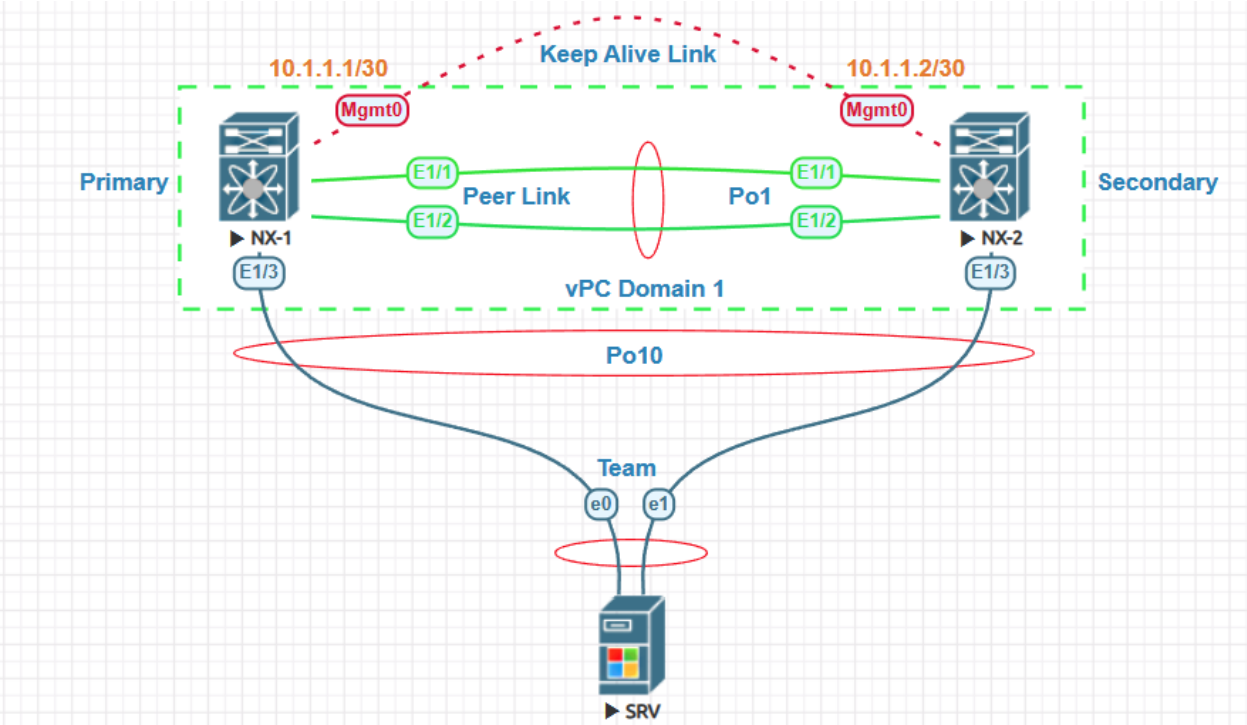
Cisco Nexus vPC & NIC Teaming Lab:



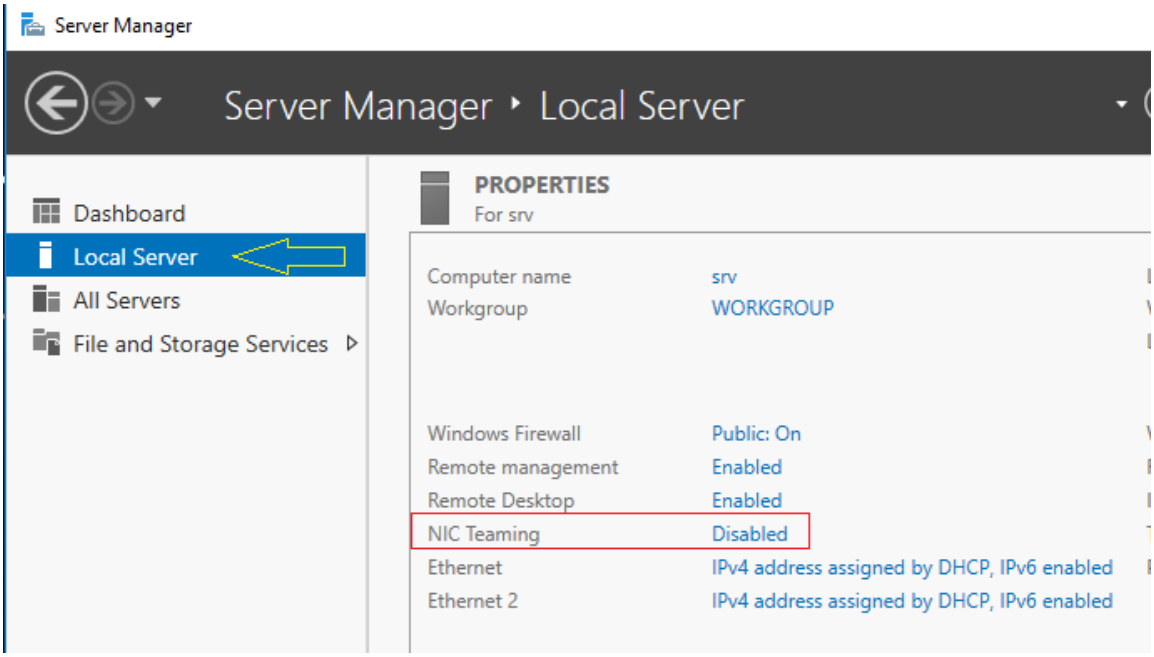
NX-1 Role	Primary
NX-2 Role	Secondary
NX-1 Priority	20
NX-2 Priority	30
Peer Links	E1/1 and E1/2
Keep Alive Link	Mgmt0
NX-1 Mgmt0 IP Address	10.1.1.1/30
NX-2 Mgmt0 IP Address	10.1.1.2/30
vPC Domain	1
Peer Link Portchannel	1
Member Portchannel	10
Member Ports	E1/3
Member Ports vPC	10
SRV Ports	E0 and E1
Windows Server Images	Winserver-S2016-R2-x64
Nexus Images Version	9300v 9.3.6
Nexus EVE-NG Image	nxosv9k-9.3.6

NX-1 Switch Configuration
Change hostname
switch(config)# hostname NX-1
Enable Features for vPC
NX-1(config)# feature vpc NX-1(config)# feature lacp
Configure Keep Alive Link
NX-1(config)# interface mgmt 0 NX-1(config-if)# ip address 10.1.1.1/30 NX-1(config-if)# no shutdown
Configure vPC Domain & Set Priorities
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
Configure Peer Link
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
Configure Peer Link Port-Channel
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
Configure Member Ports
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
Configure Member Port-Channel
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

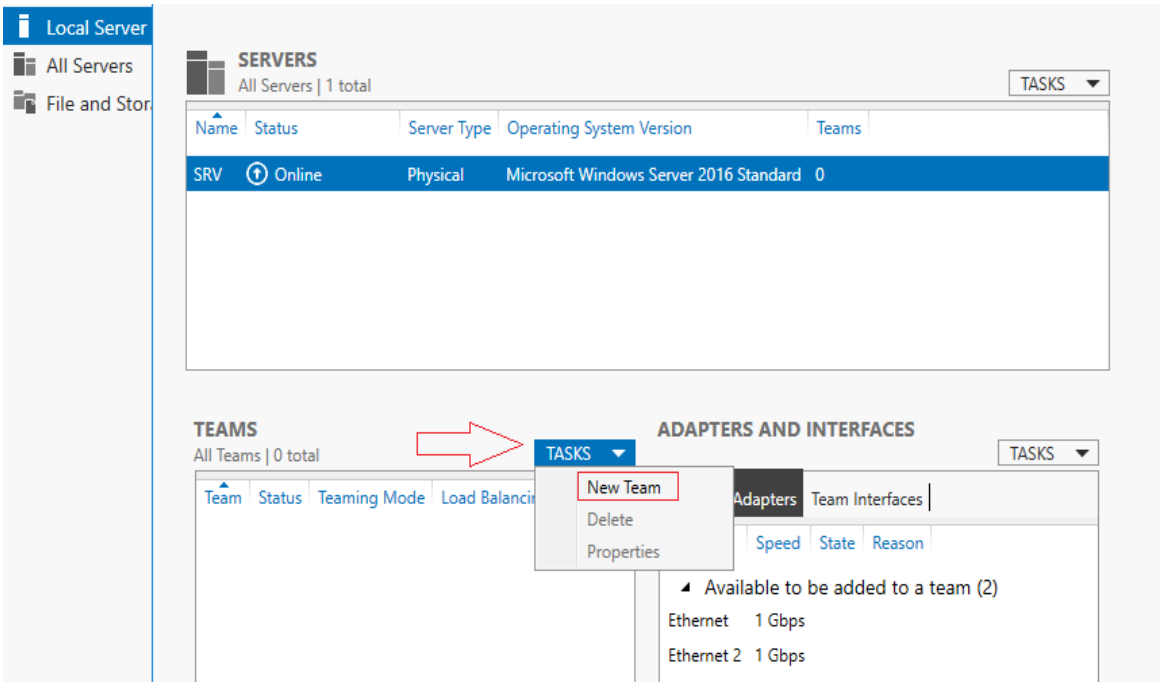
NX-2 Switch Configuration
Change hostname
switch(config)# hostname NX-2
Enable Features for vPC
NX-2(config)# feature vpc NX-2(config)# feature lacp
Configure Keep Alive Link
NX-2(config)# interface mgmt 0 NX-2(config-if)# ip address 10.1.1.2/30 NX-2(config-if)# no shutdown
Configure vPC Domain & Set Priorities
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
Configure Peer Link
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
Configure Peer Link Port-Channel
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
Configure Member Ports
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
Configure Member Port-Channel
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

Windows Server 2016 NIC Teaming:

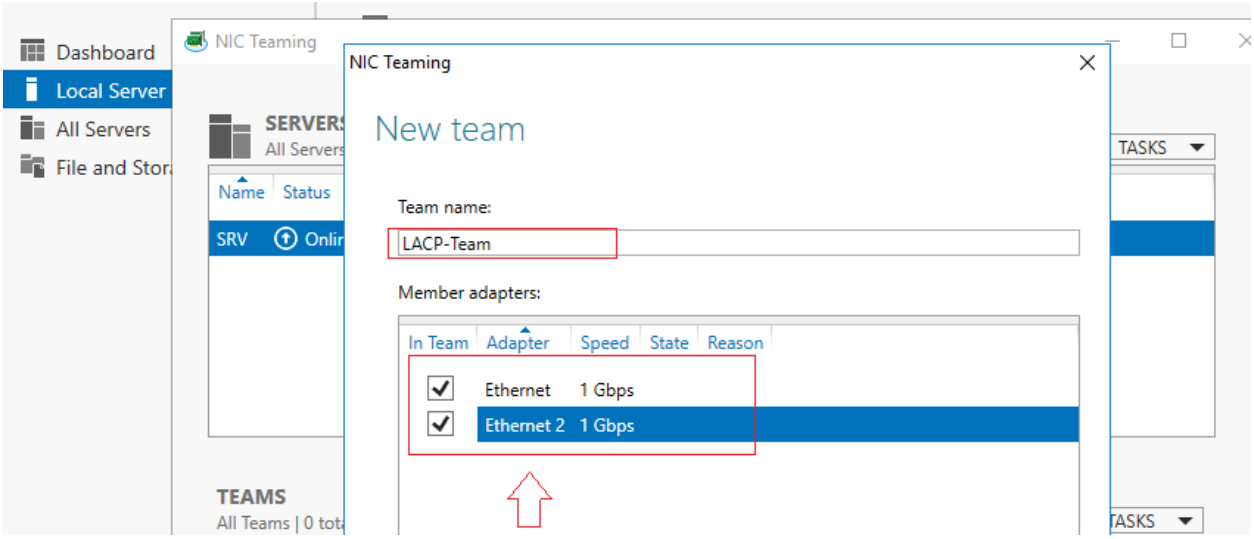
In Server Manager, select Local Server. In Properties, click NIC Teaming status – Disabled.



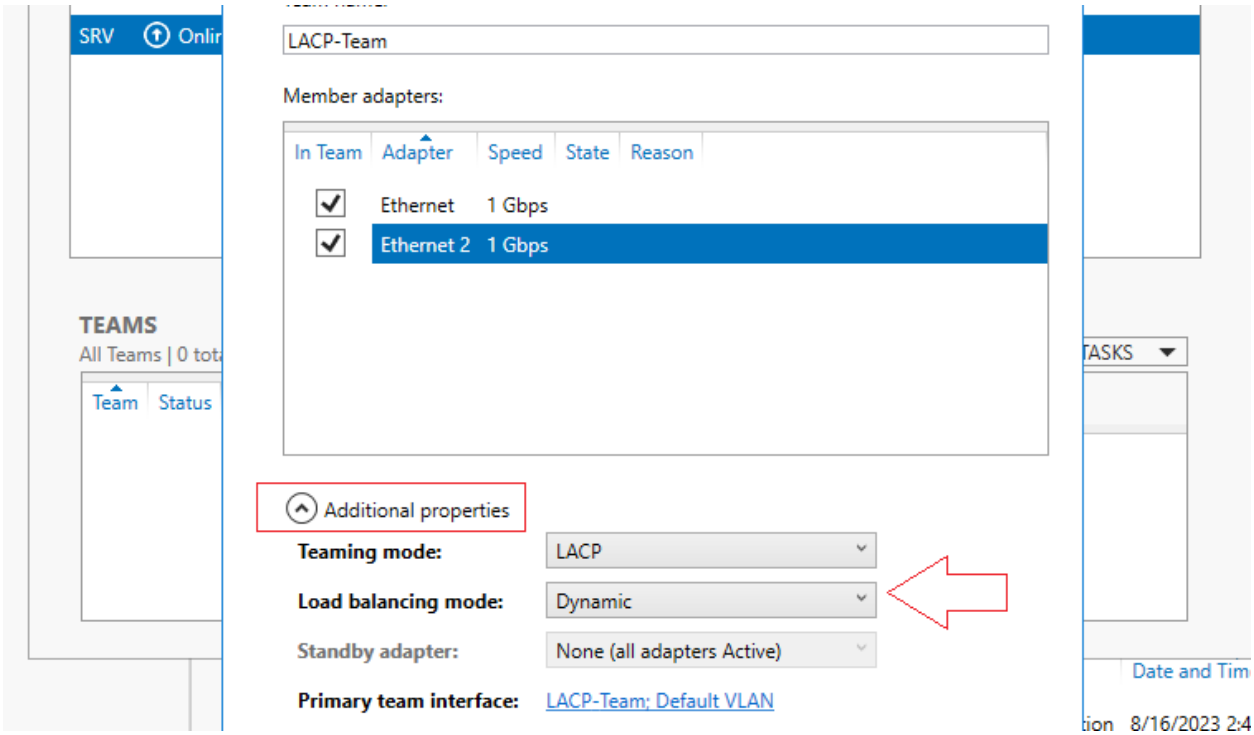
In NIC Teaming, from TASKS, select New Team.

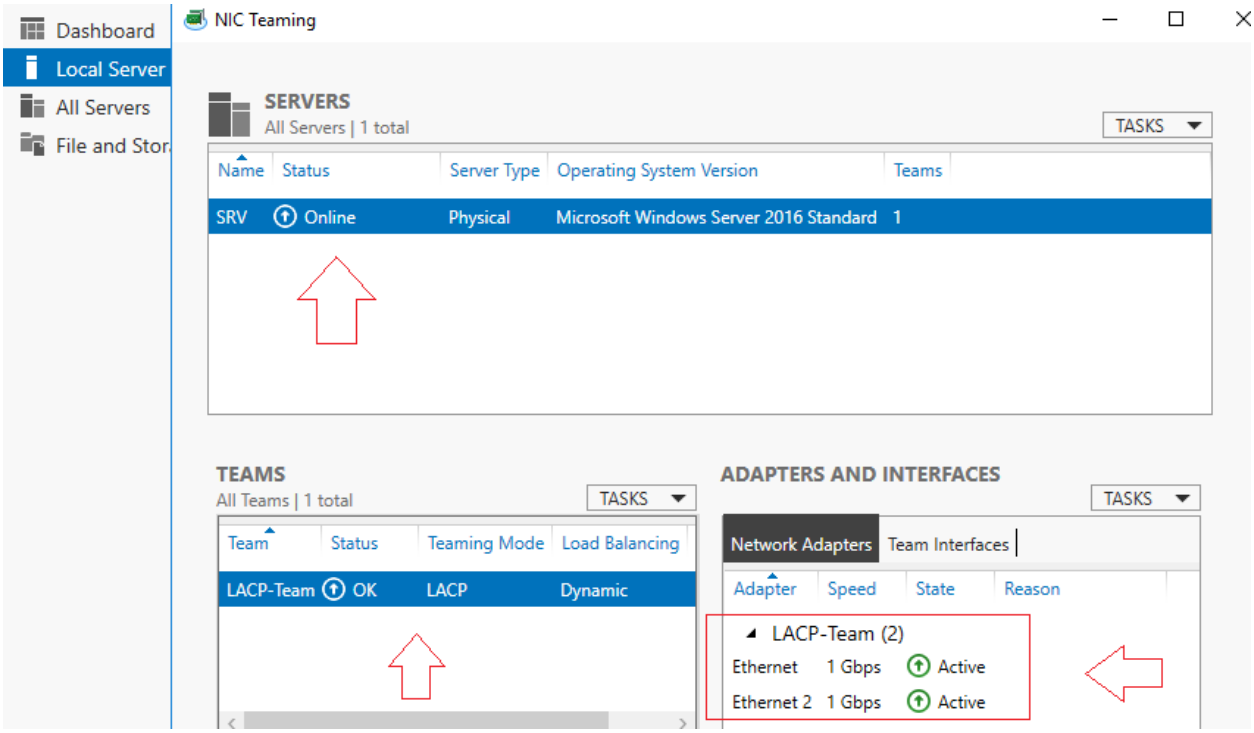


In New team, type the team name, for example LACP-Team, and select the NICs that you want to include in the team.

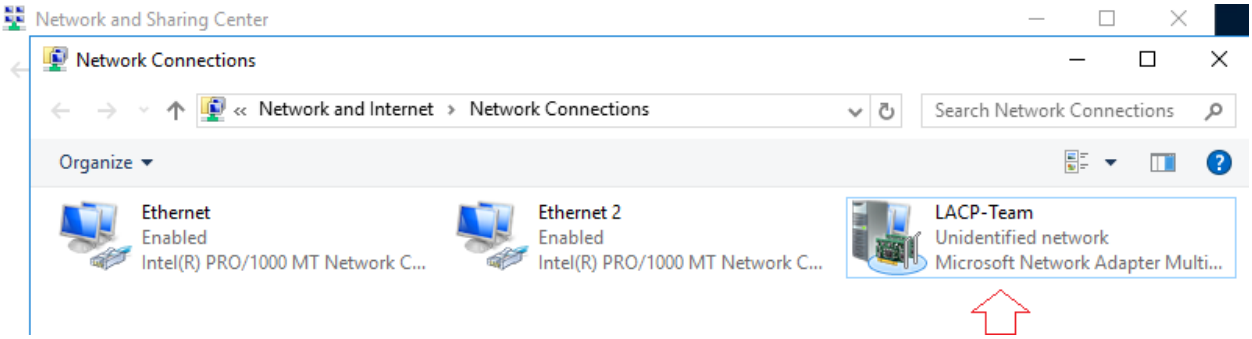


In Additional properties, set Teaming mode to LACP and Load balancing mode to Dynamic, and then click OK.





Open the list of network connections in the Control Panel. Make sure that a new device labeled Microsoft Network Adapter Multiplexor Driver has appeared. This is the NIC Teaming virtual adapter.



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

```
ACS#show etherchannel summary
Flags:  D - down        P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3      S - Layer2
        U - in use      N - not in use, no aggregation
        f - failed to allocate aggregator

        M - not in use, minimum links not met
        m - not in use, port not aggregated due to minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port

        A - formed by Auto LAG


Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------------------------
10     Po10(SU)        LACP      Gi0/0(P)    Gi0/1(P)



NX-1(config)# 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
--------------------------------------------------------------------------------
1     Po1(SU)     Eth      LACP      Eth1/1(P)    Eth1/2(P)
10    Po10(SU)    Eth      LACP      Eth1/3(P)
NX-1(config)#
```

```
NX-2(config)# 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
--------------------------------------------------------------------------------
1     Po1(SU)     Eth      LACP      Eth1/1(P)    Eth1/2(P)
10    Po10(SU)    Eth      LACP      Eth1/3(P)
NX-2(config)#

NX-2(config)# show vpc role

vPC Role status
----------------------------------------------------
vPC role                              : secondary
Dual Active Detection Status          : 0
vPC system-mac                        : 00:23:04:ee:be:01
vPC system-priority                   : 32667
vPC local system-mac                  : 50:02:00:00:1b:08
vPC local role-priority               : 30
vPC local config role-priority        : 30
vPC peer system-mac                   : 50:01:00:00:1b:08
vPC peer role-priority                : 20
vPC peer config role-priority         : 20
NX-2(config)#
```

```
NX-1(config)# show vpc
Legend:
                (*) - local vPC is down, forwarding via vPC peer-link

vPC domain id                     : 1
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                      : Disabled
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             : Disabled

vPC Peer-link status
---------------------------------------------------------------------
id    Port   Status Active vlans
--    ----   ------ --------------------------------------------------
1     Po1    up     1


vPC status
----------------------------------------------------------------------------
Id    Port          Status Consistency Reason                Active vlans
--    ------------  ------ ----------- ------                ---------------
10    Po10          up     success     success               1

NX-2(config)# show vpc peer-keepalive

vPC keep-alive status             : peer is alive
--Peer is alive for               : (1286) seconds, (827) msec
--Send status                     : Success
--Last send at                    : 2023.08.12 11:58:30 796 ms
--Sent on interface               : mgmt0
--Receive status                  : Success
--Last receive at                 : 2023.08.12 11:58:30 797 ms
--Received on interface           : mgmt0
--Last update from peer           : (0) seconds, (67) msec

vPC Keep-alive parameters
--Destination                     : 10.1.1.1
--Keepalive interval              : 1000 msec
--Keepalive timeout               : 5 seconds
--Keepalive hold timeout          : 3 seconds
--Keepalive vrf                   : management
--Keepalive udp port              : 3200
--Keepalive tos                   : 192
NX-2(config)#
```