

# Configurar e verificar LACP ESI Multi-Homing no EVPN VXLAN

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## Introdução

Este documento descreve como implantar o Link Aggregation Control Protocol (LACP) Ative/Ative EVPN Virtual Extensible LAN (VXLAN) no Nexus 9000.

## Pré-requisitos

### Requisitos

A Cisco recomenda que você tenha conhecimento destes tópicos:

- Protocolo de gateway de borda (BGP)
- Abra o protocolo OSPF
- VPN Ethernet (EVPN)
- vPC virtual
- vPC
- Segmento Ethernet

### Componentes Utilizados

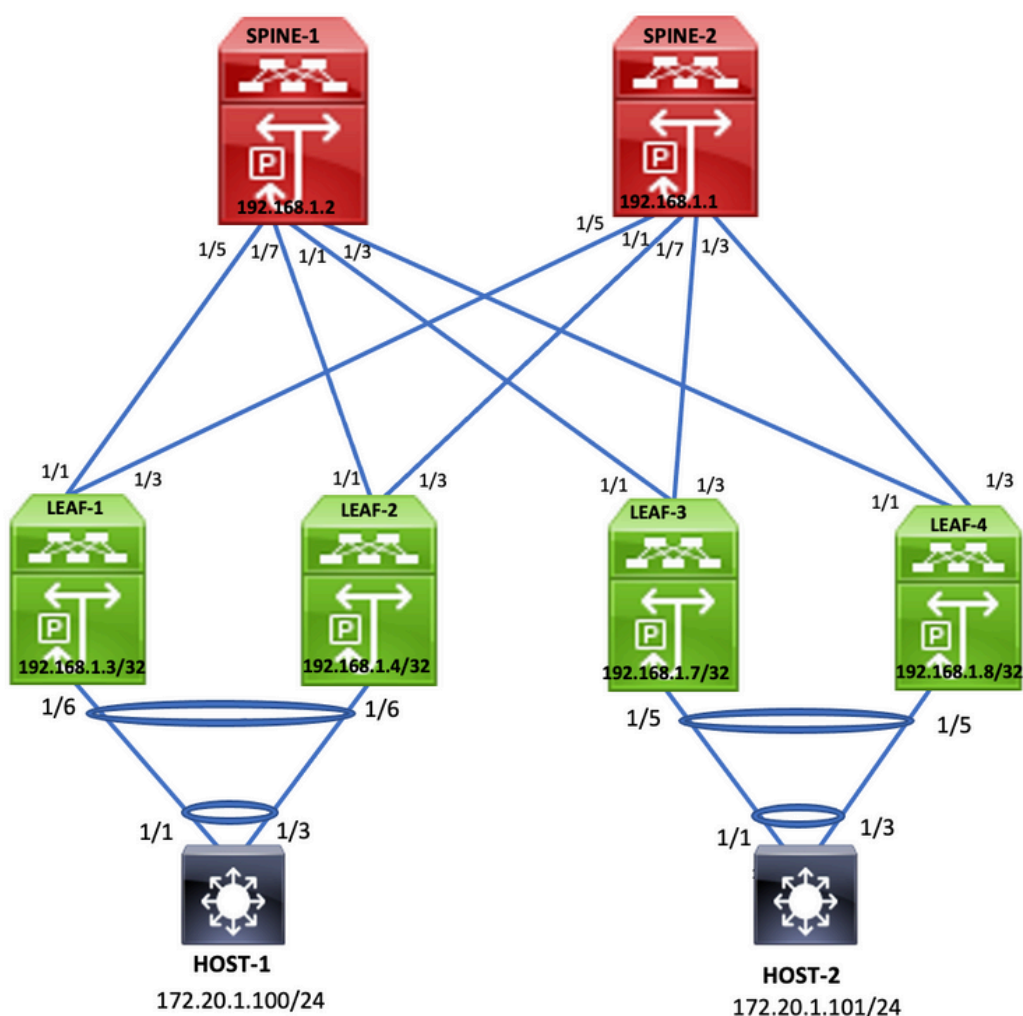
As informações neste documento são baseadas nestas versões de software e hardware:

- Cisco Nexus 9372PX-E com a versão 9.3(9) [Leaf]
- Cisco Nexus 93180YC-FX que executa a versão 10.2(2)F [Spine]
- Chassi Cisco Nexus 3548 com versão 6.0(2)A8(11b) [Host]

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. Todos os dispositivos utilizados neste documento foram iniciados com uma configuração (padrão) inicial. Se a rede estiver ativa, certifique-se de que você entenda o impacto potencial de qualquer comando.

## Configurar

### Diagrama de Rede



### Coluna-1

```
hostname Spine1  
feature scp-server
```

```
feature sftp-server
nv overlay evpn
feature ospf
feature bgp
feature pim
feature nv overlay

copp profile strict

ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

interface Ethernet1/1
ip address 172.16.4.2/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/3
mtu 9216
ip address 172.16.6.2/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/5
ip address 172.16.0.2/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/7
mtu 9216
ip address 172.16.2.2/30
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 192.168.1.2/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale

router ospf 100
router-id 192.168.1.2
router bgp 100
router-id 192.168.1.2
address-family ipv4 unicast
address-family l2vpn evpn
maximum-paths ibgp 32
additional-paths send
additional-paths receive
neighbor 192.168.1.3
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 192.168.1.4
    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
neighbor 192.168.1.7
    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 192.168.1.8
    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

```

## Coluna-2

```

hostname spine2

nv overlay evpn
feature ospf
feature bgp
feature pim
feature nv overlay

copp profile strict

ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8

interface Ethernet1/1
ip address 172.16.5.2/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/3
mtu 9216
ip address 172.16.7.2/30

```

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

interface Ethernet1/5
ip address 172.16.1.2/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown

interface Ethernet1/7
mtu 9216
ip address 172.16.3.2/30
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
router bgp 100
router-id 192.168.1.1
address-family ipv4 unicast
address-family l2vpn evpn
maximum-paths ibgp 32
additional-paths send
additional-paths receive
neighbor 192.168.1.3
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 192.168.1.4
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
neighbor 192.168.1.7
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 192.168.1.8
```

```
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
```

## Folha-1

<#root>

```
hostname Leaf1
```

```
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
```

```
copp profile strict
```

```
evpn esi multihoming
```

```
ethernet-segment delay-restore time 180
```

```
fabric forwarding anycast-gateway-mac 0000.2222.3333
ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8
```

```
vlan 1,10,100,200,300,400
```

```
vlan 10
  vn-segment 500001
vlan 100
  vn-segment 5001002
vlan 200
  vn-segment 5001001
```

```
vrf context vxlan-500001
  vni 500001
  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
hardware access-list tcam region vac1 0
hardware access-list tcam region e-rac1 0
```

```
hardware access-list tcam region arp-ether 256
```

```
interface Vlan10  
no shutdown  
vrf member vxlan-500001  
ip forward
```

```
interface Vlan100  
no shutdown  
vrf member vxlan-500001  
ip address 172.20.1.1/24  
fabric forwarding mode anycast-gateway
```

```
interface Vlan200  
no shutdown  
vrf member vxlan-500001  
ip address 172.21.1.1/24  
fabric forwarding mode anycast-gateway
```

```
interface port-channel111  
switchport mode trunk  
switchport trunk allowed vlan 100,200,300,400
```

```
ethernet-segment 2011
```

```
system-mac 0000.0000.2011
```

```
mtu 9216
```

```
interface nve1  
no shutdown  
host-reachability protocol bgp  
source-interface loopback0  
member vni 500001 associate-vrf  
member vni 5001001  
suppress-arp  
mcast-group 239.0.0.1  
member vni 5001002  
suppress-arp  
mcast-group 239.0.0.1
```

```
interface Ethernet1/1  
no switchport  
  
evpn multihoming core-tracking  
  
ip address 172.16.0.1/30  
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  
  
evpn multihoming core-tracking  
  
ip address 172.16.1.1/30  
ip ospf network point-to-point
```

```

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

interface Ethernet1/6
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
mtu 9216
channel-group 111 mode active

interface loopback0
ip address 192.168.1.3/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode

router ospf 100
router-id 192.168.1.3
router bgp 100
router-id 192.168.1.3
address-family ipv4 unicast
address-family l2vpn evpn
maximum-paths ibgp 3
additional-paths send
additional-paths receive
neighbor 192.168.1.1
remote-as 100
update-source loopback0
address-family ipv4 unicast
send-community extended
address-family l2vpn evpn
send-community extended
neighbor 192.168.1.2
remote-as 100
update-source loopback0
address-family ipv4 unicast
send-community extended
address-family l2vpn evpn
send-community extended

evpn
vrf context vxlan-500001
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

```

## Folha-2

<#root>

```
hostname Leaf2
```

```

feature scp-server
feature sftp-server
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
```

```
copp profile strict
```

```
evpn esi multihoming
```

```
    ethernet-segment delay-restore time 180
```

```
fabric forwarding anycast-gateway-mac 0000.2222.3333
ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8
```

```
vlan 1,10,100,200,300,400
```

```
vlan 10
    vn-segment 500001
vlan 100
    vn-segment 5001002
vlan 200
    vn-segment 5001001
```

```
vrf context vxlan-500001
    vni 500001
    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
hardware access-list tcam region span 0
hardware access-list tcam region rp-qos 0
hardware access-list tcam region arp-ether 256
```

```
interface Vlan10
    no shutdown
    vrf member vxlan-500001
    ip forward
```

```
interface Vlan100
    no shutdown
    vrf member vxlan-500001
    ip address 172.20.1.1/24
    fabric forwarding mode anycast-gateway
```

```
interface Vlan200
    no shutdown
    vrf member vxlan-500001
    ip address 172.21.1.1/24
    fabric forwarding mode anycast-gateway
```

```
interface port-channel111
    switchport mode trunk
```

```
switchport trunk allowed vlan 100,200,300,400
```

```
ethernet-segment 2011
```

```
system-mac 0000.0000.2011
```

```
mtu 9216
```

```
interface nve1  
no shutdown  
host-reachability protocol bgp  
source-interface loopback0  
member vni 500001 associate-vrf  
member vni 5001001  
suppress-arp  
mcast-group 239.0.0.1  
member vni 5001002  
suppress-arp  
mcast-group 239.0.0.1
```

```
interface Ethernet1/1  
no switchport
```

```
evpn multihoming core-tracking
```

```
mtu 9216  
ip address 172.16.2.1/30  
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
```

```
evpn multihoming core-tracking
```

```
mtu 9216  
ip address 172.16.3.1/30  
ip ospf network point-to-point  
ip router ospf 100 area 0.0.0.0  
ip pim sparse-mode  
no shutdown
```

```
interface Ethernet1/6  
switchport mode trunk  
switchport trunk allowed vlan 100,200,300,400  
mtu 9216  
channel-group 111 mode active
```

```
interface mgmt0  
vrf member management  
ip address 10.88.146.115/24
```

```
interface loopback0  
ip address 192.168.1.4/32  
ip router ospf 100 area 0.0.0.0
```

```
ip pim sparse-mode

router ospf 100
  router-id 192.168.1.4
router bgp 100
  router-id 192.168.1.4
  address-family ipv4 unicast
  address-family l2vpn evpn
    maximum-paths ibgp 32
    additional-paths send
    additional-paths receive
  neighbor 192.168.1.1
    remote-as 100
    update-source loopback0
  address-family ipv4 unicast
    send-community extended
  address-family l2vpn evpn
    send-community extended
  neighbor 192.168.1.2
    remote-as 100
    update-source loopback0
  address-family ipv4 unicast
    send-community extended
  address-family l2vpn evpn
    send-community extended
evpn
vrf context vxlan-500001
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
```

## Folha-3

<#root>

```
hostname Leaf3

feature scp-server
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

copp profile strict
hardware access-list tcam region egr-racl 0
hardware access-list tcam region ing-netflow 0
```

hardware access-list tcam region ing-flow-redirect 512

fabric forwarding anycast-gateway-mac 0000.2222.3333  
ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4  
ip pim ssm range 232.0.0.0/8

vlan 1,10,100,200  
vlan 10  
    vn-segment 500001  
vlan 100  
    vn-segment 5001002  
vlan 200  
    vn-segment 5001001

vrf context vxlan-500001  
vni 500001  
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

vpc domain 100  
peer-switch  
peer-keepalive destination 10.88.146.113 source 10.88.146.112  
virtual peer-link destination 192.168.1.8 source 192.168.1.7 dscp 56  
peer-gateway  
ip arp synchronize

interface Vlan1  
no ip redirects  
no ipv6 redirects

interface Vlan10  
no shutdown  
vrf member vxlan-500001  
ip forward

interface Vlan100  
no shutdown  
vrf member vxlan-500001  
no ip redirects  
ip address 172.20.1.1/24  
no ipv6 redirects  
fabric forwarding mode any cast-gateway

interface Vlan200  
no shutdown  
vrf member vxlan-500001  
no ip redirects  
ip address 172.21.1.1/24  
no ipv6 redirects  
fabric forwarding mode any cast-gateway

interface port-channel10  
switchport  
switchport mode trunk  
switchport trunk allowed vlan 100,200,300,400  
spanning-tree port type network  
vpc peer-link

```
interface port-channel30
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300,400
  vpc 30
```

```
interface nve1
  no shutdown
  host-reachability protocol bgp
  advertise virtual-rmac
  source-interface loopback1
  member vni 500001 associate-vrf
  member vni 5001001
    suppress-arp
    mcast-group 239.0.0.1
  member vni 5001002
    suppress-arp
    mcast-group 239.0.0.1
```

```
interface Ethernet1/1
```

```
port-type fabric
```

```
ip address 172.16.4.1/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown
```

```
interface Ethernet1/3
```

```
port-type fabric
```

```
ip address 172.16.5.1/30
ip ospf network point-to-point
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
no shutdown
```

```
interface Ethernet1/5
```

```
switchport
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
channel-group 30 mode active
no shutdown
```

```
interface mgmt0
```

```
vrf member management
ip address 10.88.146.112/24
```

```
interface loopback0
```

```
ip address 192.168.1.7/32
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
```

```
interface loopback1
```

```
ip address 192.168.1.5/32
ip address 192.168.1.51/32 secondary
ip router ospf 100 area 0.0.0.0
```

```
ip pim sparse-mode

router ospf 100
  router-id 192.168.1.5
router bgp 100
  router-id 192.168.1.7
  address-family ipv4 unicast
  address-family l2vpn evpn
    maximum-paths ibgp 32
  advertise-pip
  additional-paths send
  additional-paths receive
  neighbor 192.168.1.1
    remote-as 100
    update-source loopback0
  address-family ipv4 unicast
    send-community extended
  address-family l2vpn evpn
    send-community extended
  neighbor 192.168.1.2
    remote-as 100
    update-source loopback0
  address-family ipv4 unicast
    send-community extended
  address-family l2vpn evpn
    send-community extended
evpn
vrf context vxlan-500001
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
```

## Folha-4

<#root>

```
hostname Leaf4

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

copp profile strict
hardware access-list tcam region egr-racl 0
hardware access-list tcam region ing-netflow 0
hardware access-list tcam region ing-flow-redirect 512
```

```
fabric forwarding anycast-gateway-mac 0000.2222.3333
ip pim rp-address 192.168.1.1 group-list 224.0.0.0/4
ip pim ssm range 232.0.0.0/8
```

```
vlan 1,10,100,200
```

```
vlan 10
  vn-segment 500001
vlan 100
  vn-segment 5001002
vlan 200
  vn-segment 5001001
```

```
vrf context vxlan-500001
  vni 500001
  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
```

```
vpc domain 100
  peer-switch
  peer-keepalive destination 10.88.146.112 source 10.88.146.113
  virtual peer-link destination 192.168.1.7 source 192.168.1.8 dscp 56
  peer-gateway
  ip arp synchronize
```

```
interface Vlan1
  no ip redirects
  no ipv6 redirects
```

```
interface Vlan10
  no shutdown
  vrf member vxlan-500001
  ip forward
```

```
interface Vlan100
  no shutdown
  vrf member vxlan-500001
  no ip redirects
  ip address 172.20.1.1/24
  no ipv6 redirects
  fabric forwarding mode any cast-gateway
```

```
interface Vlan200
  no shutdown
  vrf member vxlan-500001
  no ip redirects
  ip address 172.21.1.1/24
  no ipv6 redirects
  fabric forwarding mode any cast-gateway
```

```
interface port-channel10
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300,400
  spanning-tree port type network
  vpc peer-link
```

```
interface port-channel30
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300,400
  vpc 30
```

```
interface nve1
  no shutdown
  host-reachability protocol bgp
  advertise virtual-rmac
  source-interface loopback1
  member vni 500001 associate-vrf
  member vni 5001001
    suppress-arp
    mcast-group 239.0.0.1
  member vni 5001002
    suppress-arp
    mcast-group 239.0.0.1
```

```
interface Ethernet1/1
  mtu 9216

  port-type fabric

  ip address 172.16.6.1/30
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown
```

```
interface Ethernet1/3
  mtu 9216

  port-type fabric

  ip address 172.16.7.1/30
  ip ospf network point-to-point
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
  no shutdown
```

```
interface Ethernet1/5
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 100,200,300,400
  channel-group 30 mode active
  no shutdown
```

```
interface mgmt0
  vrf member management
  ip address 10.88.146.113/24
```

```
interface loopback0
  ip address 192.168.1.8/32
  ip router ospf 100 area 0.0.0.0
  ip pim sparse-mode
```

```
interface loopback1
  ip address 192.168.1.6/32
  ip address 192.168.1.51/32 secondary
```



```
ip router ospf 100 area 0.0.0.0
ip pim sparse-mode
icam monitor scale
```

```
router ospf 100
router-id 192.168.1.6
router bgp 100
router-id 192.168.1.8
address-family ipv4 unicast
address-family l2vpn evpn
maximum-paths ibgp 32
advertise-pip
additional-paths send
additional-paths receive
neighbor 192.168.1.1
remote-as 100
update-source loopback0
address-family ipv4 unicast
send-community extended
address-family l2vpn evpn
send-community extended
neighbor 192.168.1.2
remote-as 100
update-source loopback0
address-family ipv4 unicast
send-community extended
address-family l2vpn evpn
send-community extended
```

```
evpn
vrf context vxlan-500001
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 evp
```

## Host-1

```
feature bash-shell
feature scp-server
feature interface-vlan
feature lacp
feature lldp
```

```
vlan 1,10,100,200,300,400
```

```
interface Vlan100
no shutdown
ip address 172.20.1.100/24
```

```
interface port-channel111
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
```

```
interface Ethernet1/2
```

```
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
channel-group 111 mode active
no shutdown
```

```
interface Ethernet1/3
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
channel-group 111 mode active
no shutdown
```

## Host 2

```
feature bash-shell
feature scp-server
feature interface-vlan
feature lacp
feature lldp
```

```
vlan 1,10,100,200,300,400
```

```
interface Vlan100
no shutdown
ip address 172.20.1.101/24
```

```
interface port-channel30
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
```

```
interface Ethernet1/1
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
channel-group 30 mode active
no shutdown
```

```
interface Ethernet1/3
switchport mode trunk
switchport trunk allowed vlan 100,200,300,400
channel-group 30 mode active
no shutdown
```

## Verificar

Use esta seção para confirmar se a sua configuração funciona corretamente.

```
H2# ping 172.20.1.100
PING 172.20.1.100 (172.20.1.100): 56 data bytes
36 bytes from 172.20.1.101: Destination Host Unreachable
Request 0 timed out
64 bytes from 172.20.1.100: icmp_seq=1 ttl=254 time=2.324 ms
```

```
64 bytes from 172.20.1.100: icmp_seq=2 ttl=254 time=1.546 ms
64 bytes from 172.20.1.100: icmp_seq=3 ttl=254 time=1.574 ms
64 bytes from 172.20.1.100: icmp_seq=4 ttl=254 time=1.527 ms
```

```
H2(config-if)# ping 172.20.1.100 source 172.21.1.101
PING 172.20.1.100 (172.20.1.100) from 172.21.1.101: 56 data bytes
64 bytes from 172.20.1.100: icmp_seq=0 ttl=254 time=3.813 ms
64 bytes from 172.20.1.100: icmp_seq=1 ttl=254 time=1.71 ms
64 bytes from 172.20.1.100: icmp_seq=2 ttl=254 time=1.76 ms
64 bytes from 172.20.1.100: icmp_seq=3 ttl=254 time=1.804 ms
64 bytes from 172.20.1.100: icmp_seq=4 ttl=254 time=1.791 ms
--- 172.20.1.100 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.71/2.175/3.813 ms
```

```
H1# ping 172.20.1.101
PING 172.20.1.101 (172.20.1.101): 56 data bytes
64 bytes from 172.20.1.101: icmp_seq=0 ttl=254 time=2.044 ms
64 bytes from 172.20.1.101: icmp_seq=1 ttl=254 time=1.746 ms
64 bytes from 172.20.1.101: icmp_seq=2 ttl=254 time=1.547 ms
64 bytes from 172.20.1.101: icmp_seq=3 ttl=254 time=1.56 ms
64 bytes from 172.20.1.101: icmp_seq=4 ttl=254 time=1.555 ms
```

```
H1(config-if)# ping 172.21.1.101 source 172.20.1.100
PING 172.21.1.101 (172.21.1.101) from 172.20.1.100: 56 data bytes
64 bytes from 172.21.1.101: icmp_seq=0 ttl=254 time=1.746 ms
64 bytes from 172.21.1.101: icmp_seq=1 ttl=254 time=1.487 ms
64 bytes from 172.21.1.101: icmp_seq=2 ttl=254 time=1.556 ms
64 bytes from 172.21.1.101: icmp_seq=3 ttl=254 time=1.572 ms
64 bytes from 172.21.1.101: icmp_seq=4 ttl=254 time=1.534 ms
--- 172.21.1.101 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.487/1.578/1.746 ms
--- 172.20.1.101 ping statistics ---
5 packets transmitted, 5 packets received, 0.00% packet loss
round-trip min/avg/max = 1.547/1.69/2.044 ms
H1#
```

```
Leaf1#
Leaf1# 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
-----+-----+-----+-----+-----+-----+-----
* 10 00f6.634e.ea4f static - F F nve1(192.168.1.4)
* 10 00f6.634f.1473 static - F F Vlan10
* 10 0200.c0a8.0133 static - F F nve1(192.168.1.51)
C 100 005d.73bb.10fc dynamic 0 F F nve1(192.168.1.51)
* 100 6cb2.aefa.2b01 dynamic 0 F F Po111
C 200 005d.73bb.10fc dynamic 0 F F nve1(192.168.1.51)
C 200 6cb2.aefa.2b01 dynamic 0 F F Po111
```

```
G - 0000.2222.3333 static - F F sup-eth1(R)
G - 00f6.634f.1473 static - F F sup-eth1(R)
G 10 00f6.634f.1473 static - F F sup-eth1(R)
G 100 00f6.634f.1473 static - F F sup-eth1(R)
G 200 00f6.634f.1473 static - F F sup-eth1(R)
```

Leaf1#

Leaf2# 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

```
-----+-----+-----+-----+-----+-----
* 10 00f6.634e.ea4f static - F F Vlan10
* 10 00f6.634f.1473 static - F F nve1(192.168.1.3)
* 10 0200.c0a8.0133 static - F F nve1(192.168.1.51)
C 100 005d.73bb.10fc dynamic 0 F F nve1(192.168.1.51)
C 100 6cb2.aefa.2b01 dynamic 0 F F Po111
C 200 005d.73bb.10fc dynamic 0 F F nve1(192.168.1.51)
* 200 6cb2.aefa.2b01 dynamic 0 F F Po111
G - 0000.2222.3333 static - F F sup-eth1(R)
G - 00f6.634e.ea4f static - F F sup-eth1(R)
G 10 00f6.634e.ea4f static - F F sup-eth1(R)
G 100 00f6.634e.ea4f static - F F sup-eth1(R)
G 200 00f6.634e.ea4f static - F F sup-eth1(R)
```

Leaf2#

Leaf2#

Leaf3# 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,  
(NA)- Not Applicable  
VLAN MAC Address Type age Secure NTFY Ports

```
-----+-----+-----+-----+-----+-----
* 100 005d.73bb.10fc dynamic NA F F Po30
C 100 6cb2.aefa.2b01 dynamic NA F F nve1(192.168.1.3)
* 200 005d.73bb.10fc dynamic NA F F Po30
C 200 6cb2.aefa.2b01 dynamic NA F F nve1(192.168.1.3)
G - 0000.2222.3333 static - F F sup-eth1(R)
G 100 003a.9c07.9b07 static - F F vPC Peer-Link(R)
G 400 003a.9c07.9b07 static - F F vPC Peer-Link(R)
G 200 003a.9c07.9b07 static - F F vPC Peer-Link(R)
G - 0200.c0a8.0133 static - F F sup-eth1(R)
G - 8c94.1f5f.f787 static - F F sup-eth1(R)
G 10 8c94.1f5f.f787 static - F F sup-eth1(R)
G 100 8c94.1f5f.f787 static - F F sup-eth1(R)
G 200 8c94.1f5f.f787 static - F F sup-eth1(R)
```

Leaf3#

Leaf3#

Leaf4# 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,  
(NA)- Not Applicable  
VLAN MAC Address Type age Secure NTFY Ports

```
-----+-----+-----+-----+-----+-----
+ 100 005d.73bb.10fc dynamic NA F F Po30
C 100 6cb2.aefa.2b01 dynamic NA F F nve1(192.168.1.3)
```

```

+ 200 005d.73bb.10fc dynamic NA F F Po30
C 200 6cb2.aefa.2b01 dynamic NA F F nve1(192.168.1.3)
G - 0000.2222.3333 static - F F sup-eth1(R)
G - 003a.9c07.9b07 static - F F sup-eth1(R)
G 10 003a.9c07.9b07 static - F F sup-eth1(R)
G 100 003a.9c07.9b07 static - F F sup-eth1(R)
G 400 003a.9c07.9b07 static - F F sup-eth1(R)
G 200 003a.9c07.9b07 static - F F sup-eth1(R)
G - 0200.c0a8.0133 static - F F sup-eth1(R)
G 100 8c94.1f5f.f787 static - F F vPC Peer-Link(R)
G 200 8c94.1f5f.f787 static - F F vPC Peer-Link(R)
Leaf4#

```

## Troubleshooting

Esta seção disponibiliza informações para a solução de problemas de configuração.

```

Leaf2# show nve ethernet-segment
ESI: 0300.0000.0020.1100.07db
  Parent interface: port-channel111
  ES State: Up
  Port-channel state: Up
  NVE Interface: nve1
  NVE State: Up
  Host Learning Mode: control-plane
  Active VLANs: 100,200,300,400
  DF VLANs:
  Active VNIs: 5001001-5001002
  CC failed for VLANs:
  VLAN CC timer: 0
  Number of ES members: 2
  My ordinal: 1
  DF timer start time: 00:00:00
  Config State: config-applied
  DF List: 192.168.1.3 192.168.1.4
  ES route added to L2RIB: True
  EAD/ES routes added to L2RIB: True
  EAD/EVI route timer age: not running
-----

```

```

Leaf2# show port-ch summary
Flags: D - Down          P - Up in port-channel (members)
       I - Individual    H - Hot-standby (LACP only)
       s - Suspended     r - Module-removed
       b - BFD Session Wait
       S - Switched      R - Routed
       U - Up (port-channel)
       p - Up in delay-lacp mode (member)
       M - Not in use. Min-links not met
-----

```

| Group | Port-Channel | Type | Protocol | Member Ports |
|-------|--------------|------|----------|--------------|
| 111   | Po111(SU)    | Eth  | LACP     | Eth1/6(P)    |

```

Leaf2# show bgp l2vpn evpn

```

BGP routing table information for VRF default, address family L2VPN EVPN  
 BGP table version is 123, Local Router ID is 192.168.1.4  
 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: 192.168.1.3:19536                                   |              |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152                       | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:27110                                   |              |        |        |        |      |
| *>i[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.3]/136                 | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:32867                                   |              |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                              | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216                   | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272             | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:32967                                   |              |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                              | 192.168.1.3  |        | 100    | 0      | i    |
| * i  | 192.168.1.3  |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.4:27110 (ES [0300.0000.0020.1100.07db 0]) |              |        |        |        |      |
| *>i[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.3]/136                 | 192.168.1.3  |        | 100    | 0      | i    |
| *>l[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.4]/136                 | 192.168.1.4  |        | 100    | 32768  |      |
| Route Distinguisher: 192.168.1.4:32867 (L2VNI 5001002)                   |              |        |        |        |      |
| * i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                              | 192.168.1.3  |        | 100    | 0      | i    |
| *>l  | 192.168.1.4  |        | 100    | 32768  | i    |
| *>i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216                   | 192.168.1.51 |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216                   | 192.168.1.51 |        | 100    | 0      | i    |
| * i  | 192.168.1.51 |        | 100    | 0      | i    |
| * i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216                   | 192.168.1.3  |        | 100    | 0      | i    |
| *>l  | 192.168.1.4  |        | 100    | 32768  | i    |
| *>i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216                   | 192.168.1.51 |        | 100    | 0      | i    |
| * i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272             | 192.168.1.51 |        | 100    | 0      | i    |
| *>i  | 192.168.1.51 |        | 100    | 0      | i    |
| * i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272             | 192.168.1.3  |        | 100    | 0      | i    |
| *>l  | 192.168.1.4  |        | 100    | 32768  | i    |
| Route Distinguisher: 192.168.1.4:32967 (L2VNI 5001001)                   |              |        |        |        |      |
| * i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                              |              |        |        |        |      |

```

192.168.1.3 100 0 i
*>l 192.168.1.4 100 32768 i
*>i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.4:65534 (L2VNI 0)
*>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152
192.168.1.3 100 0 i

Route Distinguisher: 192.168.1.7:3
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.7:32867
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.7:32967
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.8:3
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.8:32867
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.8:32967
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
192.168.1.51 100 0 i
*>i 192.168.1.51 100 0 i

Route Distinguisher: 192.168.1.4:19536 (EAD-ES [0300.0000.0020.1100.07db 19536])
*>l[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152
192.168.1.4 100 32768 i

```

Leaf2#

Leaf1# show port-ch su

```

Flags:  D - Down          P - Up in port-channel (members)
         I - Individual    H - Hot-standby (LACP only)
         s - Suspended     r - Module-removed

```

b - BFD Session Wait  
 S - Switched R - Routed  
 U - Up (port-channel)  
 p - Up in delay-lacp mode (member)  
 M - Not in use. Min-links not met

```

-----
Group Port-      Type      Protocol  Member Ports
  Channel
-----
  
```

```

111 Po111(SU)  Eth      LACP      Eth1/6(P)
  
```

Leaf1#

Leaf1#

Leaf1# show nve ethernet-segment

ESI: 0300.0000.0020.1100.07db

Parent interface: port-channel111

ES State: Up

Port-channel state: Up

NVE Interface: nve1

NVE State: Up

Host Learning Mode: control-plane

Active VLANs: 100,200,300,400

DF VLANs: 100,200,300,400

Active VNIs: 5001001-5001002

CC failed for VLANs:

VLAN CC timer: 0

Number of ES members: 2

My ordinal: 0

DF timer start time: 00:00:00

Config State: config-applied

DF List: 192.168.1.3 192.168.1.4

ES route added to L2RIB: True

EAD/ES routes added to L2RIB: True

EAD/EVI route timer age: not running

Leaf1#

Leaf1# show bgp l2vpn evpn

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

BGP table version is 189, Local Router ID is 192.168.1.3

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: 192.168.1.3:27110 (ES [0300.0000.0020.1100.07db 0]) |              |        |        |        |      |
| *>l[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.3]/136                 | 192.168.1.3  |        | 100    | 32768  | i    |
| *>i[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.4]/136                 | 192.168.1.4  |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:32867 (L2VNI 5001002)                   |              |        |        |        |      |
| *>l[1]:[0300.0000.0020.1100.07db]:[0x0]/152                              | 192.168.1.3  |        | 100    | 32768  | i    |
| * i  | 192.168.1.4  |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216                   | 192.168.1.51 |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216                   | 192.168.1.51 |        | 100    | 0      | i    |
| * i  | 192.168.1.51 |        | 100    | 0      | i    |
| *>l[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216                   | 192.168.1.3  |        | 100    | 32768  | i    |
| * i  | 192.168.1.4  |        | 100    | 0      | i    |



```

*>i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272
    192.168.1.51          100          0 i
*>i
    192.168.1.51          100          0 i
*>l[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272
    192.168.1.3           100        32768 i
* i
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.3:32967 (L2VNI 5001001)
*>l[1]:[0300.0000.0020.1100.07db]:[0x0]/152
    192.168.1.3           100        32768 i
* i
    192.168.1.4           100          0 i
*>i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i
*>i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i

Route Distinguisher: 192.168.1.3:65534 (L2VNI 0)
*>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.4:19536
* i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.4:27110
* i[4]:[0300.0000.0020.1100.07db]:[32]:[192.168.1.4]/136
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.4:32867
* i[1]:[0300.0000.0020.1100.07db]:[0x0]/152
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i
* i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i
* i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.4:32967
* i[1]:[0300.0000.0020.1100.07db]:[0x0]/152
    192.168.1.4           100          0 i
*>i
    192.168.1.4           100          0 i

Route Distinguisher: 192.168.1.7:3
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i
*>i
    192.168.1.51          100          0 i

Route Distinguisher: 192.168.1.7:32867
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i
*>i
    192.168.1.51          100          0 i
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216
    192.168.1.51          100          0 i
*>i
    192.168.1.51          100          0 i
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272
    192.168.1.51          100          0 i

```

```
*>i 192.168.1.51 100 0 i
```

```
Route Distinguisher: 192.168.1.7:32967
```

```
* i[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
Route Distinguisher: 192.168.1.8:3
```

```
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
Route Distinguisher: 192.168.1.8:32867
```

```
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
* i[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
Route Distinguisher: 192.168.1.8:32967
```

```
* i[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216  
192.168.1.51 100 0 i
```

```
*>i 192.168.1.51 100 0 i
```

```
Route Distinguisher: 192.168.1.3:19536 (EAD-ES [0300.0000.0020.1100.07db 19536])
```

```
*>l[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152  
192.168.1.3 100 32768 i
```

```
Leaf1#
```

```
Leaf3# show port-ch summary
```

```
Flags: D - Down P - Up in port-channel (members)  
I - Individual H - Hot-standby (LACP only)  
s - Suspended r - Module-removed  
b - BFD Session Wait  
S - Switched R - Routed  
U - Up (port-channel)  
p - Up in delay-lacp mode (member)  
M - Not in use. Min-links not met
```

---

| Group | Port-Channel | Type | Protocol | Member Ports |
|-------|--------------|------|----------|--------------|
| 10    | Po10(SU)     | Eth  | NONE     | --           |
| 30    | Po30(SU)     | Eth  | LACP     | Eth1/5(P)    |

---

```
Leaf3#
```

```
Leaf3# show vpc
```

```
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 = 30s)
Delay-restore SVI status    : Timer is off.(timeout = 10s)
Operational Layer3 Peer-router : Disabled
Virtual-peerlink mode       : Enabled

```

vPC Peer-link status

```

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

```

vPC status

```

-----
Id   Port           Status Consistency Reason           Active vlans
--   ---           -----
30   Po30           up    success      success           100,200

```

Please check "show vpc consistency-parameters vpc

" for the

consistency reason of down vpc and for type-2 consistency reasons for

any vpc.

Leaf3# show bgp l2vpn evpn

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

BGP table version is 66, Local Router ID is 192.168.1.7

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: 192.168.1.3:19536

\*>i [1]: [0300.0000.0020.1100.07db]: [0xffffffff]/152

|  |             |  |     |   |   |
|--|-------------|--|-----|---|---|
|  | 192.168.1.3 |  | 100 | 0 | i |
|--|-------------|--|-----|---|---|

|     |             |  |     |   |   |
|-----|-------------|--|-----|---|---|
| * i | 192.168.1.3 |  | 100 | 0 | i |
|-----|-------------|--|-----|---|---|

Route Distinguisher: 192.168.1.3:32867

\*>i [1]: [0300.0000.0020.1100.07db]: [0x0]/152

|  |             |  |     |   |   |
|--|-------------|--|-----|---|---|
|  | 192.168.1.3 |  | 100 | 0 | i |
|--|-------------|--|-----|---|---|

|     |             |  |     |   |   |
|-----|-------------|--|-----|---|---|
| * i | 192.168.1.3 |  | 100 | 0 | i |
|-----|-------------|--|-----|---|---|

\*>i [2]: [0]: [0]: [48]: [6cb2.aefa.2b01]: [0]: [0.0.0.0]/216

|  |             |  |     |   |   |
|--|-------------|--|-----|---|---|
|  | 192.168.1.3 |  | 100 | 0 | i |
|--|-------------|--|-----|---|---|

\* i 192.168.1.3 100 0 i

\*>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272

192.168.1.3 100 0 i

\* i 192.168.1.3 100 0 i

Route Distinguisher: 192.168.1.3:32967

\*>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152

192.168.1.3 100 0 i

\* i 192.168.1.3 100 0 i

Route Distinguisher: 192.168.1.4:19536

\* i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152

192.168.1.4 100 0 i

\*>i 192.168.1.4 100 0 i

Route Distinguisher: 192.168.1.4:32867

\* i[1]:[0300.0000.0020.1100.07db]:[0x0]/152

192.168.1.4 100 0 i

\*>i 192.168.1.4 100 0 i

\* i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216

192.168.1.4 100 0 i

\*>i 192.168.1.4 100 0 i

\* i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272

192.168.1.4 100 0 i

\*>i 192.168.1.4 100 0 i

Route Distinguisher: 192.168.1.4:32967

\* i[1]:[0300.0000.0020.1100.07db]:[0x0]/152

192.168.1.4 100 0 i

\*>i 192.168.1.4 100 0 i

Route Distinguisher: 192.168.1.7:32867 (L2VNI 5001002)

\*>i [1]: [0300.0000.0020.1100.07db]: [0x0]/152

192.168.1.3 100 0 i

\*|i 192.168.1.4 100 0 i

\*>l [2]: [0]: [0]: [48]: [005d.73bb.10fc]: [0]: [0.0.0.0]/216

192.168.1.51 100 32768 i

\*>i [2]: [0]: [0]: [48]: [6cb2.aefa.2b01]: [0]: [0.0.0.0]/216

192.168.1.3 100 0 i

\*|i 192.168.1.4 100 0 i

\*>l [2]: [0]: [0]: [48]: [8c94.1f5f.f787]: [0]: [0.0.0.0]/216

192.168.1.51 100 32768 i

\*>l [2]: [0]: [0]: [48]: [005d.73bb.10fc]: [32]: [172.20.1.101]/272

192.168.1.51 100 32768 i

\*>i [2]: [0]: [0]: [48]: [6cb2.aefa.2b01]: [32]: [172.20.1.100]/272

192.168.1.3 100 0 i

\*|i 192.168.1.4 100 0 i

Route Distinguisher: 192.168.1.7:32967 (L2VNI 5001001)

\*>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152

|             |     |     |
|-------------|-----|-----|
| 192.168.1.3 | 100 | 0 i |
|-------------|-----|-----|

|                 |     |     |
|-----------------|-----|-----|
| * i 192.168.1.4 | 100 | 0 i |
|-----------------|-----|-----|

\*>l[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216

|              |     |         |
|--------------|-----|---------|
| 192.168.1.51 | 100 | 32768 i |
|--------------|-----|---------|

Route Distinguisher: 192.168.1.7:65534 (L2VNI 0)

\*>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152

|             |     |     |
|-------------|-----|-----|
| 192.168.1.3 | 100 | 0 i |
|-------------|-----|-----|

|                 |     |     |
|-----------------|-----|-----|
| * i 192.168.1.4 | 100 | 0 i |
|-----------------|-----|-----|

Route Distinguisher: 192.168.1.7:3 (L3VNI 500001)

\*>l[2]:[0]:[0]:[48]:[8c94.1f5f.f787]:[0]:[0.0.0.0]/216



192.168.1.51 100 32768 i

\*>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.10]/272

192.168.1.3 100 0 i

\*|i 192.168.1.4 100 0 i

Leaf4#

Leaf4# show vpc

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 : primary  
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 = 30s)  
Delay-restore SVI status : Timer is off.(timeout = 10s)  
Operational Layer3 Peer-router : Disabled  
Virtual-peerlink mode : Enabled

vPC Peer-link status

| id | Port | Status | Active vlans |
|----|------|--------|--------------|
| 1  | Po10 | up     | 100,200      |

vPC status

| Id | Port | Status | Consistency | Reason  | Active vlans |
|----|------|--------|-------------|---------|--------------|
| 30 | Po30 | 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.

Leaf4#

Leaf4# show port-channel summary

Flags: D - Down P - Up in port-channel (members)  
I - Individual H - Hot-standby (LACP only)  
s - Suspended r - Module-removed  
b - BFD Session Wait  
S - Switched R - Routed  
U - Up (port-channel)  
p - Up in delay-lacp mode (member)  
M - Not in use. Min-links not met

```
-----  
Group Port-      Type      Protocol  Member Ports  
  Channel  
-----  
10   Po10(SU)    Eth       NONE      --  
30   Po30(SU)    Eth       LACP      Eth1/5(P)
```

Leaf4#

Leaf4#

Leaf4# show bgp l2v evpn

BGP routing table information for VRF default, address family L2VPN EVPN  
BGP table version is 101, Local Router ID is 192.168.1.8  
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: 192.168.1.3:19536                       |             |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152           | 192.168.1.3 |        | 100    | 0      | i    |
| * i  | 192.168.1.3 |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:32867                       |             |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                  | 192.168.1.3 |        | 100    | 0      | i    |
| * i  | 192.168.1.3 |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216       | 192.168.1.3 |        | 100    | 0      | i    |
| * i  | 192.168.1.3 |        | 100    | 0      | i    |
| *>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272 | 192.168.1.3 |        | 100    | 0      | i    |
| * i  | 192.168.1.3 |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.3:32967                       |             |        |        |        |      |
| *>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                  | 192.168.1.3 |        | 100    | 0      | i    |
| * i  | 192.168.1.3 |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.4:19536                       |             |        |        |        |      |
| * i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152           | 192.168.1.4 |        | 100    | 0      | i    |
| *>i  | 192.168.1.4 |        | 100    | 0      | i    |
| Route Distinguisher: 192.168.1.4:32867                       |             |        |        |        |      |
| * i[1]:[0300.0000.0020.1100.07db]:[0x0]/152                  | 192.168.1.4 |        | 100    | 0      | i    |
| *>i  | 192.168.1.4 |        | 100    | 0      | i    |
| * i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216       | 192.168.1.4 |        | 100    | 0      | i    |
| *>i  | 192.168.1.4 |        | 100    | 0      | i    |
| * i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272 | 192.168.1.4 |        | 100    | 0      | i    |

```

*>i          192.168.1.4          100          0 i

Route Distinguisher: 192.168.1.4:32967
* i[1]:[0300.0000.0020.1100.07db]:[0x0]/152
          192.168.1.4          100          0 i
*>i          192.168.1.4          100          0 i

Route Distinguisher: 192.168.1.8:32867 (L2VNI 5001002)
*>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i
*>l[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
          192.168.1.51          100          32768 i
*>l[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[0]:[0.0.0.0]/216
          192.168.1.51          100          32768 i
*>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[0]:[0.0.0.0]/216
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i
*>l[2]:[0]:[0]:[48]:[005d.73bb.10fc]:[32]:[172.20.1.101]/272
          192.168.1.51          100          32768 i
*>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i

Route Distinguisher: 192.168.1.8:32967 (L2VNI 5001001)
*>i[1]:[0300.0000.0020.1100.07db]:[0x0]/152
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i
*>l[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
          192.168.1.51          100          32768 i

Route Distinguisher: 192.168.1.8:65534 (L2VNI 0)
*>i[1]:[0300.0000.0020.1100.07db]:[0xffffffff]/152
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i

Route Distinguisher: 192.168.1.8:3 (L3VNI 500001)
*>l[2]:[0]:[0]:[48]:[003a.9c07.9b07]:[0]:[0.0.0.0]/216
          192.168.1.51          100          32768 i
*>i[2]:[0]:[0]:[48]:[6cb2.aefa.2b01]:[32]:[172.20.1.100]/272
          192.168.1.3          100          0 i
*|i          192.168.1.4          100          0 i

```

## Sobre esta tradução

A Cisco traduziu este documento com a ajuda de tecnologias de tradução automática e humana para oferecer conteúdo de suporte aos seus usuários no seu próprio idioma, independentemente da localização.

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