

N5K/7K VXLAN

vPC LAB

(N9Ks used as hosts)

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N7K-1
=====

N7K-1# show run

[Command: show running-config
Running configuration last done at: Thu Apr 13
04:59:43 2023
Time: Fri Apr 14 08:08:29 2023

version 8.2(3)

nv overlay evpn
feature ospf
feature bgp
feature pin
feature nv overlay

ip pin rp-address 111.1.1.1 group-list 224.0.0.0/4
bidir
ip pin ssm range 232.0.0.0/8
vlan 1
vian 1

interface Ethernet3/1
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode
no shutdown

interface Ethernet3/2
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode
no shutdown

interface loopback0
ip address 1.1.1.1/32
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface loopback1
ip address 111.1.1.2/32
ip ospf network point-to-point
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

router ospf 1
router bgp 65000
address-family ipv4 unicast
address-family 12vpn evpn
neighbor 1.1.1.51 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
route-reflector-client
neighbor 1.1.1.52 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
route-reflector-client
```

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=====
N7K-2
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N7K-2# show run

[Command: show running-config
Running configuration last done at: Wed Apr 12 16:45:54
2023
Time: Thu Apr 13 19:53:09 2023

version 8.2(3)

nv overlay evpn
feature ospf
feature bgp
feature pin
feature nv overlay

ip pin rp-address 111.1.1.1 group-list 224.0.0.0/4 bidir
ip pin ssm range 232.0.0.0/8
vian 1
vian 1

interface Ethernet3/1
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode
no shutdown

interface Ethernet3/2
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode
no shutdown

interface loopback0
ip address 1.1.1.72/32
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface loopback1
ip address 111.1.1.3/28
ip ospf network point-to-point
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

router ospf 1
router bgp 65000
address-family ipv4 unicast
address-family 12vpn evpn
neighbor 1.1.1.51 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
route-reflector-client
neighbor 1.1.1.52 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
route-reflector-client
```

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=====
N9K-1
=====

N9K-1# show run

[Command: show running-config
Time: Thu Apr 13 19:37:57 2023

version 7.3(5)NI(1)
hardware ethernet store-and-fwd-switching
feature-set fabric
feature-set fabric

no feature telnet
cfs eth distribute
feature fabric forwarding
nv overlay evpn
feature ospf
feature bgp
feature pin
feature interface-vlan
feature lacp
feature vpc
feature lldp
feature nv overlay
feature vn-segment-vlan-based

fabric forwarding anycast-gateway-mac
1234.1234.1234
ip pin rp-address 111.1.1.1 group-list 224.0.0.0/4
bidir
ip pin ssm range 232.0.0.0/8
vian 1
vn-segment 10010
vian 20
vn-segment 20020
vian 30
vn-segment 30030
vian 1234

route-map PERMIT-TAG permit 10
match tag 12345

vrf context tnl
vni 30030
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn
vpc domain 5
peer-switch
peer-keepalive destination 10.201.182.134
peer-gateway
ip arp synchronize

interface Vlan1
no shutdown
vrf member tnl
no ip redirects
ip address 192.168.10.254/24 tag 12345
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan20
no shutdown
vrf member tnl
no ip redirects
ip address 192.168.20.254/24 tag 12345
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan30
no shutdown
vrf member tnl
no ip redirects
ip forward
no ipv6 redirects

interface Vlan1234
no shutdown
mtu 9216
no ip redirects
ip address 10.53.1.1/24
no ipv6 redirects
ip ospf cost 10
ip ospf network point-to-point
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface port-channel151
switchport mode trunk
switchport trunk allowed vlan 10,20,30
speed 10000
vpc 53

interface port-channel154
switchport mode trunk
spanning-tree port type network
speed 10000
vpc peer-link

interface nve1
no shutdown
source-interface loopback1
host-reachability protocol bgp
member vni 10010
ncast-group 225.5.5.5
member vni 20020
ncast-group 227.7.7.7
member vni 30030 associate-vrf

interface Ethernet1/1
description Connected to N7009-1 Eth3/1
no switchport
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface Ethernet1/2
description Connected to N7009-2 Eth3/1
no switchport
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface Ethernet1/5
description Connected to N93180VC-1 Eth1/3
switchport mode trunk
switchport trunk allowed vlan 10,20,30
channel-group 51 mode active

interface Ethernet1/48
description Connected to N5672UP-2 Eth1/48
switchport mode trunk
channel-group 54 mode active

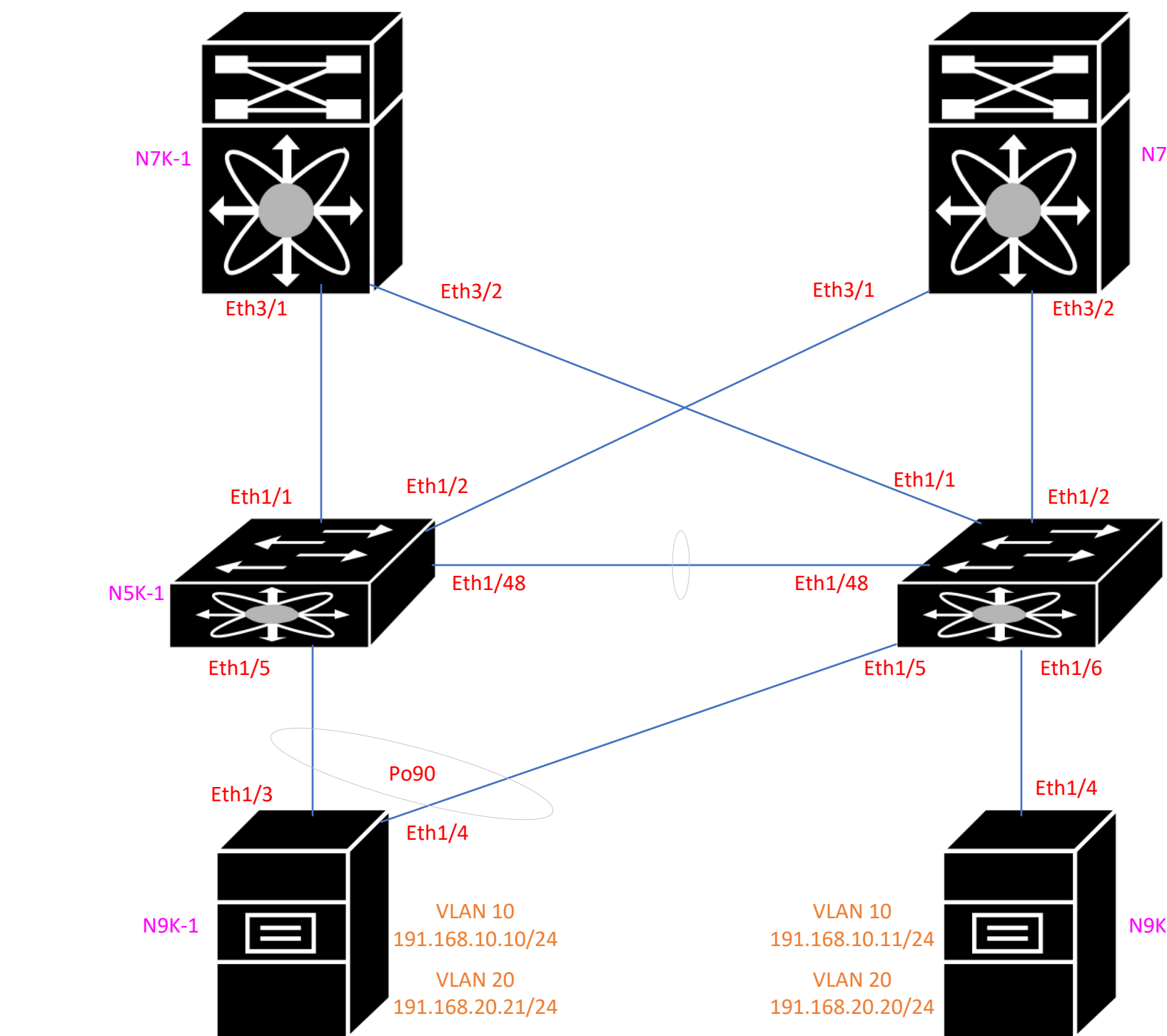
interface loopback0
ip address 1.1.1.51/32
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface loopback1
ip address 10.1.1.51/32
ip address 10.1.1.100/32 secondary
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

router ospf 1
router-id 1.1.1.51
router bgp 65000
address-family loopback0
address-family 12vpn evpn
send-community both
neighbor 1.1.1.72 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
vrf tnl
address-family ipv4 unicast
advertise 12vpn evpn
redistribute direct route-map PERMIT-TAG

evpn
vni 10010 12
rd auto
route-target import auto
route-target export auto
vni 20020 12
rd auto
route-target import auto
route-target export auto

vpc nve peer-link-vlan 1234
```



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=====
N9K-1
=====

N9K-1# show run

[Command: show running-config
Running configuration last done at: Thu Apr 13
12:50:28 2023
Time: Thu Apr 13 20:03:32 2023

version 9.2(3) Bios:version 07.69

feature interface-vlan
feature lacp

ip route 0.0.0.0/0 192.168.10.254
ip route 0.0.0.0/0 192.168.20.254

vian 1,10,20

interface Vlan1
no shutdown
ip address 192.168.10.10/24

interface Vlan10
no shutdown
ip address 192.168.10.11/24

interface Vlan20
no shutdown
ip address 192.168.20.21/24

interface port-channel190
switchport
switchport mode trunk

interface Ethernet1/3
description Connected to N5672UP-1 Eth1/5
switchport
switchport mode trunk
channel-group 90 mode active
no shutdown

interface Ethernet1/4
description Connected to N5672UP-2 Eth1/5
switchport
switchport mode trunk
channel-group 90 mode active
no shutdown
```

```
=====
N9K-2
=====

N9K-2# show run

[Command: show running-config
Running configuration last done at: Thu Apr 13
20:23:15 2023
Time: Thu Apr 13 20:23:52 2023

version 9.2(3) Bios:version 07.69

feature interface-vlan

ip route 0.0.0.0/0 192.168.10.254
ip route 0.0.0.0/0 192.168.20.254

vian 1,10,20

interface Vlan1
no shutdown
ip address 192.168.10.11/24

interface Vlan10
no shutdown
ip address 192.168.10.11/24

interface Vlan20
no shutdown
ip address 192.168.20.20/24

interface Ethernet1/3
description Connected to N5672UP-1 Eth1/6
switchport
switchport mode trunk
no shutdown

interface Ethernet1/4
description Connected to N5672UP-2 Eth1/6
switchport
switchport mode trunk
no shutdown
```

```
=====
N9K-2
=====

N9K-2# show run

[Command: show running-config
Time: Thu Apr 13 19:40:43 2023

version 7.3(5)NI(1)
hardware ethernet store-and-fwd-switching
feature-set fabric
feature-set fabric

no feature telnet
cfs eth distribute
feature fabric forwarding
nv overlay evpn
feature ospf
feature bgp
feature pin
feature interface-vlan
feature lacp
feature vpc
feature lldp
feature nv overlay
feature vn-segment-vlan-based

fabric forwarding anycast-gateway-mac
1234.1234.1234
ip pin rp-address 111.1.1.1 group-list 224.0.0.0/4
bidir
ip pin ssm range 232.0.0.0/8
vian 1
vn-segment 10010
vian 20
vn-segment 20020
vian 30
vn-segment 30030
vian 1234

route-map PERMIT-TAG permit 10
match tag 12345

vrf context tnl
vni 30030
rd auto
address-family ipv4 unicast
route-target both auto
route-target both auto evpn
vpc domain 5
peer-switch
peer-keepalive destination 10.201.182.133
peer-gateway
ip arp synchronize

interface Vlan10
no shutdown
vrf member tnl
no ip redirects
ip address 192.168.10.254/24 tag 12345
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan20
no shutdown
vrf member tnl
no ip redirects
ip address 192.168.20.254/24 tag 12345
no ipv6 redirects
fabric forwarding mode anycast-gateway

interface Vlan30
no shutdown
vrf member tnl
no ip redirects
ip forward
no ipv6 redirects

interface Vlan1234
no shutdown
mtu 9216
no ip redirects
ip address 10.53.1.2/24
no ipv6 redirects
ip ospf cost 10
ip ospf network point-to-point
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface port-channel152
switchport mode trunk
switchport trunk allowed vlan 10,20,30
speed 10000
vpc 53

interface port-channel154
switchport mode trunk
spanning-tree port type network
speed 10000
vpc peer-link

interface nve1
no shutdown
source-interface loopback1
host-reachability protocol bgp
member vni 10010
ncast-group 225.5.5.5
member vni 20020
ncast-group 227.7.7.7
member vni 30030 associate-vrf

interface Ethernet1/4
description Connected to N7009-1 Eth3/2
no switchport
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface Ethernet1/2
description Connected to N7009-2 Eth3/2
no switchport
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface Ethernet1/5
description Connected to N93180VC-1 Eth1/4
switchport mode trunk
switchport trunk allowed vlan 10,20,30
channel-group 52 mode active

interface Ethernet1/6
description Connected to N93180VC-2 Eth1/4
switchport mode trunk
switchport trunk allowed vlan 10,20,30

interface Ethernet1/48
description Connected to N5672UP-1 Eth1/48
switchport mode trunk
channel-group 54 mode active

interface loopback0
ip address 1.1.1.52/32
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

interface loopback1
ip address 10.1.1.52/32
ip address 10.1.1.100/32 secondary
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode

router ospf 1
router-id 1.1.1.52
router bgp 65000
neighbor 1.1.1.71 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
neighbor 1.1.1.72 remote-as 65000
update-source loopback0
address-family 12vpn evpn
send-community both
vrf tnl
address-family ipv4 unicast
advertise 12vpn evpn
redistribute direct route-map PERMIT-TAG

evpn
vni 10010 12
rd auto
route-target import auto
route-target export auto
vni 20020 12
rd auto
route-target import auto
route-target export auto

vpc nve peer-link-vlan 1234
```