

Suivi des objets vPC

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Introduction

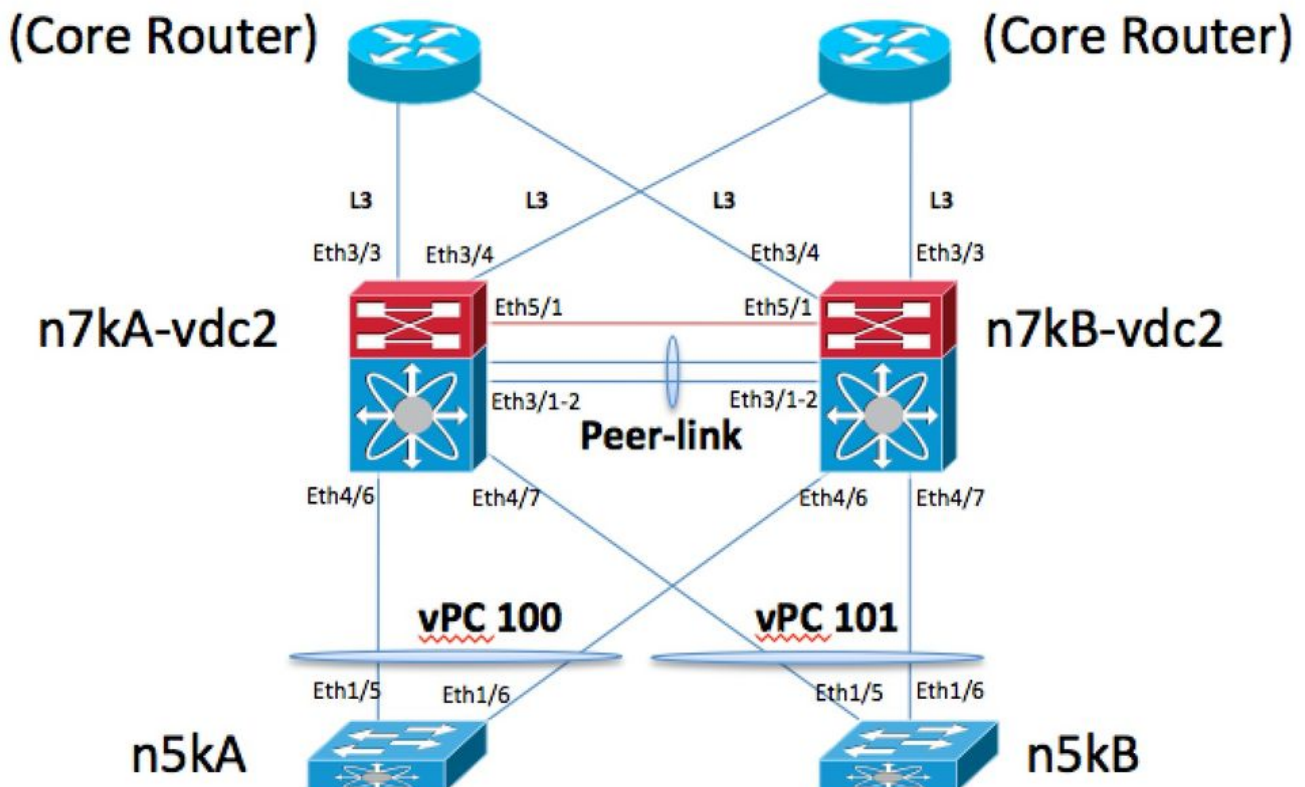
Ce document décrit le suivi des objets vPC, les raisons de son utilisation et son fonctionnement.

Suivi des objets vPC

Diagramme du réseau

Voici le schéma de réseau utilisé pour cette démonstration :

vPC Object Tracking Topology



La liaison homologue vPC est Port-channel 1. Ethernet 5/1 est la liaison de veille homologue vPC. Deux routeurs principaux sont connectés via les liaisons L3/30 e3/3 et e3/4 sur chaque zone N7K. N5KA et N5KB simulent les commutateurs L2 vPC connectés sur vPC 100 et vPC 101. N7KA est le périphérique principal vPC.

Commandes show de la ligne de base

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#

N7Ko :

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#
```

Le suivi des objets vPC est utilisé dans un scénario comme celui-ci. Un module M132 est utilisé pour la liaison homologue vPC ainsi que pour les liaisons ascendantes L3 vers le coeur. Si vous perdez le module M132 en raison d'une défaillance matérielle, vous perdrez la liaison homologue vPC ainsi que les liaisons ascendantes L3. Si cela devait se produire sur le boîtier secondaire vPC (N7KB), cela ne poserait pas de problème, car l'homologue principal opérationnel prendrait la relève de la suspension des canaux de port et des interfaces Vlan vPC sur le secondaire opérationnel. Le problème se pose en cas de défaillance matérielle sur le périphérique principal opérationnel (N7KA). Si vous n'avez pas utilisé le suivi d'objet, nous suspendrions tous les canaux de port vPC sur N7KB ainsi que les interfaces Vlan. La liaison homologue serait également désactivée. Dans ce scénario, vous n'auriez pas de moyen d'acheminer le trafic Core vers nos VLAN vPC.

Le suivi des objets contournera ce problème en désactivant le vPC sur le primaire opérationnel afin de ne pas entrer dans ce scénario où nous arrêtons les interfaces Vlan et les canaux de port vPC sur le boîtier qui possède les liaisons ascendantes restantes vers le coeur.

Ici, vous voyez les messages de keepalive d'homologue vPC à l'aide d'éthanalyser :

```
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
```

```
estimation port: 3200
2013-09-26 20:01:10.639097      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  D
estimation port: 3200
2013-09-26 20:01:10.954944      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estimation 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
estimation port: 3200
2013-09-26 20:00:22.922517      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estimation port: 3200
2013-09-26 20:00:23.616427      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200  D
estimation port: 3200
2013-09-26 20:00:23.922557      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200  D
estimation port: 3200
4 packets captured
N7KB#
```

Maintenant, vous simulez une défaillance du module 3 sur N7KA en mettant le module hors tension :

```
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
```

Journaux :

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-channell: 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-
channell is down (No operational members)
2013 Sep 26 20:02:45 N7KB-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channell: 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-channell is down (No operational members)

```

Maintenant, vous restez dans cet état. N7KA est l'homologue principal vPC, mais il arrête d'envoyer des messages de test d'activité vPC à N7KB afin que N7KB ne soit pas suspendu. N7KB est le seul système qui possède des liaisons ascendantes.

Note: e3/4 sur N7KB se connecte à un autre VDC sur N7KA, ce qui explique pourquoi il a également baissé. Le fait est que vous avez suivi les interfaces sur N7KB et aucune sur N7KA. Il arrête donc d'envoyer des messages à N7KB sur le lien peer-keepalive.

Sortie d'analyseur d'éthers de N7KA :

(Remarquez qu'après TRACK_INTFS_DOWN syslog, nous n'envoyons plus de messages de veille sur N7KB, nous ne les recevons que de N7KB qui est 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-
09-26 20:03:27.691367 1.1.1.1 -> 1.1.1.2 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

```

Sortie éthanalyzer 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#

N7Ko :

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#

Vous pouvez maintenant restaurer la configuration :

```
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 20:26:53 N7KA %PLATFORM-2-PFM_MODULE_POWER_ON: Manual power-on of Module 3 from
Command Line Interface
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#

N7Ko :

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	Pol	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

Track 2

Interface port-channell1 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#

Détails sur l'échec de Peer-keepalive vPC :

Réexécutez le test afin de voir ce qui se passe avec la liaison peer-keepalive.

Envoyer les keepalives bidirectionnellement - actuellement, tout est opérationnel :

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

Maintenant, arrêtez à nouveau le module M132 3 sur N7KA :

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)

```

Vous voyez maintenant que seul N7KB (1.1.1.2) envoie les messages keepalive à 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

```

Ici, vous voyez l'état sur N7KB montrant que le keepalive homologue a échoué :

```
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#

Maintenant, vous commencez à recevoir à nouveau des messages de keepalive d'homologue de N7KA après une brève période (90 secondes) :

<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
```

Vous voyez ensuite l'état le plus récent sur N7KB (indiquant que l'homologue est vivant) :

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#