

N5K/7K VXLAN

vPC LAB

(N9Ks used as hosts)



*Created by Matthew Rich, TCE, Cisco Systems, Inc.

```
N7K-1# show run

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

version 8.2(3)

nv overlay svpn
feature ospf
feature bgp
feature nv overlay

ip pin rp-address 111.1.1.1 group-list 224.0.0.0/4
bidir
ip pin sm-range 232.0.0.0/8
vlan 1
vlan 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 111.1.1.2/29
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 l2vpn evpn
neighbor 1.1.1.155 remote-as 65000
update-source loopback0
address-family l2vpn evpn
send-community both
route-reflector-client
neighbor 1.1.1.52 remote-as 65000
update-source loopback0
address-family l2vpn evpn
send-community both
route-reflector-client
```

```

#####
N7K-2
#####

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 224.0.0.4 bdr
ip pin sm range 232.0.0.8/8
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

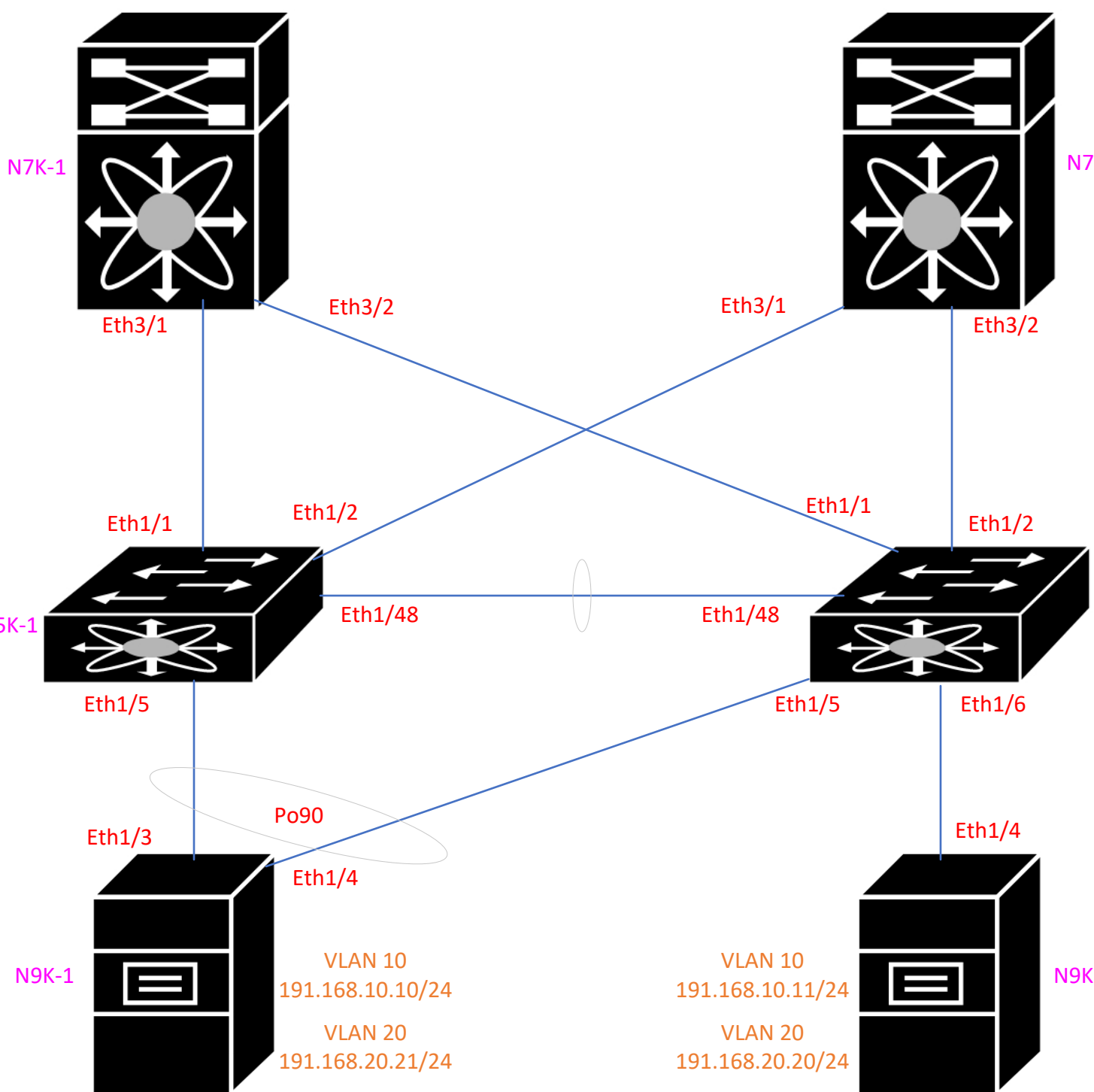
interface Ethernet3/2
mtu 9216
medium p2p
ip unnumbered loopback0
ip router ospf 1 area 0.0.0.0
ip pin sparse-mode
no shutdown

interface loopback0
ip address 1.1.1.2/32
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 1.1.1.1.52 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

```



```
#####
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 87.69

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

vlan 1,10,20

interface Vlan1
!
interface Vlan10
no shutdown
ip address 192.168.10.10/24

interface Vlan20
no shutdown
ip address 192.168.20.11/24

interface port-channel90
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
```

```
=====
NOK-2
=====

NOK-20 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 87.69
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

vlan 1,10,20

interface Vlan1

interface Vlan10
no shutdown
ip address 192.168.10.11/24

interface Vlan20
no shutdown
ip address 192.168.20.20/24

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

```

#####
NSK-2
#####
NSK-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-forward-switching

install feature-set fabric
feature-set fabric
feature fabric forwarding
nv overlay evpn
feature ospf
feature bgp
feature pin
feature interface-vlan
feature lisp
feature vpc
feature nv overlay
feature vn-segment-vlan-based

fabric forwarding anycast-gateway-mac
1234.1234.1234
ip pin pr address 111.1.1.1 group-list 224.0.0.0/4
vlan 1
vlan 10
vn-segment 10010
vlan 20
vn-segment 20020
vlan 30
vn-segment 30030
vlan 1234
route-map PERMIT-TAG permit 10
match tag 12345

vrf context tn1
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
  vpc domain 1
  peer-switch
  peer-keepalive destination 10.201.182.133
  peer-gateway
  ip arp synchronize

Interface Vlan10
no shutdown
vrf member tn1
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 tn1
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 tn1
no ip redirects
ip forwarding
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 router ospf 1 area 0.0.0.0
ip pin sparse-mode

Interface port-channel52
description Connected to N3572UP-1 Eth3/2
switchport mode trunk
switchport trunk allowed vlan 10,20,30
speed 10000
vpc peer-link

Interface nve1
no shutdown
source-interface loopback1
host-reachability protocol bgp
member vni 30010
  mcast-group 225.5.5.5
  mcast-vni 20020
  mcast-group 227.7.7.7
member vni 30030 associate-vrf

Interface Ethernet1/1
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
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-id 1.1.1.52
  neighbor 10.1.1.1 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 tn1
    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 vpe-peer-link-vlan 1234

```