entry using vPC Peer-Link
 VLAN MAC Address Type age Secure NTFY Ports/SWID.SSID.LID
-----
* 1000 0000.2222.3333 static 0 F F sup-eth2
* 1000 0035.1acl.37c2 dynamic 730 F F Eth1/23
* 1000 005d.738e.a337 static 0 F F nve1/10.111.111.2
* 1000 00c8.8bf9.5f41 dynamic 0 F F nve1/10.111.111.2
* 1000 6cb2.ae91.38bf static 0 F F nve1/10.200.200.22
* 1000 e0d1.73a4.1d41 dynamic 0 F F nve1/192.168.1.4
leaf1#

leaf1# sh system internal l2rib event-history mac | i 0035.1acl.37c2
[04/24/20 13:10:09.721 UTC 3 4173] Received MAC ROUTE msg: addr: (1000-0035.1acl.37c2) vni: 0 admin_dist: 0 seq_num: 0 rt_flags: L soo: 0 dg_count: 0 res: 0 esi: (F) nh_count: 1
[04/24/20 13:10:09.721 UTC 6 4173] (1000,0035.1acl.37c2,3):MAC route created with seq num:0, flags:L (), soo:0, peerid:0
[04/24/20 13:10:09.732 UTC c 4173] (1000,0035.1acl.37c2,3):Encoding MAC best route (ADD, client id 4)
[04/24/20 13:10:09.871 UTC e 4173] (1000,0035.1acl.37c2):Bound MAC-IP(4.2.2.10) to MAC, Total MAC-IP linked: 1

leaf1# show system internal l2rib event-history mac | i 0035.1acl.37c3
[04/24/20 13:10:09.721 UTC 8 4173] Received MAC ROUTE msg: addr: (1001-0035.1acl.37c3) vni: 0 admin_dist: 0 seq_num: 0 rt_flags: L soo: 0 dg_count: 0 res: 0 esi: (F) nh_count: 1
[04/24/20 13:10:09.721 UTC b 4173] (1001,0035.1acl.37c3,3):MAC route created with seq num:0, flags:L (), soo:0, peerid:0
[04/24/20 13:10:09.732 UTC d 4173] (1001,0035.1acl.37c3,3):Encoding MAC best route (ADD, client id 4)
[04/24/20 13:10:09.871 UTC f 4173] (1001,0035.1acl.37c3):Bound MAC-IP(4.1.1.10) to MAC, Total MAC-IP linked: 1

leaf1# sh system internal l2rib event-history mac-ip | i 0035.1acl.37c2
[04/24/20 13:10:09.871 UTC 2 4173] Received MAC-IP ROUTE msg: addr: (1000-0035.1acl.37c2) host ip: 4.2.2.10 vni: 0 L3 info: 900001 rt_flags: 0 admin_dist: 7 seq_num: 0 soo: 0 nh_count: 0
[04/24/20 13:10:09.871 UTC 3 4173] (1000,0035.1acl.37c2,4.2.2.10):MAC-IP entry created
[04/24/20 13:10:09.871 UTC 4 4173] (1000,0035.1acl.37c2,4.2.2.10,12):MAC-IP route created with flags 0, L3 vrf 900001, seq 0, admin dist 7, soo 0
[04/24/20 13:10:09.882 UTC 9 4173] (1000,0035.1acl.37c2,4.2.2.10,12):Encoding MAC-IP best route (ADD, client id 4)
leaf1#

leaf1# show system internal l2rib event-history mac-ip | i 0035.1acl.37c3
[04/24/20 13:10:09.871 UTC 6 4173] Received MAC-IP ROUTE msg: addr: (1001-0035.1acl.37c3) host ip: 4.1.1.10 vni: 0 L3 info: 900001 rt_flags: 0 admin_dist: 7 seq_num: 0 soo: 0 nh_count: 0
[04/24/20 13:10:09.871 UTC 7 4173] (1001,0035.1acl.37c3,4.1.1.10):MAC-IP entry created
[04/24/20 13:10:09.871 UTC 8 4173] (1001,0035.1acl.37c3,4.1.1.10,12):MAC-IP route created with flags 0, L3 vrf 900001, seq 0, admin dist 7, soo 0
[04/24/20 13:10:09.882 UTC a 4173] (1001,0035.1acl.37c3,4.1.1.10,12):Encoding MAC-IP best route (ADD, client id 4)
leaf1#

```

## 문제 해결

트러블슈팅을 수행하려면 멀티사이트 환경에서 [EVPN/VxLAN 트러블슈팅을 참조하십시오](#)

## 관련 정보

- [VXLAN EVPN Multi-Site Design and Deployment 백서](#)
- [VXLAN EVPN 멀티 사이트 구성](#)

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