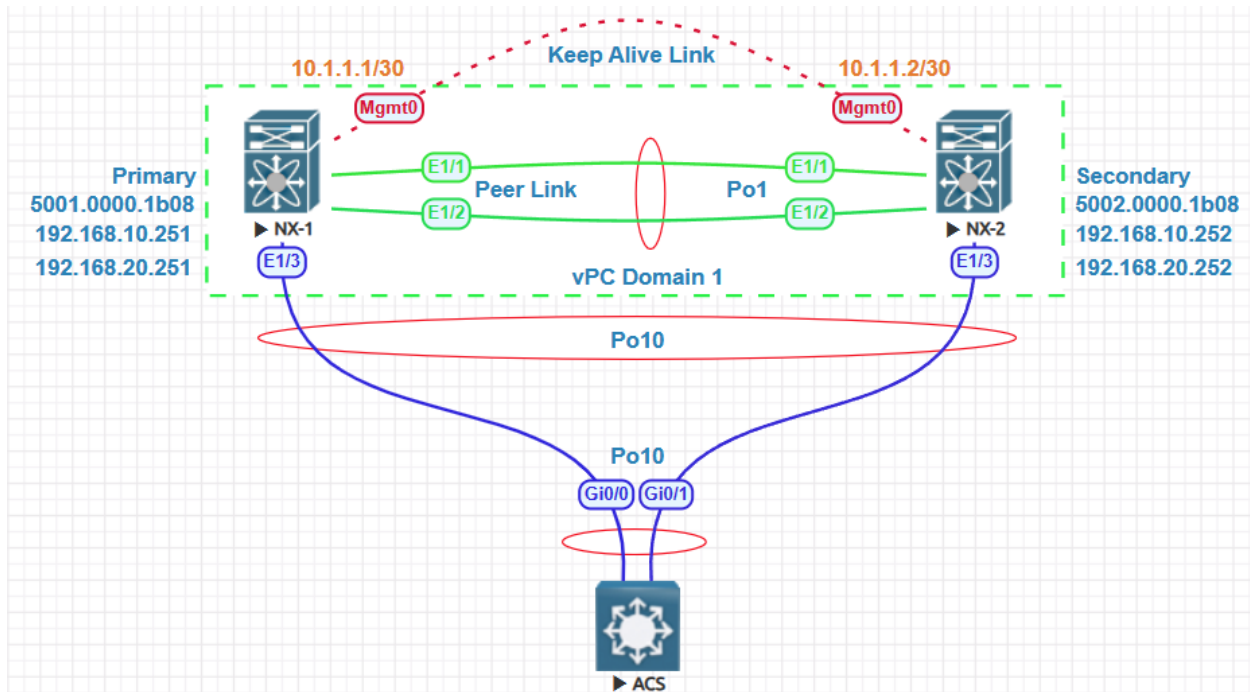


vPC Peer-Gateway Lab:



NX-1 Role	Primary
NX-2 Role	Secondary
NX-1 Priority	20
NX-2 Priority	30
Peer Links	E1/1 and E1/2
Keep Alive Link	Mgmt0
NX-1 Mgmt0 IP Address	10.1.1.1/30
NX-2 Mgmt0 IP Address	10.1.1.2/30
VLAN NX-1 and NX-2	VLAN 10 and VLAN 20
NX-1 SVI 10 IP Address	192.168.10.251
NX-1 SVI 20 IP Address	192.168.20.251
NX-2 SVI 10 IP Address	192.168.10.252
NX-2 SVI 20 IP Address	192.168.20.252
vPC Domain	1
Peer Link Portchannel	1
Member Portchannel	10
Member Ports	E1/3
Member Ports vPC	10
ACS Switch Ports	G0/0 and G0/1
ACS Switch Images	viosl2-adventerprisek9-m.ssa.high_iron_20190423
Nexus Images Version	9300v 9.3.6
Nexus EVE-NG Image	nxosv9k-9.3.6

NX-1 Switch Configuration
switch(config)# hostname NX-1
NX-1(config)# feature vpc NX-1(config)# feature lacp NX-1(config)# feature interface-vlan
NX-1(config)# interface mgmt 0 NX-1(config-if)# ip address 10.1.1.1/30 NX-1(config-if)# no shutdown
NX-1(config)# vpc domain 1 NX-1(config-vpc-domain)# role priority 20 NX-1(config-vpc-domain)# peer-keepalive destination 10.1.1.2 source 10.1.1.1 vrf management NX-1(config-vpc-domain)# exit
NX-1(config)# interface ethernet 1/1-2 NX-1(config-if-range)# switchport mode trunk NX-1(config-if-range)# spanning-tree port type network NX-1(config-if-range)# channel-group 1 mode active NX-1(config-if-range)# no shutdown
NX-1(config)# interface port-channel 1 NX-1(config-if)# no shutdown NX-1(config-if)# switchport NX-1(config-if)# switchport mode trunk NX-1(config-if)# spanning-tree port type network NX-1(config-if)# vpc peer-link
NX-1(config)# interface ethernet 1/3 NX-1(config-if)# channel-group 10 mode active NX-1(config-if)# no shutdown NX-1(config-if)# exit
NX-1(config)# interface port-channel 10 NX-1(config-if)# no shutdown NX-1(config-if)# switchport NX-1(config-if)# switchport mode trunk NX-1(config-if)# vpc 10
NX-1(config)# vlan 10,20
NX-1(config)# interface vlan 10 NX-1(config-if)# ip address 192.168.10.251/24 NX-1(config-if)# no shutdown NX-1(config-if)# exit
NX-1(config)# interface vlan 20 NX-1(config-if)# ip address 192.168.20.251/24 NX-1(config-if)# no shutdown NX-1(config-if)# exit

NX-2 Switch Configuration
switch(config)# hostname NX-2
NX-2(config)# feature vpc NX-2(config)# feature lacp NX-2(config)# feature interface-vlan
NX-2(config)# interface mgmt 0 NX-2(config-if)# ip address 10.1.1.2/30 NX-2(config-if)# no shutdown
NX-2(config)# vpc domain 1 NX-2(config-vpc-domain)# role priority 20 NX-2(config-vpc-domain)# peer-keepalive destination 10.1.1.1 source 10.1.1.2 vrf management NX-2(config-vpc-domain)# exit
NX-2(config)# interface ethernet 1/1-2 NX-2(config-if-range)# switchport mode trunk NX-2(config-if-range)# spanning-tree port type network NX-2(config-if-range)# channel-group 1 mode active NX-2(config-if-range)# no shutdown
NX-2(config)# interface port-channel 1 NX-2(config-if)# no shutdown NX-2(config-if)# switchport NX-2(config-if)# switchport mode trunk NX-2(config-if)# spanning-tree port type network NX-2(config-if)# vpc peer-link
NX-2(config)# interface ethernet 1/3 NX-2(config-if)# channel-group 10 mode active NX-2(config-if)# no shutdown NX-2(config-if)# exit
NX-2(config)# interface port-channel 10 NX-2(config-if)# no shutdown NX-2(config-if)# switchport NX-2(config-if)# switchport mode trunk NX-2(config-if)# vpc 10
NX-2(config)# vlan 10,20
NX-2(config)# interface vlan 10 NX-2(config-if)# ip address 192.168.10.252/24 NX-2(config-if)# no shutdown NX-2(config-if)# exit
NX-2(config)# interface vlan 20 NX-2(config-if)# ip address 192.168.20.252/24 NX-2(config-if)# no shutdown NX-2(config-if)# exit

ACS Switch Configuration
Change hostname
Switch(config)#hostname ACS
Configure Port-channel
ACS(config)#interface range g0/0-1 ACS(config-if-range)#switchport trunk encapsulation dot1q ACS(config-if-range)#switchport mode trunk ACS(config-if-range)#channel-protocol lacp ACS(config-if-range)#channel-group 10 mode active ACS(config-if-range)#no shutdown ACS(config-if-range)#exit ACS(config)#exit
ACS(config)#vlan 10 ACS(config-vlan)#exit ACS(config)#vlan 20 ACS(config-vlan)#exit
ACS(config)#interface g0/2 ACS(config-if)#switchport mode access ACS(config-if)#switchport access vlan 10 ACS(config-if)#no shutdown ACS(config-if)#exit
ACS(config)#interface g0/3 ACS(config-if)#switchport mode access ACS(config-if)#switchport access vlan 20 ACS(config-if)#no shutdown

Cisco vPC Command	Purpose
show feature	Displays whether the vPC is enabled or not
show vpc brief	Displays brief information about the vPCs
show vpc consistency-parameters	Displays the current status of parameters
show running-config vpc	Displays running configuration information for vPCs
show port-channel capacity	Displays how many port channels are configured
show vpc statistics	Displays statistics about the vPCs
show vpc peer-keepalive	Displays info about the peer-keepalive messages
show vpc role	Displays the vPC peer's state
show vpc orphan-ports	Displays orphan port details

vPC Peer-Gateway Disabled:

let's find out the MAC Address of VLAN 10 and VLAN 20 on NX-2 secondary device.

```
NX-2(config)# show interface vlan 10
vlan10 is up, line protocol is up, autostate enabled
Hardware is EthersVI, address is 5002.0000.1b08
Internet Address is 192.168.10.252/24
```

```
NX-2(config)# show interface vlan 20
vlan20 is up, line protocol is up, autostate enabled
Hardware is EthersVI, address is 5002.0000.1b08
Internet Address is 192.168.20.252/24
```

Let's check the MAC Address table of NX-1 Primary Device the Gateway bit is not enabled.

```
NX-1(config)# show mac address-table vlan 10
```

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     0050.7966.6805   dynamic   0        F        F        Po10
G 10     5001.0000.1b08   static    -        F        F        sup-eth1(R)
* 10     5002.0000.1b08   static    -        F        F        VPC Peer-Link(R)
```

```
NX-1(config)#
```

```
NX-1(config)# show mac address-table vlan 20
```

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
-----+-----+-----+-----+-----+-----+-----
* 20     0050.7966.6803   dynamic   0        F        F        Po10
G 20     5001.0000.1b08   static    -        F        F        sup-eth1(R)
* 20     5002.0000.1b08   static    -        F        F        VPC Peer-Link(R)
```

```
NX-1(config)#
```

```
NX-1(config)# 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     0050.7966.6805   dynamic   0        F        F        Po10
* 20     0050.7966.6803   dynamic   0        F        F        Po10
G -      5001.0000.1b08   static    -        F        F        sup-eth1(R)
G 10     5001.0000.1b08   static    -        F        F        sup-eth1(R)
G 20     5001.0000.1b08   static    -        F        F        sup-eth1(R)
* 10     5002.0000.1b08   static    -        F        F        VPC Peer-Link(R)
* 20     5002.0000.1b08   static    -        F        F        VPC Peer-Link(R)
```

```
NX-1(config)#
```

let's find out the MAC Address of VLAN 10 and VLAN 20 on NX-1 Primary device.

```
NX-1(config)# show interface vlan 10
vlan10 is up, line protocol is up, autostate enabled
  Hardware is EthersVI, address is 5001.0000.1b08
  Internet Address is 192.168.10.251/24

NX-1(config)# show interface vlan 20
vlan20 is up, line protocol is up, autostate enabled
  Hardware is EthersVI, address is 5001.0000.1b08
  Internet Address is 192.168.20.251/24
```

Let's check the MAC Address table of NX-2 Secondary Device the Gateway bit is not enabled.

```
NX-2(config)# 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	0050.7966.6805	dynamic	0	F	F	Po10
+ 20	0050.7966.6803	dynamic	0	F	F	Po10
* 10	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
* 20	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G -	5002.0000.1b08	static	-	F	F	sup-eth1(R)
G 10	5002.0000.1b08	static	-	F	F	sup-eth1(R)
G 20	5002.0000.1b08	static	-	F	F	sup-eth1(R)

```
NX-2(config)#
```

```
NX-2(config)# show mac address-table vlan 10
```

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	0050.7966.6805	dynamic	0	F	F	Po10
* 10	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G 10	5002.0000.1b08	static	-	F	F	sup-eth1(R)

```
NX-2(config)# show mac address-table vlan 20
```

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
+ 20	0050.7966.6803	dynamic	0	F	F	Po10
* 20	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G 20	5002.0000.1b08	static	-	F	F	sup-eth1(R)

```
NX-2(config)#
```

vPC Peer-Gateway Enabled:

Let's enable vpc peer-gateway on both devices.

NX-1(config)# vpc domain 1
NX-1(config-vpc-domain)# peer-gateway
NX-1(config-vpc-domain)# end
NX-2(config)# vpc domain 1
NX-2(config-vpc-domain)# peer-gateway
NX-2(config-vpc-domain)# end

Let's check again after enable the peer-gateway feature now the gateway bit is there.

NX-1# 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	0050.7966.6805	dynamic	0	F	F	Po10
* 20	0050.7966.6803	dynamic	0	F	F	Po10
G -	5001.0000.1b08	static	-	F	F	sup-eth1(R)
G 10	5001.0000.1b08	static	-	F	F	sup-eth1(R)
G 20	5001.0000.1b08	static	-	F	F	sup-eth1(R)
G 10	5002.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G 20	5002.0000.1b08	static	-	F	F	vPC Peer-Link(R)

NX-1#

Let's check again after enable the peer-gateway feature now the gateway bit is there.

NX-2# 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	0050.7966.6805	dynamic	0	F	F	Po10
+ 20	0050.7966.6803	dynamic	0	F	F	Po10
G 10	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G 20	5001.0000.1b08	static	-	F	F	vPC Peer-Link(R)
G -	5002.0000.1b08	static	-	F	F	sup-eth1(R)
G 10	5002.0000.1b08	static	-	F	F	sup-eth1(R)
G 20	5002.0000.1b08	static	-	F	F	sup-eth1(R)

NX-2#