

# Data Center Multi-Layer VPC Design Aggregation Layer Failure Scenarios (LACP) Configuration Example: Part I

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## Introduction

### Test Details: Goals of this test

Data Center Multi-Layer VPC design aggregation layer failure scenarios are depicted in this document. The tests involve a multiple VPC domain design with VPC extended from Core to Aggregation as well as Aggregation to Access. The Failure scenarios covered in this test document are the following:

- Failure of the Peer Keepalive link - simulated by the shutdown of Ethernet1/1 on AGG1 router
- Failure of a single link in the Peer-link bundle - simulated by shutting down either Ethernet2/1 on the AGG1 router
- Failure of the peer-link port-channel - simulated by shutting down the Port-channel 3000 interface between AGG1 and AGG2 routers
- SFM module failure on Aggregation router
- Supervisor failure/switchover on an aggregation router
- Linecard failure on the AGG1 router
- Failure of an aggregation node

### Data to Record

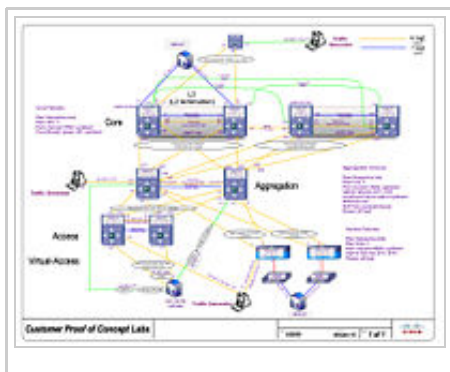
Verification of operation of VPC and its configuration using the following commands:

- show vpc brief
- show port-channel summary
- show port-channel traffic
- show run int port-channel xxxx
- show run vpc

Estimated Time: 120 minutes

# Topology

Click on thumbnail to enlarge:



## Procedures

1. This document highlights the failure scenarios with the above mentioned topology in the Aggregation layer.
2. The following failures were conducted on the Aggregation layer to verify the operation and resiliency of VPC in a multi-domain VPC environment with the entire Data Center running on VPC.

- Failure of the Peer Keepalive link - simulated by the shutdown of Ethernet1/1 on AGG1 router
- Failure of a single link in the Peer-link bundle- Simulated by shutting down either Ethernet2/1 on the AGG1 router
- Failure of the peer-link port-channel- Simulated by shutting down the Port-channel 3000 interface between AGG1 and AGG2 routers
- SFM module failure on Aggregation router
- Supervisor Failure/switchover on an aggregation router
- Linecard failure on the AGG1 router
- Failure of an aggregation node

## Baseline Configurations for VPC on all routers

### Configs for Core1-VDC1

```

CORE1-F10# show run vpc
!Command: show running-config vpc
version 4.2(1)
feature vpc

vpc domain 1
 peer-keepalive destination 11.21.1.2 source 11.21.1.1 vrf peerkeepalive

interface port-channel50
 vpc 50

interface port-channel100
 vpc 100

interface port-channel1000

```

```
vpc peer-link

CORE1-F10# show run int vlan 100

!Command: show running-config interface Vlan100

version 4.2(1)

interface Vlan100
  no shutdown
  description Server Subnet - Vlan 100
  ip address 100.100.11.1/24
  ip router ospf 100 area 0.0.0.0
  hsrp 100
    preempt delay minimum 15
    priority 120
    timers 1 3
    ip 100.100.11.254

CORE1-F10# show run int port-channel 50

!Command: show running-config interface port-channel50

version 4.2(1)

interface port-channel50
  description Port-Channel to Northbound Test Port (via 6500)
  switchport
  switchport mode trunk
  vpc 50
  switchport trunk allowed vlan 1,100
  spanning-tree port type edge trunk
  spanning-tree bpdufilter enable

CORE1-F10# show run int port-channel 100

!Command: show running-config interface port-channel100

version 4.2(1)

interface port-channel100
  description vPC to Aggregation Layer
  switchport
  switchport mode trunk
  vpc 100
  switchport trunk allowed vlan 1,100

CORE1-F10# show run int port-channel 1000

!Command: show running-config interface port-channel1000

version 4.2(1)

interface port-channel1000
  description vPC Peerlink (eth 2/1,eth 4/1)
  switchport
  switchport mode trunk
  vpc peer-link
  switchport trunk allowed vlan 1,50,100
  spanning-tree port type network

CORE1-F10# 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
        S - Switched      R - Routed
        U - Up (port-channel)
```

```

-----
Group Port-      Type      Protocol  Member Ports
Channel
-----
50    Po50 (SU)    Eth       LACP      Eth2/26 (P)
100   Po100 (SU)   Eth       LACP      Eth2/9 (P)   Eth2/10 (P)
1000  Po1000 (SU) Eth       LACP      Eth2/1 (P)   Eth4/1 (P)

```

```

CORE1-F10# show run int eth 2/26

```

```

!Command: show running-config interface Ethernet2/26

```

```

version 4.2(1)

```

```

interface Ethernet2/26
  description Connection to Catalyst 6500 te5/1 (for Connectivity)
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100
  rate-mode dedicated force
  channel-group 50 mode active
  no shutdown

```

```

CORE1-F10# show run int eth 2/9

```

```

!Command: show running-config interface Ethernet2/9

```

```

version 4.2(1)

```

```

interface Ethernet2/9
  description Connection to AGG2 eth 2/17
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100
  rate-mode dedicated force
  channel-group 100 mode active
  no shutdown

```

```

CORE1-F10# show run int eth 2/10

```

```

!Command: show running-config interface Ethernet2/10

```

```

version 4.2(1)

```

```

interface Ethernet2/10
  description Connection to AGG1 eth 2/17
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100
  rate-mode dedicated force
  channel-group 100 mode active
  no shutdown

```

```

CORE1-F10# show run int eth 2/1

```

```

!Command: show running-config interface Ethernet2/1

```

```

version 4.2(1)

```

```

interface Ethernet2/1
  description vPC Peerlink Member Port #1 (por 1000)
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,50,100
  rate-mode dedicated force
  udd aggressive
  channel-group 1000 mode active

```

```

no shutdown

CORE1-F10# show run int eth 4/1

!Command: show running-config interface Ethernet4/1

version 4.2(1)

interface Ethernet4/1
  description vPC Peerlink Member Port #2 (por 1000)
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,50,100
  rate-mode dedicated force
  uddl aggressive
  channel-group 1000 mode active
  no shutdown

CORE1-F10# show vpc brief
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
vPC role               : secondary
Number of vPCs configured : 2
Peer Gateway           : Disabled
Dual-active excluded VLANs : -

vPC Peer-link status
-----
id   Port   Status Active vlans
--   -
1    Po1000 up    1,100

vPC status
-----
id   Port   Status Consistency Reason           Active vlans
--   -
50   Po50   up     success   success           1,100
100  Po100  up     success   success           1,100

```

## Configs for Core2-VDC1

```

CORE2-F11# show run vpc

!Command: show running-config vpc

version 4.2(1)
feature vpc

vpc domain 1
  peer-keepalive destination 11.21.1.1 source 11.21.1.2 vrf peerkeepalive

interface port-channel50
  vpc 50

interface port-channel100
  vpc 100

interface port-channel1000
  vpc peer-link

```

```

CORE2-F11# show run int port-channel 50

!Command: show running-config interface port-channel50

version 4.2(1)

interface port-channel50
  description Port-Channel to Northbound Test Port (via 6500)
  switchport
  switchport mode trunk
  vpc 50
  switchport trunk allowed vlan 1,100
  spanning-tree port type edge trunk
  spanning-tree bpdufilter enable

CORE2-F11# show run int port-channel 100

!Command: show running-config interface port-channel100

version 4.2(1)

interface port-channel100
  description vPC to Aggregation Layer
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100
  vpc 100

CORE2-F11# show run int port-channel 1000

!Command: show running-config interface port-channel1000

version 4.2(1)

interface port-channel1000
  description vPC Peerlink (eth 2/1, eth 4/1)
  switchport
  switchport mode trunk
  vpc peer-link
  switchport trunk allowed vlan 1,100
  spanning-tree port type network

CORE2-F11# 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
        S - Switched     R - Routed
        U - Up (port-channel)

-----
Group Port-      Type      Protocol  Member Ports
  Channel
-----
50     Po50(SU)   Eth       LACP      Eth2/26(P)
100    Po100(SU)  Eth       LACP      Eth2/9(P)   Eth2/10(P)
1000   Po1000(SU) Eth       LACP      Eth2/1(P)   Eth4/1(P)
CORE2-F11# show run int eth 2/26

!Command: show running-config interface Ethernet2/26

version 4.2(1)

interface Ethernet2/26
  description Connection to Catalyst 6500 te5/1 (for Connectivity)
  switchport
  switchport mode trunk

```

```
switchport trunk allowed vlan 1,100
rate-mode dedicated force
channel-group 50 mode active
no shutdown
```

```
CORE2-F11# show run int eth 2/9
```

```
!Command: show running-config interface Ethernet2/9
```

```
version 4.2(1)
```

```
interface Ethernet2/9
description Connection to AGG1 eth 2/18
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100
rate-mode dedicated force
channel-group 100 mode active
no shutdown
```

```
CORE2-F11# show run int eth 2/10
```

```
!Command: show running-config interface Ethernet2/10
```

```
version 4.2(1)
```

```
interface Ethernet2/10
description Connection to AGG2 eth 2/18
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100
rate-mode dedicated force
channel-group 100 mode active
no shutdown
```

```
CORE2-F11# show run int eth 2/1
```

```
!Command: show running-config interface Ethernet2/1
```

```
version 4.2(1)
```

```
interface Ethernet2/1
description vPC Peerlink Member Port #1 (por 1000)
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100
rate-mode dedicated force
udld aggressive
channel-group 1000 mode active
no shutdown
```

```
CORE2-F11# show run int eth 4/1
```

```
!Command: show running-config interface Ethernet4/1
```

```
version 4.2(1)
```

```
interface Ethernet4/1
description vPC Peerlink Member Port #2 (por 1000)
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100
rate-mode dedicated force
udld aggressive
channel-group 1000 mode active
no shutdown
```

```
CORE2-F11# show run int vlan 100
!Command: show running-config interface Vlan100
version 4.2(1)
interface Vlan100
  no shutdown
  description Server Subnet - Vlan 100
  ip address 100.100.11.2/24
  ip router ospf 100 area 0.0.0.0
  hsrp 100
    preempt delay minimum 15
    timers 1 3
  ip 100.100.11.254
```

## Configuration of AGG1

```
AGG1-F12# show run vpc
!Command: show running-config vpc
version 4.2(1)
feature vpc
vpc domain 2
  role priority 1
  peer-keepalive destination 111.211.1.2 source 111.211.1.1 vrf peerkeepalive

interface port-channel10
  vpc 10

interface port-channel20
  vpc 20

interface port-channel100
  vpc 100

interface port-channel200
  vpc 200

interface port-channel300
  vpc 300

interface port-channel600
  vpc 600

interface port-channel3000
  vpc peer-link

AGG1-F12# show run int port-channel 10
!Command: show running-config interface port-channel10
version 4.2(1)
interface port-channel10
  description Port Channel to ACC3 Nexus 5K
  switchport
  switchport mode trunk
  vpc 10
  switchport trunk allowed vlan 1,100,200
```



```
AGG1-F12# show run int port-channel 20
!Command: show running-config interface port-channel20

version 4.2(1)

interface port-channel20
  description Port Channel to ACC4 Nexus 5K
  switchport
  switchport mode trunk
  vpc 20
  switchport trunk allowed vlan 1,100,200

AGG1-F12# show run int port-channel 100
!Command: show running-config interface port-channel100

version 4.2(1)

interface port-channel100
  description Port Channel to Core Layer - VDC1
  switchport
  switchport mode trunk
  vpc 100
  switchport trunk allowed vlan 1,100

AGG1-F12# show run int port-channel 200
!Command: show running-config interface port-channel200

version 4.2(1)

interface port-channel200
  description Port Channel to Core Layer - VDC2
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,200
  vpc 200

AGG1-F12# show run int port-channel 300
!Command: show running-config interface port-channel300

version 4.2(1)

interface port-channel300
  description Port Channel to Access Layer
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  vpc 300

AGG1-F12# show run int port-channel 600
!Command: show running-config interface port-channel600

version 4.2(1)

interface port-channel600
  description Port Channel to SVR-WIN TEAM2 (100.100.11.201)
  switchport
  vpc 600
  switchport access vlan 100

AGG1-F12# show run int port-channel 3000
```

```
!Command: show running-config interface port-channel3000
```

```
version 4.2(1)
```

```
interface port-channel3000
  description vPC Peerlink
  switchport
  switchport mode trunk
  vpc peer-link
  switchport trunk allowed vlan 1,100,200
  spanning-tree port type network
```

```
AGG1-F12# 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
        S - Switched      R - Routed
        U - Up (port-channel)
```

```
-----
```

Group	Port-Channel	Type	Protocol	Member Ports
10	Po10(SU)	Eth	LACP	Eth3/1(P)
20	Po20(SU)	Eth	LACP	Eth3/2(P)
100	Po100(SU)	Eth	LACP	Eth2/17(P) Eth2/18(P)
200	Po200(SU)	Eth	LACP	Eth2/25(P) Eth2/26(P)
300	Po300(SU)	Eth	LACP	Eth3/9(P) Eth3/10(P)
600	Po600(SU)	Eth	NONE	Eth3/17(P)
3000	Po3000(SU)	Eth	LACP	Eth2/1(P) Eth2/2(P) Eth3/25(P) Eth3/26(P)

```
AGG1-F12# show run int eth 3/1
```

```
!Command: show running-config interface Ethernet3/1
```

```
version 4.2(1)
```

```
interface Ethernet3/1
  description Member Port #1 for Port-Channel 10 (N5K ACC3)
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  rate-mode dedicated force
  channel-group 10 mode active
  no shutdown
```

```
AGG1-F12# show run int eth 2/1
```

```
!Command: show running-config interface Ethernet2/1
```

```
version 4.2(1)
```

```
interface Ethernet2/1
  description Member port for Peerlink #1
  switchport
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  rate-mode dedicated force
  channel-group 3000 mode active
  no shutdown
```

```
AGG1-F12# show vpc brief
```

```
Legend:
```

```
(*) - local vPC is down, forwarding via vPC peer-link
```

```
vPC domain id          : 2
Peer status            : peer adjacency formed ok
vPC keep-alive status  : peer is alive
```

```

Configuration consistency status: success
vPC role                          : primary
Number of vPCs configured         : 6
Peer Gateway                       : Disabled
Dual-active excluded VLANs       : -

```

```
vPC Peer-link status
```

```

-----
id   Port   Status Active vlans
-----
1    Po3000 up     1,100,200

```

```
vPC status
```

```

-----
id   Port   Status Consistency Reason           Active vlans
-----
10   Po10   up     success   success           1,100,200
20   Po20   up     success   success           1,100,200
100  Po100  up     success   success           1,100
200  Po200  up     success   success           1,200
300  Po300  up     success   success           1,100,200
600  Po600  up     success   success           100

```

## Configuration of AGG2:

```
AGG2-F13# show run vpc
```

```
!Command: show running-config vpc
```

```

version 4.2(1)
feature vpc

vpc domain 2
 peer-keepalive destination 111.211.1.1 source 111.211.1.2 vrf peerkeepalive

interface port-channel10
 vpc 10

interface port-channel20
 vpc 20

interface port-channel100
 vpc 100

interface port-channel200
 vpc 200

interface port-channel300
 vpc 300

interface port-channel600
 vpc 600

interface port-channel3000
 vpc peer-link

```

```
AGG2-F13# show run int port-channel 10
```

```
!Command: show running-config interface port-channel10
```

```

version 4.2(1)

interface port-channel10
 description Port Channel to ACC3 (N5K)

```

```
switchport
switchport mode trunk
vpc 10
switchport trunk allowed vlan 1,100,200

AGG2-F13# show run int port-channel 20
!Command: show running-config interface port-channel20

version 4.2(1)

interface port-channel20
description Port Channel to ACC4 (N5K)
switchport
switchport mode trunk
vpc 20
switchport trunk allowed vlan 1,100,200

AGG2-F13# show run int port-channel 100
!Command: show running-config interface port-channel100

version 4.2(1)

interface port-channel100
description Port Channel to Core Layer VDC1
switchport
switchport mode trunk
vpc 100
switchport trunk allowed vlan 1,100,200

AGG2-F13# show run int port-channel 200
!Command: show running-config interface port-channel200

version 4.2(1)

interface port-channel200
description Port Channel to Core Layer VDC2
switchport
switchport mode trunk
vpc 200
switchport trunk allowed vlan 1,100,200

AGG2-F13# show run int port-channel 300
!Command: show running-config interface port-channel300

version 4.2(1)

interface port-channel300
description Port Channel to Access Layer N7Ks
switchport
switchport mode trunk
vpc 300
switchport trunk allowed vlan 1,100,200

AGG2-F13# show run int port-channel 600
!Command: show running-config interface port-channel600

version 4.2(1)

interface port-channel600
description Port Channel to SVR-WIN TEAM2 (100.100.11.201)
```

```

switchport
vpc 600
switchport access vlan 100
AGG2-F13# show run int port-channel 3000
!Command: show running-config interface port-channel3000

version 4.2(1)

interface port-channel3000
description vPC Peerlink
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100,200
vpc peer-link
spanning-tree port type network
AGG2-F13# 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
        S - Switched      R - Routed
        U - Up (port-channel)
-----
Group Port-      Type      Protocol  Member Ports
Channel
-----
10    Po10(SU)   Eth       LACP      Eth3/1(P)
20    Po20(SU)   Eth       LACP      Eth3/2(P)
100   Po100(SU)  Eth       LACP      Eth2/17(P)  Eth2/18(P)
200   Po200(SU)  Eth       LACP      Eth2/25(P)  Eth2/26(P)
300   Po300(SU)  Eth       LACP      Eth3/9(P)   Eth3/10(P)
600   Po600(SU)  Eth       NONE      Eth3/17(P)
1000  Po1000(SD) Eth       NONE      --
3000  Po3000(SU) Eth       LACP      Eth2/1(P)   Eth2/2(P)   Eth2/9(P)
                                   Eth2/10(P)
AGG2-F13# show run int eth 3/1
!Command: show running-config interface Ethernet3/1

version 4.2(1)

interface Ethernet3/1
description Member Port #1 for Port-Channel 10 (N5K ACC3)
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100,200
rate-mode dedicated force
channel-group 10 mode active
no shutdown
AGG2-F13# show run int eth 2/1
!Command: show running-config interface Ethernet2/1

version 4.2(1)

interet2/1
description Peer keep-alive Member Port #1
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100,200
rate-mode dedicated force
channel-group 3000 mode active
no shutdown

```

```

AGG2-F13# show vpc brief
Legend:
          (*) - local vPC is down, forwarding via vPC peer-link

vPC domain id          : 2
Peer status            : peer adjacency formed ok
vPC keep-alive status  : peer is alive
Configuration consistency status: success
vPC role               : secondary
Number of vPCs configured : 6
Peer Gateway          : Disabled
Dual-active excluded VLANs : -

vPC Peer-link status
-----
id   Port   Status Active vlans
--   -
1    Po3000 up    1,100,200

vPC status
-----
id   Port   Status Consistency Reason           Active vlans
--   -
10   Po10   up    success  success          1,100,200
20   Po20   up    success  success          1,100,200
100  Po100  up    success  success          1,100
200  Po200  up    success  success          1,200
300  Po300  up    success  success          1,100,200
600  Po600  up    success  success          100

AGG2-F13#

```

### Configuration of ACC1:

```

ACC1-I13# show run vpc
!Command: show running-config vpc

version 4.2(1)
feature vpc

vpc domain 1
  role priority 1
  peer-keepalive destination 112.212.1.2 source 112.212.1.1 vrf peerkeepalive

interface port-channel300
  vpc 300

interface port-channel500
  vpc 500

interface port-channel4000
  vpc peer-link

ACC1-I13# show run int port-channel 300
!Command: show running-config interface port-channel300

version 4.2(1)

interface port-channel300
  description Port Channel to AGG Layer N7Ks
  switchport
  switchport mode trunk

```

```

switchport trunk allowed vlan 1,100,200
vpc 300

ACC1-I13# show run int port-channel 500

!Command: show running-config interface port-channel500

version 4.2(1)

interface port-channel500
 description Port Channel to SVR-WIN (vPC 500)
 switchport
 vpc 500
 switchport access vlan 100

ACC1-I13# show run int port-channel 4000

!Command: show running-config interface port-channel4000

version 4.2(1)

interface port-channel4000
 description Peerlink Port Channel (eth2/1 - eth2/2)
 switchport
 switchport mode trunk
 vpc peer-link
 switchport trunk allowed vlan 1,100,200
 spanning-tree port type network

ACC1-I13# 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
        S - Switched     R - Routed
        U - Up (port-channel)

-----
Group Port-      Type      Protocol  Member Ports
   Channel
-----
300   Po300(SU)   Eth       LACP      Eth2/9(P)   Eth2/10(P)
500   Po500(SU)   Eth       NONE      Eth2/17(P)
4000  Po4000(SU)  Eth       LACP      Eth2/1(P)   Eth2/2(P)
ACC1-I13# show run int eth 2/9

!Command: show running-config interface Ethernet2/9

version 4.2(1)

interface Ethernet2/9
 description Member Port #1 - vPC 300 to AGG Layer
 switchport
 switchport mode trunk
 switchport trunk allowed vlan 1,100,200
 rate-mode dedicated force
 channel-group 300 mode active
 no shutdown

ACC1-I13# show run int eth 2/17

!Command: show running-config interface Ethernet2/17

version 4.2(1)

interface Ethernet2/17
 description Connects to SVR-WIN TEAM1 (100.100.11.202)
 switchport

```

```

switchport access vlan 100
rate-mode dedicated force
channel-group 500
no shutdown

ACC1-I13# show run int eth 2/1

!Command: show running-config interface Ethernet2/1

version 4.2(1)

interface Ethernet2/1
description Peerlink Member Port #1
switchport
switchport mode trunk
switchport trunk allowed vlan 1,100,200
rate-mode dedicated force
channel-group 4000 mode active
no shutdown

ACC1-I13# show vpc brief
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
vPC role                 : primary
Number of vPCs configured : 2
Peer Gateway             : Disabled
Dual-active excluded VLANs : -

vPC Peer-link status
-----
id   Port   Status Active vlans
--   -
1    Po4000 up     1,100,200

vPC status
-----
id   Port   Status Consistency Reason           Active vlans
--   -
300  Po300  up     success    success           1,100,200
500  Po500  up     success    success           100

```

## Configuration of ACC2:

```

ACC2-I12# show run vpc

!Command: show running-config vpc

version 4.2(1)
feature vpc

vpc domain 1
peer-keepalive destination 112.212.1.1 source 112.212.1.2 vrf peerkeepalive

interface port-channel300
vpc 300

interface port-channel500
vpc 500

```



```

interface port-channel4000
 vpc peer-link
ACC2-I12# show run int port-channel 300
!Command: show running-config interface port-channel300

version 4.2(1)

interface port-channel300
 description vPC to AGG Layer N7Ks
 switchport
 switchport mode trunk
 vpc 300
 switchport trunk allowed vlan 1,100,200
ACC2-I12# show run int port-channel 500
!Command: show running-config interface port-channel500

version 4.2(1)

interface port-channel500
 description Port Channel to SVR-WIN TEAM1 (eth 2/17)
 switchport
 vpc 500
 switchport access vlan 100
ACC2-I12# show run int port-channel 4000
!Command: show running-config interface port-channel4000

version 4.2(1)

interface port-channel4000
 description vPC Peerlink (eth 2/1 - eth 2/2)
 switchport
 switchport mode trunk
 vpc peer-link
 switchport trunk allowed vlan 1,100,200
 spanning-tree port type network
ACC2-I12# 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
        S - Switched     R - Routed
        U - Up (port-channel)
-----
Group Port-      Type      Protocol  Member Ports
   ID Channel
-----
300   Po300(SU)  Eth       LACP      Eth2/9(P)   Eth2/10(P)
500   Po500(SU)  Eth       NONE      Eth2/17(P)
4000  Po4000(SU) Eth       LACP      Eth2/1(P)   Eth2/2(P)
ACC2-I12# show run int eth 2/9
!Command: show running-config interface Ethernet2/9

version 4.2(1)

interface Ethernet2/9
 switchport
 switchport mode trunk
 switchport trunk allowed vlan 1,100,200
 rate-mode dedicated force

```

```

channel-group 300 mode active
no shutdown
ACC2-I12# show run int eth 2/17
!Command: show running-config interface Ethernet2/17

version 4.2(1)

interface Ethernet2/17
 switchport
 switchport access vlan 100
 rate-mode dedicated force
 channel-group 500
 no shutdown
ACC2-I12# show run int eth 2/1
!Command: show running-config interface Ethernet2/1

version 4.2(1)

interface Ethernet2/1
 description Peerlink Member Port #1
 switchport
 switchport mode trunk
 switchport trunk allowed vlan 1,100,200
 rate-mode dedicated force
 channel-group 4000 mode active
 no shutdown
ACC2-I12# show vpc brief
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
vPC role               : secondary
Number of vPCs configured : 2
Peer Gateway          : Disabled
Dual-active excluded VLANs : -

vPC Peer-link status
-----
id   Port   Status Active vlans
--   -
1    Po4000 up    1,100,200

vPC status
-----
id   Port   Status Consistency Reason           Active vlans
--   -
300  Po300  up     success   success           1,100,200
500  Po500  up     success   success           100

```

### Configuration of ACC3:

```

n5k-F10# 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
        S - Switched     R - Routed

```

U - Up (port-channel)

```
-----
Group Port-      Type      Protocol  Member Ports
Channel
-----
10    Po10(SU)   Eth       LACP      Eth1/1(P)   Eth1/2(P)
```

```
n5k-F10# show run int port-channel 10
```

```
version 4.0(1a)N2(1a)
```

```
interface port-channel10
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
```

```
n5k-F10# show run int eth 1/1
```

```
version 4.0(1a)N2(1a)
```

```
interface Ethernet1/1
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  channel-group 10 mode active
```

```
n5k-F10# show run int eth 1/2
```

```
version 4.0(1a)N2(1a)
```

```
interface Ethernet1/2
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  channel-group 10 mode active
```

```
n5k-F10# show run int eth 1/7
```

```
version 4.0(1a)N2(1a)
```

```
interface Ethernet1/7
  spanning-tree port type edge
  switchport access vlan 100
```

## Configuration of ACC4:

```
n5k-F11# 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
        S - Switched     R - Routed
        U - Up (port-channel)
```

```
-----
Group Port-      Type      Protocol  Member Ports
Channel
-----
20    Po20(SU)   Eth       LACP      Eth1/1(P)   Eth1/2(P)
```

```
n5k-F11# show run int eth 1/1
```

```
version 4.0(1a)N2(1a)
```

```
interface Ethernet1/1
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  channel-group 20 mode active
```

```
n5k-F11# show run int eth 1/2
```

```
version 4.0(1a)N2(1a)
```

```
interface Ethernet1/2
  switchport mode trunk
  switchport trunk allowed vlan 1,100,200
  channel-group 20 mode active
```

```
n5k-F11# show run int port-channel 20
```

```
version 4.0(1a)N2(1a)
```

```
interface port-channel20
 switchport mode trunk
 switchport trunk allowed vlan 1,100,200
```

## Related Information

Technical Support & Documentation - Cisco Systems (<http://www.cisco.com/cisco/web/psa/default.html?mode=prod>)

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