

# Rastreo de objetos del vPC

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## Introducción

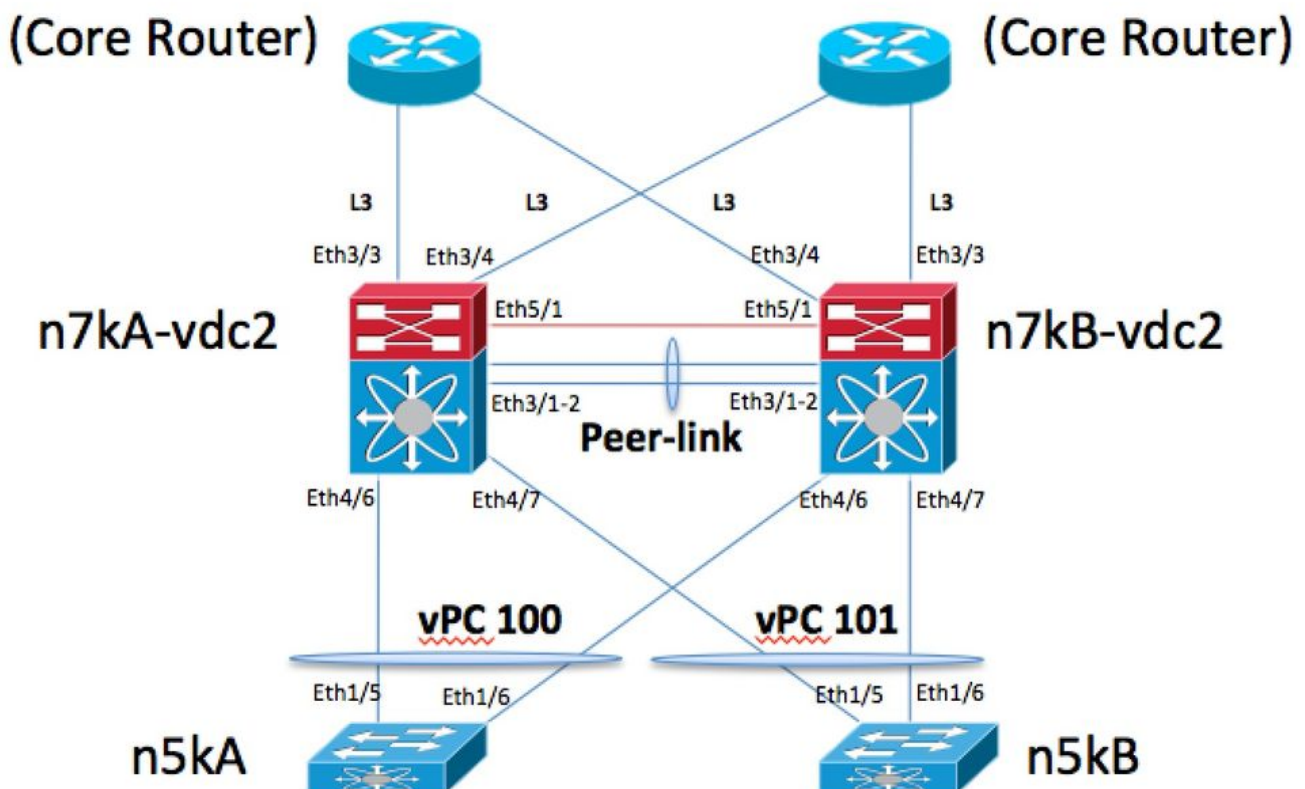
Este documento describe el Rastreo de objetos del vPC, porqué se utiliza, y cómo trabaja.

## Rastreo de objetos del vPC

### Diagrama de la red

Aquí está el diagrama de la red usado para esta demostración:

## vPC Object Tracking Topology



El par del vPC que el link es el Ethernet 5/1 del canal del puerto 1. es el link del par-keepalive del vPC. Hay dos routers del núcleo que están conectados vía los links e3/3 y e3/4 L3 /30 en cada cuadro N7K. N5KA y N5KB están simulando el vPC del Switches L2 conectado en el vPC 100 y el vPC 101. N7KA es el Dispositivo principal del vPC.

## Comandos show de la línea de fondo

N7KA:

```
N7KA-vdc2# show run vpc
```

```
!Command: show running-config vpc
!Time: Thu Sep 26 19:51:57 2013
```

```
version 6.1(4)
feature vpc
```

```
vpc domain 102
  peer-keepalive destination 1.1.1.2 source 1.1.1.1 vrf vpc-keepalive
  peer-gateway
  track 1
  auto-recovery
```

```
interface port-channel1
  vpc peer-link
```

```
interface port-channel100
  vpc 100
```

```
interface port-channel101
  vpc 101
```

```
N7KA-vdc2# show run track
```

```
!Command: show running-config track
!Time: Thu Sep 26 19:51:59 2013
```

```
version 6.1(4)
track 1 list boolean or
  object 2
  object 3
  object 4
track 2 interface port-channel1 line-protocol
track 3 interface Ethernet3/3 line-protocol
track 4 interface Ethernet3/4 line-protocol
```

```
N7KA-vdc2# show vpc brief
```

Legend:

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

```
vPC domain id           : 102
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 : 2
Track object            : 1
```

Peer Gateway : Enabled  
Peer gateway excluded VLANs : -  
Dual-active excluded VLANs : -  
Graceful Consistency Check : Enabled  
Auto-recovery status : Enabled (timeout = 240 seconds)

vPC Peer-link status

```
-----  
id  Port  Status Active vlans  
--  ----  -----  
1   Po1   up     1
```

vPC status

```
-----  
id  Port  Status Consistency Reason      Active vlans  
--  ----  -----  
100 Po100  up     success  success      1  
101 Po101  up     success  success      1
```

N7KA-vdc2# show track

Track 1

List Boolean or  
Boolean or is UP  
2 changes, last change 23:24:08  
Track List Members:  
object 4 UP  
object 3 UP  
object 2 UP  
Tracked by:  
vPCM 102

Track 2

Interface port-channell1 Line Protocol  
Line Protocol is UP  
1 changes, last change 23:26:59  
Tracked by:  
Track List 1

Track 3

Interface Ethernet3/3 Line Protocol  
Line Protocol is UP  
3 changes, last change 23:26:50  
Tracked by:  
Track List 1

Track 4

Interface Ethernet3/4 Line Protocol  
Line Protocol is UP  
3 changes, last change 23:26:48  
Tracked by:  
Track List 1

N7KA-vdc2#

**N7KB:**

N7KB-vdc2# show run vpc

!Command: show running-config vpc  
!Time: Thu Sep 26 19:53:17 2013

version 6.1(4)

```

feature vpc

vpc domain 102
  peer-keepalive destination 1.1.1.1 source 1.1.1.2 vrf vpc-keepalive
  peer-gateway
  track 1
  auto-recovery

interface port-channel1
  vpc peer-link

interface port-channel100
  vpc 100

interface port-channel101
  vpc 101

```

N7KB-vdc2# show run track

```

!Command: show running-config track
!Time: Thu Sep 26 19:53:20 2013

```

```

version 6.1(4)
track 1 list boolean or
  object 2
  object 3
  object 4
track 2 interface port-channel1 line-protocol
track 3 interface Ethernet3/3 line-protocol
track 4 interface Ethernet3/4 line-protocol

```

N7KB-vdc2# show vpc brief

Legend:

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

```

vPC domain id           : 102
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                : secondary
Number of vPCs configured : 2
Track object            : 1
Peer Gateway            : Enabled
Peer gateway excluded VLANs : -
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status    : Enabled (timeout = 240 seconds)

```

vPC Peer-link status

```

-----
id   Port   Status Active vlans
--   ----   -
1    Po1    up     1
-----

```

vPC status

```

-----
id   Port   Status Consistency Reason           Active vlans
--   ----   -
100  Po100  up     success    success                       1
101  Po101  up     success    success                       1
-----

```

```
N7KB-vdc2# show track
```

```
Track 1
```

```
List Boolean or  
Boolean or is UP  
2 changes, last change 23:25:51  
Track List Members:  
object 4 UP  
object 3 UP  
object 2 UP  
Tracked by:  
vPCM 102
```

```
Track 2
```

```
Interface port-channell1 Line Protocol  
Line Protocol is UP  
1 changes, last change 23:29:09  
Tracked by:  
Track List 1
```

```
Track 3
```

```
Interface Ethernet3/3 Line Protocol  
Line Protocol is UP  
3 changes, last change 23:28:55  
Tracked by:  
Track List 1
```

```
Track 4
```

```
Interface Ethernet3/4 Line Protocol  
Line Protocol is UP  
3 changes, last change 23:28:56  
Tracked by:  
Track List 1
```

```
N7KB-vdc2#
```

el Rastreo de objetos del vPC se utiliza en un escenario tal como esto. Usted tiene un módulo M132 usado para el link del par del vPC así como el uplinks L3 a la base. En el evento donde usted está perder el módulo M132 debido a un error HW usted perdería el par-link del vPC así como el uplinks L3. Si éste fuera suceder en el cuadro secundario del vPC (N7KB) esto no sería un problema pues el peer primario operativo asumiría el control el suspender de los canales del puerto del vPC y de las interfaces de Vlan en el secundario operativo. El problema está en el caso de un error HW en el Dispositivo principal operativo (N7KA). Si usted no utilizara el Rastreo de objetos suspenderíamos todos los canales del puerto del vPC en N7KB así como las interfaces de Vlan. El link del par también estaría abajo. Usted no tendría una manera de rutear el tráfico de la base en nuestro vlans del vPC en este escenario.

El Rastreo de objetos consigue alrededor de esto derribando el vPC en el primario operativo de modo que no consigamos en este escenario donde derribamos las interfaces de Vlan y los canales del puerto del vPC en el cuadro que tiene el uplinks restante a la base.

Aquí usted ve el vPC mirar los mensajes de keepalive usando el ethanalyzer:

```
N7KA# ethanalyzer local interface inband capture-filter "host 1.1.1.1 and host 1.1.1.2" limit-  
captured-frames 4  
Capturing on inband  
2013-09-26 20:01:09.629309 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 D  
estination port: 3200  
2013-09-26 20:01:09.954909 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 D  
estination port: 3200
```

```
2013-09-26 20:01:10.639097      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  D
estination port: 3200
2013-09-26 20:01:10.954944      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estination port: 3200
4 packets captured
N7KA#
```

```
N7KB# ethanalyzer local interface inband capture-filter "host 1.1.1.1 and host 1.1.1.2" limit-
captured-frames 4
Capturing on inband
2013-09-26 20:00:22.606593      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  D
estination port: 3200
2013-09-26 20:00:22.922517      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estination port: 3200
2013-09-26 20:00:23.616427      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  D
estination port: 3200
2013-09-26 20:00:23.922557      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estination port: 3200
4 packets captured
N7KB#
```

Ahora usted simula el error del módulo 3 en N7KA vía accionar del módulo:

```
N7KA# conf t
Enter configuration commands, one per line.  End with CNTL/Z.
N7KA(config)# poweroff mod 3
N7KA(config)# end
N7KA#
```

```
2013 Sep 26 20:03:25 N7KA %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of Module 3 from
Command Line Interface
```

## Registros:

N7KA:

```
2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-IF_DOWN_INITIALIZING: Interface port-channel1 is down
(Initializing) 2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-IF_DOWN_MODULE_REMOVED: Interface
Ethernet3/3 is down (module removed) 2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-
IF_DOWN_MODULE_REMOVED: Interface Ethernet3/4 is down (module removed)
2013 Sep 26 20:03:28 N7KA-vdc2 %VPC-2-TRACK_INTFS_DOWN: In domain 102, vPC tracked interfaces
down, suspending all vPCs and keep-alive
2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-IF_DOWN_NONE: Interface port-channel101 is down (None)
2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-IF_DOWN_NONE: Interface port-channel100 is down (None)
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channel101: Ethernet4/7 is
down 2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channel100: Ethernet4/6
is down
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channel101: first
operational port changed from Ethernet4/7 to none 2013 Sep 26 20:03:28 N7KA-vdc2
%ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channel100: first operational port changed from
Ethernet4/6 to none
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channel1: Ethernet3/1 is down
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channel1: Ethernet3/2 is down
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channel1: first operational
port changed from Ethernet3/1 to none 2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-
IF_DOWN_PORT_CHANNEL_MEMBERS_DOWN: Interface port-channel1 is down (No operational members)
N7KB: 2013 Sep 26 20:02:39 N7KB-vdc2 %ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channel1: first
operational port changed from Ethernet3/1 to none 2013 Sep 26 20:02:40 N7KB-vdc2
%ETH_PORT_CHANNEL-5-PORT_DOWN: port-channel1: Ethernet3/2 is down 2013 Sep 26 20:02:40 N7KB-vdc2
%ETHPORT-5-IF_DOWN_LINK_FAILURE: Interface Ethernet3/2 is down (Link failure)
```

2013 Sep 26 20:02:45 N7KB-vdc2 %VPC-2-PEER\_KEEP\_ALIVE\_RECV\_FAIL: In domain 102, VPC peer keep-alive receive has failed  
2013 Sep 26 20:02:45 N7KB-vdc2 %ETHPORT-5-IF\_DOWN\_PORT\_CHANNEL\_MEMBERS\_DOWN: Interface port-channell1 is down (No operational members)  
2013 Sep 26 20:02:45 N7KB-vdc2 %ETH\_PORT\_CHANNEL-5-PORT\_DOWN: port-channell1: Ethernet3/1 is down  
2013 Sep 26 20:02:45 N7KB-vdc2 %ETHPORT-5-IF\_DOWN\_LINK\_FAILURE: Interface Ethernet3/1 is down (Link failure) 2013 Sep 26 20:02:45 N7KB-vdc2 %ETHPORT-5-IF\_DOWN\_PORT\_CHANNEL\_MEMBERS\_DOWN: Interface port-channell1 is down (No operational members)

Ahora le dejan en el este estado. N7KA es el peer primario del vPC, pero para el enviar de los mensajes de keepalive del par del vPC a N7KB de modo que no vaya N7KB suspendido. N7KB es el único sistema que tiene uplinks para arriba.

**Note:** e3/4 en N7KB conecta con otro VDC en N7KA que sea porqué también fue abajo. La punta es que usted ha seguido las interfaces para arriba en N7KB y ningunos en N7KA así que para el enviar de los mensajes a N7KB en el link del par-keepalive.

Ethalyzer hizo salir de N7KA:

(Aviso después de que el Syslog TRACK\_INTFS\_DOWN nosotros envíe no más al par-keepalives a N7KB, lo recibimos solamente de N7KB que sea 1.1.1.2)

```
2013-09-26 20:03:23.684887      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port: 3200
2013-09-26 20:03:23.685766      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port: 3200
2013-09-26 20:03:24.684863 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:24.685580 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013 Sep 26 20:03:25 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of Module 3 from Command Line Interface 2013 Sep 26 20:03:25 N7KA %$ VDC-1 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of Module 3 from Command Line Interface 2013-09-26 20:03:25.684869 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:25.685771 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200
2013-09-26 20:03:26.684835 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:26.685716 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200
2013-09-26 20:03:27.690661 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013 Sep 26 20:03:28 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-MOD_PWRDN: Module 3 powered down (Serial number JAF1703ALTD) 2013 Sep 26 20:03:28 N7KA %$ VDC-1 %$ %PLATFORM-2-MOD_PWRDN: Module 3 powered down (Serial number JAF1703ALTD) 2013 Sep 26 20:03:28 N7KA-vdc2 %$ VDC-2 %$ %VPC-2-TRACK_INTFS_DOWN: In domain 102, vPC tracked interfaces down, suspending all vPCs and keep-alive 2013-09-26 20:03:28.700594 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:29.700538 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:30.700603 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:31.710665 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:32.720601 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:33.715295 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:34.713112 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200 2013-09-26 20:03:35.713177 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200
```

Ethalyzer hizo salir de N7KB:

```
2013-09-26 20:02:36.651007      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port: 3200
2013-09-26 20:02:36.651534      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port: 3200
2013-09-26 20:02:37.651053      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port: 3200
```

```

2013-09-26 20:02:37.651644      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:38.650967      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:38.651579      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:39.656523      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:39.657500      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200

```

(Here we stop receiving keepalive messages from N7KA or 1.1.1.1):

```

2013-09-26 20:02:40.666531      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:41.666442      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:42.666479      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:43.676461      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:44.686478      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

```

```

2013 Sep 26 20:02:45 N7KB-vdc2 %$ VDC-2 %$ %VPC-2-PEER_KEEP_ALIVE_RECV_FAIL: In domain 102, VPC
peer keep-alive receive has failed

```

```

2013-09-26 20:02:45.681050      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:46.678911      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:47.678918      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:02:48.678961      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

```

## N7KA:

```
N7KA-vdc2# sh vpc brief
```

Legend:

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

```

vPC domain id          : 102
Peer status             : peer link is down
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 : 2
Track object           : 1
Peer Gateway           : Enabled
Peer gateway excluded VLANs : -
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status   : Enabled (timeout = 240 seconds)

```

vPC Peer-link status

```
-----
id  Port  Status Active vlans
```



```
--  ----  -----  -----  
1   Po1   down   -
```

vPC status

```
-----  
id   Port   Status Consistency Reason           Active vlans  
--   ----   -----  -----  
100  Po100   down   success    success          -  
101  Po101   down   success    success          -
```

N7KA-vdc2# show track

Track 1

```
List Boolean or  
Boolean or is DOWN  
3 changes, last change 00:20:50  
Track List Members:  
object 4 DOWN  
object 3 DOWN  
object 2 DOWN  
Tracked by:  
vPCM                               102
```

Track 2

```
Interface port-channell1 Line Protocol  
Line Protocol is DOWN  
2 changes, last change 00:20:50  
Tracked by:  
Track List 1
```

Track 3

```
Interface Ethernet3/3 Line Protocol  
Line Protocol is DOWN  
4 changes, last change 00:20:50  
Tracked by:  
Track List 1
```

Track 4

```
Interface Ethernet3/4 Line Protocol  
Line Protocol is DOWN  
4 changes, last change 00:20:50  
Tracked by:  
Track List 1
```

N7KA-vdc2#

**N7KB:**

N7KB-vdc2# sh vpc brief

Legend:

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

```
vPC domain id           : 102  
Peer status             : peer link is down  
vPC keep-alive status  : peer is alive  
Configuration consistency status : success  
Per-vlan consistency status : success  
Type-2 consistency status : success  
vPC role                : secondary, operational primary  
Number of vPCs configured : 2  
Track object           : 1  
Peer Gateway           : Enabled  
Peer gateway excluded VLANs : -
```

Dual-active excluded VLANs : -  
Graceful Consistency Check : Enabled  
Auto-recovery status : Enabled (timeout = 240 seconds)

vPC Peer-link status

```
-----  
id   Port   Status Active vlans  
--   ----   -  
1    Po1    down  -
```

vPC status

```
-----  
id   Port   Status Consistency Reason           Active vlans  
--   ----   -  
100  Po100  up     success    success           1  
101  Po101  up     success    success           1
```

N7KB-vdc2# sh track

Track 1

List Boolean or  
Boolean or is UP  
2 changes, last change 23:57:10  
Track List Members:  
object 4 DOWN  
object 3 UP  
object 2 DOWN  
Tracked by:  
vPCM 102

Track 2

Interface port-channell1 Line Protocol  
Line Protocol is DOWN  
2 changes, last change 00:22:04  
Tracked by:  
Track List 1

Track 3

Interface Ethernet3/3 Line Protocol  
Line Protocol is UP  
3 changes, last change 1d00h  
Tracked by:  
Track List 1

Track 4

Interface Ethernet3/4 Line Protocol  
Line Protocol is DOWN  
4 changes, last change 00:22:04  
Tracked by:  
Track List 1

N7KB-vdc2#

**Ahora usted puede restablecer la configuración:**

```
N7KA# conf t  
Enter configuration commands, one per line. End with CNTL/Z.  
N7KA(config)# no poweroff mod 3  
N7KA(config)# end  
N7KA#
```

2013 Sep 26 20:26:56 N7KA %PLATFORM-2-MOD\_DETECT: Module 3 detected (Serial number JAF1703ALTD)  
Module-Type 10 Gbps Ethernet XL Module Model N7K-M132XP-12L  
2013 Sep 26 20:26:56 N7KA %PLATFORM-2-MOD\_PWRUP: Module 3 powered up (Serial number JAF1703ALTD)  
2013 Sep 26 20:26:56 N7KA %PLATFORM-5-MOD\_STATUS: Module 3 current-status is  
MOD\_STATUS\_POWERED\_UP

## N7KA:

N7KA-vdc2# sh vpc brief

Legend:

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

vPC domain id : 102  
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, operational secondary  
Number of vPCs configured : 2  
Track object : 1  
Peer Gateway : Enabled  
Peer gateway excluded VLANs : -  
Dual-active excluded VLANs : -  
Graceful Consistency Check : Enabled  
Auto-recovery status : Enabled (timeout = 240 seconds)

vPC Peer-link status

```
-----  
id  Port  Status Active vlans  
--  ----  -  
1   Po1   up     1
```

vPC status

```
-----  
id  Port  Status Consistency Reason      Active vlans  
--  ----  -  
100 Po100  up     success  success      1  
101 Po101  up     success  success      1
```

N7KA-vdc2# sh track

Track 1

List Boolean or  
Boolean or is UP  
4 changes, last change 00:01:44

Track List Members:

object 4 UP  
object 3 UP  
object 2 UP

Tracked by:

vPCM 102

Track 2

Interface port-channell1 Line Protocol  
Line Protocol is UP  
3 changes, last change 00:01:40

Tracked by:

Track List 1

Track 3

Interface Ethernet3/3 Line Protocol

Line Protocol is UP  
5 changes, last change 00:01:43  
Tracked by:  
Track List 1

Track 4

Interface Ethernet3/4 Line Protocol  
Line Protocol is UP  
5 changes, last change 00:01:44  
Tracked by:  
Track List 1

N7KA-vdc2#

**N7KB:**

N7KB-vdc2# sh vpc brief

Legend:

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

vPC domain id : 102  
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 : secondary, operational primary  
Number of vPCs configured : 2  
Track object : 1  
Peer Gateway : Enabled  
Peer gateway excluded VLANs : -  
Dual-active excluded VLANs : -  
Graceful Consistency Check : Enabled  
Auto-recovery status : Enabled (timeout = 240 seconds)

vPC Peer-link status

```
-----  
id  Port  Status Active vlans  
--  ---  -----  
1   Po1   up     1
```

vPC status

```
-----  
id  Port  Status Consistency Reason          Active vlans  
--  ---  -----  
100 Po100  up     success  success          1  
101 Po101  up     success  success          1
```

N7KB-vdc2# sh track

Track 1

List Boolean or  
Boolean or is UP  
2 changes, last change 1d00h  
Track List Members:  
object 4 UP  
object 3 UP  
object 2 UP  
Tracked by:  
vPCM 102

Track 2

Interface port-channell Line Protocol

Line Protocol is UP  
3 changes, last change 00:02:07  
Tracked by:  
Track List 1

Track 3

Interface Ethernet3/3 Line Protocol  
Line Protocol is UP  
3 changes, last change 1d00h  
Tracked by:  
Track List 1

Track 4

Interface Ethernet3/4 Line Protocol  
Line Protocol is UP  
5 changes, last change 00:02:09  
Tracked by:  
Track List 1

N7KB-vdc2#

**Detalles en el error del Par-keepalive del vPC:**

Vuelva a efectuar la prueba para ver qué sucede con el link del par-keepalive.

Envíe los keepalives bidireccional - todo es actualmente ascendente y operativo:

```
2013-09-26 20:32:12.532319      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port:
3200
2013-09-26 20:32:12.533083      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port:
3200
2013-09-26 20:32:13.532485 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 3200 2013-
09-26 20:32:13.533147 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200
```

**Ahora apague M132 el módulo 3 en N7KA otra vez:**

```
2013 Sep 26 20:32:14 N7KA %$ VDC-1 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of
Module 3 from Command Line Interface
2013 Sep 26 20:32:14 N7KA-vdc3 %$ VDC-3 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of
Module 3 from Command Line Interface
2013 Sep 26 20:32:14 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of
Module 3 from Command Line Interface
```

```
2013-09-26 20:32:14.532364      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port:
3200
2013-09-26 20:32:14.533217      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port:
3200
```

```
2013-09-26 20:32:15.532453      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port:
3200
2013-09-26 20:32:15.533158      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port:
3200
```

```
2013-09-26 20:32:16.532452      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port:
3200
2013-09-26 20:32:16.536224      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination port:
3200
```

```
2013 Sep 26 20:32:17 N7KA %$ VDC-1 %$ %PLATFORM-2-MOD_PWRDN: Module 3 powered down (Serial
number JAF1703ALTD)
2013 Sep 26 20:32:17 N7KA-vdc3 %$ VDC-3 %$ %PLATFORM-2-MOD_PWRDN: Module 3 powered down (Serial
```

number JAF1703ALTD)

2013 Sep 26 20:32:16 N7KA-vdc2 %\$ VDC-2 %\$ %VPC-2-TRACK\_INTFS\_DOWN: In domain 102, vPC tracked interfaces down, suspending all vPCs and keep-alive

2013 Sep 26 20:32:17 N7KA-vdc2 %\$ VDC-2 %\$ %PLATFORM-2-MOD\_PWRDN: Module 3 powered down (Serial number JAF1703ALTD)

Ahora usted ve que solamente N7KB (1.1.1.2) está enviando los mensajes de keepalive a N7KA (1.1.1.1):

```
2013-09-26 20:32:17.549161      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
2013-09-26 20:32:18.549352      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
2013-09-26 20:32:19.549294      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
2013-09-26 20:32:20.549358      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
2013-09-26 20:32:21.549303      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
2013-09-26 20:32:22.549991      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port: 3200
```

Aquí usted ve que el estado en N7KB que mostraba el keepalive del par ha fallado:

N7KB-vdc2# sh vpc brief

Legend:

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

```
vPC domain id          : 102
Peer status            : peer link is down
vPC keep-alive status  : peer is not reachable through peer-keepalive
Configuration consistency status : success
Per-vlan consistency status : success
Type-2 consistency status : success
vPC role               : secondary, operational primary
Number of vPCs configured : 2
Track object           : 1
Peer Gateway           : Enabled
Peer gateway excluded VLANs : -
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status   : Enabled (timeout = 240 seconds)
```

vPC Peer-link status

```
-----
id  Port  Status Active vlans
--  ---  -----
1   Po1   down   -
```

vPC status

```
-----
id  Port  Status Consistency Reason          Active vlans
--  ---  -----
100 Po100 up     success  success                    1
101 Po101 up     success  success                    1
```

N7KB-vdc2#

Ahora usted comienza a recibir los mensajes del par-keepalive de N7KA otra vez después de un

breve período (90 segundos):

```
<snip>
2013-09-26 20:33:42.630255      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:43.630199      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:44.630263      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:45.640201      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:46.650262      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

2013-09-26 20:33:47.652445      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:47.660318      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

2013-09-26 20:33:48.652768      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:48.653347      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200

2013-09-26 20:33:49.652409      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:49.652705      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

2013-09-26 20:33:50.652423      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:50.652773      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200

2013-09-26 20:33:51.652401      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  Destination port:
3200
2013-09-26 20:33:51.652839      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  Destination port:
3200
```

Entonces usted ve el último estado en N7KB (mostrar al par está vivo):

```
N7KB-vdc2# sh vpc brief
```

```
Legend:
```

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

```
vPC domain id          : 102
Peer status            : peer link is down
vPC keep-alive status  : peer is alive
Configuration consistency status : success
Per-vlan consistency status : success
Type-2 consistency status : success
vPC role               : secondary, operational primary
Number of vPCs configured : 2
Track object          : 1
Peer Gateway          : Enabled
Peer gateway excluded VLANs : -
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status  : Enabled (timeout = 240 seconds)
```

vPC Peer-link status

```
-----  
id   Port   Status Active vlans  
--   ----   -  
1    Po1     down  -
```

vPC status

```
-----  
id   Port   Status Consistency Reason           Active vlans  
--   ----   -  
100  Po100  up     success    success           1  
101  Po101  up     success    success           1
```

N7KB-vdc2#