

Rastreamento de objetos do vPC

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Introdução

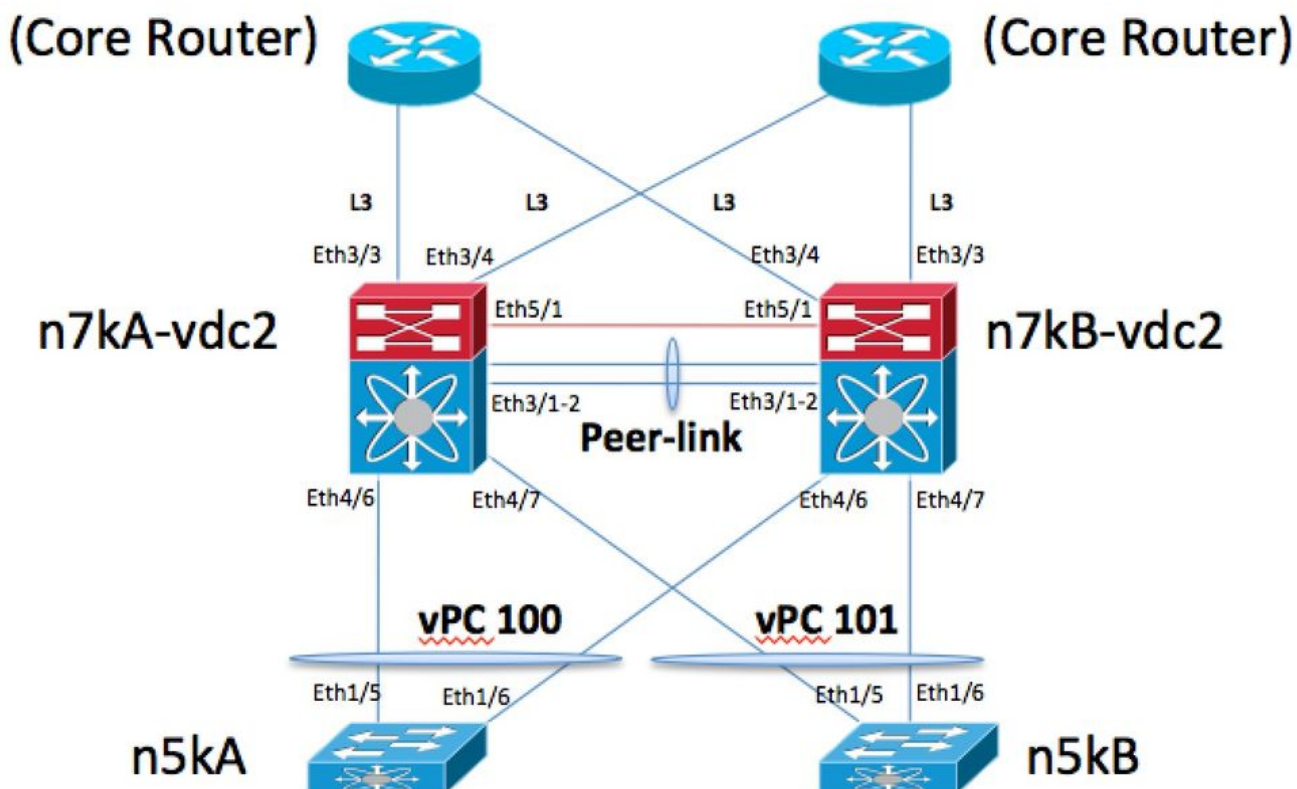
Este documento descreve o Rastreamento de objetos do vPC, porque é usado, e como trabalha.

Rastreamento de objetos do vPC

Diagrama de Rede

Está aqui o diagrama da rede usado para esta demonstração:

vPC Object Tracking Topology



O par que do vPC o link é o Ethernet 5/1 do canal de porta 1. é o link do par-keepalive do vPC. Há dois roteadores centrais que são conectados através dos links e3/3 e e3/4 L3 /30 em cada caixa N7K. N5KA e N5KB estão simulando o vPC do Switches L2 conectado no vPC 100 e no vPC 101. N7KA é o dispositivo principal do vPC.

Comandos show da linha de base

N7KA:

```
N7KA-vdc2# show run vpc!Command: show running-config vpc!Time: Thu Sep 26 19:51:57 2013version
6.1(4)feature vpcvpc domain 102 peer-keepalive destination 1.1.1.2 source 1.1.1.1 vrf vpc-
keepalive peer-gateway track 1 auto-recoveryinterface port-channell vpc peer-linkinterface
port-channell100 vpc 100interface port-channell101 vpc 101N7KA-vdc2# show run track!Command:
show running-config track!Time: Thu Sep 26 19:51:59 2013version 6.1(4)track 1 list boolean or
object 2 object 3 object 4track 2 interface port-channell line-protocoltrack 3 interface
Ethernet3/3 line-protocoltrack 4 interface Ethernet3/4 line-protocolN7KA-vdc2# show vpc
briefLegend: (*) - local vPC is down, forwarding via vPC peer-linkvPC 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 : EnabledPeer
gateway excluded VLANs : -Dual-active excluded VLANs : -Graceful Consistency Check
: EnabledAuto-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 Pol100 up
success success 1
101 Pol101 up success success 1
N7KA-vdc2# show trackTrack 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-channell Line Protocol Line Protocol is UP 1 changes, last change
23:26:59 Tracked by: Track List 1Track 3 Interface Ethernet3/3 Line Protocol Line
Protocol is UP 3 changes, last change 23:26:50 Tracked by: Track List 1Track 4 Interface
Ethernet3/4 Line Protocol Line Protocol is UP 3 changes, last change 23:26:48 Tracked by:
Track List 1N7KA-vdc2#
```

N7KB:

```
N7KB-vdc2# show run vpc!Command: show running-config vpc!Time: Thu Sep 26 19:53:17 2013version
6.1(4)feature vpcvpc domain 102 peer-keepalive destination 1.1.1.1 source 1.1.1.2 vrf vpc-
keepalive peer-gateway track 1 auto-recoveryinterface port-channell vpc peer-linkinterface
port-channell100 vpc 100interface port-channell101 vpc 101N7KB-vdc2# show run track!Command:
show running-config track!Time: Thu Sep 26 19:53:20 2013version 6.1(4)track 1 list boolean or
object 2 object 3 object 4track 2 interface port-channell line-protocoltrack 3 interface
Ethernet3/3 line-protocoltrack 4 interface Ethernet3/4 line-protocolN7KB-vdc2# show vpc
briefLegend: (*) - local vPC is down, forwarding via vPC peer-linkvPC 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 : EnabledPeer
gateway excluded VLANs : -Dual-active excluded VLANs : -Graceful Consistency Check
: EnabledAuto-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 Pol100 up
success success 1
```

```

101 Po101 up success success 1
N7KB-vdc2# show trackTrack 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-channell Line Protocol Line Protocol is UP 1 changes, last change
23:29:09 Tracked by: Track List 1Track 3 Interface Ethernet3/3 Line Protocol Line
Protocol is UP 3 changes, last change 23:28:55 Tracked by: Track List 1Track 4 Interface
Ethernet3/4 Line Protocol Line Protocol is UP 3 changes, last change 23:28:56 Tracked by:
Track List 1N7KB-vdc2#

```

o Rastreamento de objetos do vPC é usado em uma encenação tal como este. Você tem um módulo M132 usado para o link do par do vPC assim como os uplinks L3 ao núcleo. No evento onde você deve perder o módulo M132 devido a uma falha do HW você perderia o par-link do vPC assim como os uplinks L3. Se este era acontecer na caixa secundária do vPC (N7KB) este não seria um problema porque o peer principal operacional tomaria sobre a suspensão dos canais de porta do vPC e das relações de Vlan no secundário operacional. O problema é no caso de uma falha do HW no dispositivo principal operacional (N7KA). Se você não usou o Rastreamento de objetos nós suspenderíamos todos os canais de porta do vPC em N7KB assim como nas relações de Vlan. O link do par igualmente estaria para baixo. Você não teria uma maneira de distribuir o tráfego do núcleo em nossos vlans do vPC nesta encenação.

O Rastreamento de objetos obtém em torno deste derrubando o vPC no preliminar operacional de modo que nós não obtenhamos nesta encenação onde nós derrubamos as relações de Vlan e os canais de porta do vPC na caixa que tem os uplinks restantes ao núcleo.

Aqui você vê o vPC espreitar mensagens de keepalive usando o ethanalyzer:

```

N7KA# ethanalyzer local interface inband capture-filter "host 1.1.1.1 and host 1.1.1.2" limit-
captured-frames 4Capturing on inband2013-09-26 20:01:09.629309 1.1.1.2 -> 1.1.1.1 UDP
Source port: 3200 Destination port: 32002013-09-26 20:01:09.954909 1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:01:10.639097 1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:01:10.954944 1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32004 packets capturedN7KA# N7KB# ethanalyzer local
interface inband capture-filter "host 1.1.1.1 and host 1.1.1.2" limit-captured-frames 4Capturing
on inband2013-09-26 20:00:22.606593 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200
Destination port: 32002013-09-26 20:00:22.922517 1.1.1.1 -> 1.1.1.2 UDP Source port:
3200 Destination port: 32002013-09-26 20:00:23.616427 1.1.1.2 -> 1.1.1.1 UDP Source
port: 3200 Destination port: 32002013-09-26 20:00:23.922557 1.1.1.1 -> 1.1.1.2 UDP
Source port: 3200 Destination port: 32004 packets capturedN7KB#

```

Agora você simula a falha do módulo 3 em N7KA através da colocação em movimento fora do módulo:

```

N7KA# conf tEnter configuration commands, one per line. End with CNTL/Z.N7KA(config)# poweroff
mod 3N7KA(config)# endN7KA#2013 Sep 26 20:03:25 N7KA %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual
power-off of Module 3 from Command Line Interface

```

Logs:

N7KA:

```

2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-IF_DOWN_INITIALIZING: Interface port-channell 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
down2013 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-channell01: first
operational port changed from Ethernet4/7 to none2013 Sep 26 20:03:28 N7KA-vdc2
%ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channell00: first operational port changed from
Ethernet4/6 to none
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channell: Ethernet3/1 is
down2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-PORT_DOWN: port-channell: Ethernet3/2 is
down
2013 Sep 26 20:03:28 N7KA-vdc2 %ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channell: first operational
port changed from Ethernet3/1 to none2013 Sep 26 20:03:28 N7KA-vdc2 %ETHPORT-5-
IF_DOWN_PORT_CHANNEL_MEMBERS_DOWN: Interface port-channell is down (No operational members)
N7KB:2013 Sep 26 20:02:39 N7KB-vdc2 %ETH_PORT_CHANNEL-5-FOP_CHANGED: port-channell: first
operational port changed from Ethernet3/1 to none2013 Sep 26 20:02:40 N7KB-vdc2
%ETH_PORT_CHANNEL-5-PORT_DOWN: port-channell: Ethernet3/2 is down2013 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
down2013 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)

```

Você é deixado agora neste estado. N7KA é o peer principal do vPC, mas para de enviar mensagens de keepalive do par do vPC a N7KB de modo que N7KB não vá suspenso. N7KB é o único sistema que tem uplinks acima.

Nota: e3/4 em N7KB conecta a um outro VDC em N7KA que é porque igualmente foi para baixo. O ponto é que você seguiu relações acima em N7KB e nenhuns em N7KA assim que para de enviar mensagens a N7KB no link do par-keepalive.

Ethalyzer output de N7KA:

(Observação depois que o Syslog TRACK_INTFS_DOWN nós já não envia o par-keepalives a N7KB, nós o recebemos somente de N7KB que é 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:
32002013-09-26 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: 32002013-
09-26 20:03:24.685580 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013 Sep 26
20:03:25 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of Module 3
from Command Line Interface2013 Sep 26 20:03:25 N7KA %$ VDC-1 %$ %PLATFORM-2-
PFM_MODULE_POWER_OFF: Manual power-off of Module 3 from Command Line Interface2013-09-26
20:03:25.684869 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 32002013-09-26
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: 32002013-
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: 32002013-
09-26 20:03:27.691367 1.1.1.1 -> 1.1.1.2 UDP Source port: 3200 Destination port: 32002013 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-alive2013-09-26
20:03:28.700594 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:29.700538 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:30.700603 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:31.710665 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:32.720601 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:33.715295 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26
20:03:34.713112 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 32002013-09-26

```

20:03:35.713177 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200

Ethalyzer output 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 failed2013-09-26 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 briefLegend: (*) - 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 table with columns: -id, Port, Status, Active vlans, Consistency Reason, Active vlans, vPC status. Row 1: 1, Pol, down, -, 100 Po100 down success success, -

N7KA-vdc2# show trackTrack 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-channell Line Protocol Line Protocol is DOWN 2 changes, last change 00:20:50
Tracked by: Track List 1Track 3 Interface Ethernet3/3 Line Protocol Line Protocol is DOWN 4 changes, last change 00:20:50
Tracked by: Track List 1Track 4 Interface Ethernet3/4 Line Protocol Line Protocol is DOWN 4 changes, last change 00:20:50
Tracked by: Track List 1N7KA-vdc2#

N7KB:

N7KB-vdc2# sh vpc briefLegend: (*) - 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 table with columns: -id, Port, Status, Active vlans, vPC status. Row 1: 1, Pol, down, -

```

Status Consistency Reason          Active vlans--  ----  -----
-----100 Po100 up      success  success          1
101 Po101 up      success  success          1
N7KB-vdc2# sh trackTrack 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-channell Line Protocol Line Protocol is DOWN 2 changes, last
change 00:22:04 Tracked by: Track List 1Track 3 Interface Ethernet3/3 Line Protocol Line
Protocol is UP 3 changes, last change 1d00h Tracked by: Track List 1Track 4 Interface
Ethernet3/4 Line Protocol Line Protocol is DOWN 4 changes, last change 00:22:04 Tracked by:
Track List 1N7KB-vdc2#

```

Agora você pode restaurar a instalação:

```

N7KA# conf tEnter configuration commands, one per line. End with CNTL/Z.N7KA(config)# no
poweroff mod 3N7KA(config)# endN7KA# 2013 Sep 26 20:26:53 N7KA %PLATFORM-2-PFM_MODULE_POWER_ON:
Manual power-on of Module 3 from Command Line Interface2013 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-12L2013 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 briefLegend:          (*) - local vPC is down, forwarding via vPC peer-
linkvPC 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 secondaryNumber of vPCs configured : 2 Track object          :
1 Peer Gateway          : EnabledPeer gateway excluded VLANs : -Dual-active
excluded VLANs         : -Graceful Consistency Check      : EnabledAuto-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 trackTrack 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-channell Line Protocol Line Protocol is UP 3 changes, last change
00:01:40 Tracked by: Track List 1Track 3 Interface Ethernet3/3 Line Protocol Line
Protocol is UP 5 changes, last change 00:01:43 Tracked by: Track List 1Track 4 Interface
Ethernet3/4 Line Protocol Line Protocol is UP 5 changes, last change 00:01:44 Tracked by:
Track List 1N7KA-vdc2#

```

N7KB:

```

N7KB-vdc2# sh vpc briefLegend:          (*) - local vPC is down, forwarding via vPC peer-
linkvPC 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 primaryNumber of vPCs configured : 2 Track object          : 1
Peer Gateway          : EnabledPeer gateway excluded VLANs : -Dual-active
excluded VLANs         : -Graceful Consistency Check      : EnabledAuto-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 trackTrack 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 1Track 3 Interface Ethernet3/3 Line Protocol Line Protocol is UP 3 changes, last change 1d00h Tracked by: Track List 1Track 4 Interface Ethernet3/4 Line Protocol Line Protocol is UP 5 changes, last change 00:02:09 Tracked by: Track List 1N7KB-vdc2#

Detalhes na falha do Par-keepalive do vPC:

Torne a colocar em funcionamento o teste a fim ver o que acontece com o link do par-keepalive.

Envie os keepalives bidirecional - atualmente tudo é ascendente e operacional:

```
2013-09-26 20:32:12.532319      1.1.1.1 -> 1.1.1.2      UDP Source port: 3200 Destination port:
32002013-09-26 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: 32002013-
09-26 20:32:13.533147 1.1.1.2 -> 1.1.1.1 UDP Source port: 3200 Destination port: 3200
```

Agora para a programação M132 o módulo 3 em N7KA outra 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 Interface2013 Sep 26 20:32:14 N7KA-vdc3 %$ VDC-3 %$ %PLATFORM-2-
PFM_MODULE_POWER_OFF: Manual power-off of Module 3 from Command Line Interface2013 Sep 26
20:32:14 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-PFM_MODULE_POWER_OFF: Manual power-off of Module 3
from Command Line Interface2013-09-26 20:32:14.532364      1.1.1.1 -> 1.1.1.2      UDP Source
port: 3200 Destination port: 32002013-09-26 20:32:14.533217      1.1.1.2 -> 1.1.1.1      UDP
Source port: 3200 Destination port: 32002013-09-26 20:32:15.532453      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:32:15.533158      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:32:16.532452      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:32:16.536224      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013 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-alive2013 Sep 26 20:32:17 N7KA-vdc2 %$ VDC-2 %$ %PLATFORM-2-
MOD_PWRDN: Module 3 powered down (Serial number JAF1703ALTD)
```

Agora você vê que somente N7KB (1.1.1.2) está enviando os mensagens 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:
32002013-09-26 20:32:18.549352      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination
port: 32002013-09-26 20:32:19.549294      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200
Destination port: 32002013-09-26 20:32:20.549358      1.1.1.2 -> 1.1.1.1      UDP Source port:
3200 Destination port: 32002013-09-26 20:32:21.549303      1.1.1.2 -> 1.1.1.1      UDP Source
port: 3200 Destination port: 32002013-09-26 20:32:22.549991      1.1.1.2 -> 1.1.1.1      UDP
Source port: 3200 Destination port: 3200
```

Aqui você vê que o estado em N7KB que mostra o keepalive do par falhou:

```
N7KB-vdc2# sh vpc briefLegend:          (*) - local vPC is down, forwarding via vPC peer-
linkvPC domain id                      : 102 Peer status                      : peer link is
down vPC keep-alive status              : peer is not reachable through peer-
keepaliveConfiguration consistency status : success Per-vlan consistency status      : success
Type-2 consistency status                : success vPC role                      : secondary,
operational primaryNumber of vPCs configured : 2 Track object                      : 1
Peer Gateway                             : EnabledPeer gateway excluded VLANs      : -Dual-active
excluded VLANs                           : -Graceful Consistency Check          : EnabledAuto-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#

Agora você começa receber outra vez mensagens do par-keepalive de N7KA após um período breve (90 segundos):

```
<snip>2013-09-26 20:33:42.630255      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200 Destination
port: 32002013-09-26 20:33:43.630199      1.1.1.2 -> 1.1.1.1      UDP Source port: 3200
Destination port: 32002013-09-26 20:33:44.630263      1.1.1.2 -> 1.1.1.1      UDP Source port:
3200 Destination port: 32002013-09-26 20:33:45.640201      1.1.1.2 -> 1.1.1.1      UDP Source
port: 3200 Destination port: 32002013-09-26 20:33:46.650262      1.1.1.2 -> 1.1.1.1      UDP
Source port: 3200 Destination port: 32002013-09-26 20:33:47.652445      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:47.660318      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:48.652768      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:48.653347      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:49.652409      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:49.652705      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:50.652423      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:50.652773      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:51.652401      1.1.1.1 -> 1.1.1.2
UDP Source port: 3200 Destination port: 32002013-09-26 20:33:51.652839      1.1.1.2 -> 1.1.1.1
UDP Source port: 3200 Destination port: 3200
```

Então você vê o estado o mais atrasado em N7KB (mostrar o par está vivo):

```
N7KB-vdc2# sh vpc briefLegend:          (*) - local vPC is down, forwarding via vPC peer-
linkvPC 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 primaryNumber of vPCs configured : 2 Track object          : 1
Peer Gateway          : EnabledPeer gateway excluded VLANs : -Dual-active
excluded VLANs       : -Graceful Consistency Check       : EnabledAuto-recovery status
: Enabled (timeout = 240 seconds)vPC Peer-link status-----
-----id Port Status Active vlans -- ---- -----
-----1 Pol down -
vPC status-----id Port
Status Consistency Reason          Active vlans-- ---- -----
-----100 Pol100 up success success 1
101 Pol101 up success success 1
N7KB-vdc2#
```