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Introdução

Este documento discute diversos cenários comuns encontrados onde o vizinho do Open Shortest Path First (OSPF) não vem em linha como esperado. A fim evitar este tipo de comportamento inesperado no Switches Cisco Nexus série 7000, certifique-se seguir as diretrizes e as limitações sobre a camada 3 (L3) e o canal da porta virtual (vPC).

Informações de Apoio

Antes que você pesquise defeitos problemas, assegure-se de que as diretrizes e as limitações estejam encontradas. Refira o [projeto e o manual de configuração: Melhores prática para os canais da porta virtual \(vPC\) no Switches Cisco Nexus série 7000](#) para obter mais informações sobre do L3 e do vPC.

O procedimento usado a fim pesquisar defeitos edições da adjacência de OSPF no nexo 7000 é similar aos procedimentos para o ^{® do} Cisco IOS, mas o nexo 7000 tem umas ferramentas mais incorporados e uns filtros a fim identificar facilmente a edição.

A adjacência de OSPF não vem Online

Há as épocas em que a adjacência de OSPF não vem em linha. O comando `show ip ospf neighbor` não mostra o vizinho.

```
R3#show ip ospf neighbor
```

```
R3#
```

Esta edição pôde ser causada por:

- Problema de conectividade L2/L3
- OSPF não permitido na relação
- A relação é definida como a voz passiva
- Máscara de sub-rede combinada mal
- Intervalo de saudação/inoperante combinado mal
- Chave de autenticação combinada mal

- ID de área incompatível
- Trânsito combinado mal/stub/opção da not-so-stubby area (NSSA)

A fim investigar edição, verificam Conectividade, configuração, e Access Control List) (ACL/Policiamento do plano de controle (CoPP).

Verifique a Conectividade L2/L3

1. Verifique a Conectividade do unicast com o sibilo.

Se há um problema de conectividade, descubra se é devido ao provedor de serviço do Internet (ISP) L2, a uma porta física, a um gigabit interface converter (GBIC), ou a um cabo. Nota: Supõe que não há nenhum ACL/CoPP que obstrui o tráfego. Se a edição é devido ao hardware defeituoso ou a um cabo, substitua-o ou mova-o uma outra porta a fim pesquisar defeitos.

2. Verifique a Conectividade do Multicast com o sibilo.

```
N7K1-RP# ping multicast 224.0.0.5 interface vlan 5
PING 224.0.0.5 (224.0.0.5): 56 data bytes
64 bytes from 5.5.5.2: icmp_seq=0 ttl=254 time=1.739 ms
64 bytes from 5.5.5.2: icmp_seq=1 ttl=254 time=1.253 ms
64 bytes from 5.5.5.2: icmp_seq=2 ttl=254 time=0.866 ms
64 bytes from 5.5.5.2: icmp_seq=3 ttl=254 time=1.045 ms
64 bytes from 5.5.5.2: icmp_seq=4 ttl=254 time=1.89 ms

--- 224.0.0.5 ping multicast statistics ---
5 packets transmitted,
From member 5.5.5.2: 5 packets received, 0.00% packet loss
--- in total, 1 group member responded ---
N7K1-RP#
```

Verifique que a relação está limpa e que não há nenhum gota ou erro com o comando 1/1 dos Ethernet int da mostra.

```
N7K1-RP# show int ethernet 1/20 | section RX|TX
RX
 340213 unicast packets  368092 multicast packets  2 broadcast packets
 708307 input packets  233094927 bytes
 0 jumbo packets  0 storm suppression packets
 0 runs  0 giants  0 CRC/FCS  0 no buffer
 0 input error  0 short frame  0 overrun  0 underrun  0 ignored
 0 watchdog  0 bad etype drop  0 bad proto drop  0 if down drop
 0 input with dribble  0 input discard
 0 Rx pause

TX
 1374131 unicast packets  324752 multicast packets  3 broadcast packets
 1698886 output packets  196282264 bytes
 0 jumbo packets
 0 output error  0 collision  0 deferred  0 late collision
 0 lost carrier  0 no carrier  0 babble  0 output discard
 0 Tx pause
N7K1-RP#
```

3. Determine se estas características deixam cair pacotes na placa de linha, na relação, ou no CPU entrante.

- ACL - De entrada/de partida da relação
- Qualidade de Serviço (QoS) - Na relação
- CoPP

QoS

N7K1-RP# **show policy-map interface ethernet 1/20**

Global statistics status : enabled

Ethernet1/20

Service-policy (queuing) input: default-in-policy
SNMP Policy Index: 301989913

Class-map (queuing): in-q1 (match-any)
queue-limit percent 50
bandwidth percent 80
queue dropped pkts : 0

Class-map (queuing): in-q-default (match-any)
queue-limit percent 50
bandwidth percent 20
queue dropped pkts : 0

Service-policy (queuing) output: default-out-policy
SNMP Policy Index: 301989922

Class-map (queuing): out-pq1 (match-any)
priority level 1
queue-limit percent 16
queue dropped pkts : 0

Class-map (queuing): out-q2 (match-any)
queue-limit percent 1
queue dropped pkts : 0

Class-map (queuing): out-q3 (match-any)
queue-limit percent 1
queue dropped pkts : 0

Class-map (queuing): out-q-default (match-any)
queue-limit percent 82
bandwidth remaining percent 25
queue dropped pkts : 0

CoPP

show policy-map interface control-plane class test1-copp-class-critical

Control Plane

service-policy input test1-copp-policy-lenient

class-map test1-copp-class-critical (match-any)
match access-group name test1-copp-acl-bgp
match access-group name test1-copp-acl-pim
match access-group name test1-copp-acl-rip
match access-group name test1-copp-acl-vpc
match access-group name test1-copp-acl-bgp6
match access-group name test1-copp-acl-igmp
match access-group name test1-copp-acl-lisp
match access-group name test1-copp-acl-msdp
match access-group name test1-copp-acl-ospf
match access-group name test1-copp-acl-pim6
match access-group name test1-copp-acl-rip6
match access-group name test1-copp-acl-rise

```

match access-group name test1-copp-acl-eigrp
match access-group name test1-copp-acl-lisp6
match access-group name test1-copp-acl-ospf6
match access-group name test1-copp-acl-rise6
match access-group name test1-copp-acl-eigrp6
match access-group name test1-copp-acl-otv-as
match access-group name test1-copp-acl-mac-l2pt
match access-group name test1-copp-acl-mpls-ldp
match access-group name test1-copp-acl-mpls-oam
match access-group name test1-copp-acl-mpls-rsvp
match access-group name test1-copp-acl-mac-l3-isis
match access-group name test1-copp-acl-mac-otv-isis
match access-group name test1-copp-acl-mac-fabricpath-isis
match protocol mpls router-alert
match protocol mpls exp 6
set cos 7
police cir 39600 kbps bc 375 ms
  conform action: transmit
  violate action: drop
module 1:
  conformed 539964945 bytes,
    5-min offered rate 5093 bytes/sec
    peak rate 5213 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec
module 2:
  conformed 784228080 bytes,
    5-min offered rate 5848 bytes/sec
    peak rate 7692 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec
module 3:
  conformed 5114206 bytes,
    5-min offered rate 41 bytes/sec
    peak rate 6656 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec

```

N7K1#

Verifique a configuração de OSPF

Use estes comandos a fim verificar a configuração de OSPF (sub-rede, intervalo de saudação/inoperante, ID da área, tipo de área, chave de autenticação (eventualmente), e não-passivo), e assegure-se de que combine em ambos os lados.

1. Mostre o OSPF da corrida
2. Mostre a relação OSPF 5 IP
3. Mostre OSPF 5 IP

Está aqui um exemplo do primeiro comando:

N7K1-RP# **show run ospf**

```

!Command: show running-config ospf
!Time: Thu May 16 11:27:24 2013

```

```

version 6.2(2)
feature ospf

```

```

logging level ospf 7

```

```

router ospf 5

```

```
router-id 5.5.0.1

interface Vlan5
 ip router ospf 5 area 0.0.0.0

interface loopback5
 ip router ospf 5 area 0.0.0.0
```

N7K1-RP#

Está aqui um exemplo do comando second:

```
N7K1-RP# show ip ospf 5 interface
Vlan5 is up, line protocol is up
  IP address 5.5.5.1/24, Process ID 5 VRF default, area 0.0.0.0
  Enabled by interface configuration
  State DR, Network type BROADCAST, cost 40
  Index 2, Transmit delay 1 sec, Router Priority 1
  Designated Router ID: 5.5.0.1, address: 5.5.5.1
  Backup Designated Router ID: 5.5.0.2, address: 5.5.5.2
  1 Neighbors, flooding to 1, adjacent with 1
  Timer intervals: Hello 10, Dead 40, Wait 40, Retransmit 5
    Hello timer due in 00:00:00
  No authentication
  Number of opaque link LSAs: 0, checksum sum 0
loopback5 is up, line protocol is up
  IP address 5.5.0.1/32, Process ID 5 VRF default, area 0.0.0.0
  Enabled by interface configuration
  State LOOPBACK, Network type LOOPBACK, cost 1
  Index 1
```

N7K1-RP#

Está aqui um exemplo do terceiro comando:

```
N7K1-RP# show ip ospf 5

Routing Process 5 with ID 5.5.0.1 VRF default
Routing Process Instance Number 3
Stateful High Availability enabled
Graceful-restart is configured
  Grace period: 60 state: Inactive
  Last graceful restart exit status: None
Supports only single TOS(TOS0) routes
Supports opaque LSA
Administrative distance 110
Reference Bandwidth is 40000 Mbps
SPF throttling delay time of 200.000 msecs,
  SPF throttling hold time of 1000.000 msecs,
  SPF throttling maximum wait time of 5000.000 msecs
LSA throttling start time of 0.000 msecs,
  LSA throttling hold interval of 5000.000 msecs,
  LSA throttling maximum wait time of 5000.000 msecs
Minimum LSA arrival 1000.000 msec
LSA group pacing timer 10 secs
Maximum paths to destination 8
Number of external LSAs 0, checksum sum 0
Number of opaque AS LSAs 0, checksum sum 0
Number of areas is 1, 1 normal, 0 stub, 0 nssa
Number of active areas is 1, 1 normal, 0 stub, 0 nssa
Install discard route for summarized external routes.
Install discard route for summarized internal routes.
Area BACKBONE(0.0.0.0)
  Area has existed for 1d10h
  Interfaces in this area: 2 Active interfaces: 2
```

```
Passive interfaces: 0 Loopback interfaces: 1
No authentication available
SPF calculation has run 47 times
  Last SPF ran for 0.000542s
Area ranges are
Number of LSAs: 3, checksum sum 0x84d4
```

N7K1-RP#

Verifique as mensagens OSPF

Incorpore o comando da **adjacência da evento-história OSPF da mostra IP** a fim verificar que que debuga as mensagens são enviadas e recebidas pelo processo OPSF.

Nota: As mensagens as mais atrasadas aparecem na parte superior.

A saída mostra todas as mensagens da adjacência de OSPF que são trocadas entre vizinhos de OSPF. Quando uma adjacência de OSPF é formada, um roteador atravessa diversas mudanças de estado antes que se torne inteiramente adjacente com seu vizinho. Esta saída mostra todas as mudanças de estado e negociações. Se há uma edição (unidade máxima da transição (MTU), problemas de conectividade, queda de pacote de informação), reflete-se na saída.

N7K1-RP# **show ip ospf 5 event-history adjacency**

```
Adjacency events for OSPF Process "ospf-5"
2013 May 16 10:50:58.121128 ospf 5 [9386]: :   mtu 1600, opts: 0x42, ddbits:
0, seq: 0x6f40fde4
2013 May 16 10:50:58.121124 ospf 5 [9386]: : Sent DBD with 0 entries to 5.5.5.2
on Vlan5
2013 May 16 10:50:58.121114 ospf 5 [9386]: : Sending DBD to 5.5.5.2 on Vlan5
2013 May 16 10:50:58.118030 ospf 5 [9386]: : Nbr 5.5.5.2: LOADING --> FULL,
event LDDONE
2013 May 16 10:50:58.115840 ospf 5 [9386]: : Built LS Request packet for 5.5.5.2
with 1 entries
2013 May 16 10:50:58.115835 ospf 5 [9386]: :       Add 5.5.0.2(0x1)5.5.0.2
(0x8000104e)(0x7ef8) (156) to LSR
2013 May 16 10:50:58.115823 ospf 5 [9386]: : Building LS Request packet to
5.5.5.2
2013 May 16 10:50:58.112201 ospf 5 [9386]: : Nbr 5.5.5.2: EXCHANGE --> LOADING,
event EXCHDONE
2013 May 16 10:50:58.112026 ospf 5 [9386]: :   seqnr 0x6f40fde4, dbdbits 0x1,
mtu 1600, options 0x42
2013 May 16 10:50:58.112022 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 0 entries
2013 May 16 10:50:58.111988 ospf 5 [9386]: :   seqnr 0x6f40fde4, dbdbits 0x1,
mtu 1600, options 0x42
2013 May 16 10:50:58.111984 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 0 entries
2013 May 16 10:50:58.110169 ospf 5 [9386]: :   mtu 1600, opts: 0x42, ddbits: 0,
seq: 0x6f40fde3
2013 May 16 10:50:58.110165 ospf 5 [9386]: : Sent DBD with 0 entries to 5.5.5.2
on Vlan5
2013 May 16 10:50:58.110155 ospf 5 [9386]: : Sending DBD to 5.5.5.2 on Vlan5
2013 May 16 10:50:58.106609 ospf 5 [9386]: :   Added 1 out of 1 LSAs to
request list
2013 May 16 10:50:58.106606 ospf 5 [9386]: :       Added 5.5.0.2(0x1)5.5.0.2
(0x8000104e) (0x7ef8) (156) to request list
2013 May 16 10:50:58.106586 ospf 5 [9386]: :   seqnr 0x6f40fde3, dbdbits 0x3,
mtu 1600, options 0x42
2013 May 16 10:50:58.106582 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 1 entries
2013 May 16 10:50:58.106537 ospf 5 [9386]: :   seqnr 0x6f40fde3, dbdbits 0x3,
mtu 1600, options 0x42
2013 May 16 10:50:58.106532 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 1 entries
2013 May 16 10:50:58.104462 ospf 5 [9386]: : Built reply LSU with 2 LSAs for
```

5.5.5.2 128 bytes

```
2013 May 16 10:50:58.104439 ospf 5 [9386]: : Added 5.5.5.2(0x2)5.5.0.2
(0x80000045) (0xaf32) (156)
2013 May 16 10:50:58.104431 ospf 5 [9386]: : Added 5.5.0.1(0x1)5.5.0.1
(0x80000ecf) (0xd834) (8)(0)
2013 May 16 10:50:58.104408 ospf 5 [9386]: : Building reply LSU to 5.5.5.2
2013 May 16 10:50:58.104404 ospf 5 [9386]: : 2 requests in LSR (2 left)
2013 May 16 10:50:58.104370 ospf 5 [9386]: : Answering LSR from 5.5.5.2
2013 May 16 10:50:58.100790 ospf 5 [9386]: : Recv LSR from Nbr 5.5.5.2
2013 May 16 10:50:58.099055 ospf 5 [9386]: : mtu 1600, opts: 0x42, ddbits:
0x2, seq: 0x6f40fde2
2013 May 16 10:50:58.099051 ospf 5 [9386]: : Sent DBD with 3 entries to 5.5.5.2
on Vlan5
2013 May 16 10:50:58.099038 ospf 5 [9386]: : Sending DBD to 5.5.5.2 on Vlan5
2013 May 16 10:50:58.095072 ospf 5 [9386]: : seqnr 0x6f40fde2, ddbits 0x7,
mtu 1600, options 0x42
2013 May 16 10:50:58.095068 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 0 entries
2013 May 16 10:50:58.095024 ospf 5 [9386]: : Nbr 5.5.5.2: EXSTART --> EXCHANGE,
event NEGDONE
2013 May 16 10:50:58.094895 ospf 5 [9386]: : We are SLAVE, 5.5.5.2 is master
2013 May 16 10:50:58.094890 ospf 5 [9386]: : seqnr 0x6f40fde2, ddbits 0x7,
mtu 1600, options 0x42
2013 May 16 10:50:58.094886 ospf 5 [9386]: : Got DBD from 5.5.5.2 with 0 entries
2013 May 16 10:50:58.093037 ospf 5 [9386]: : mtu 1600, opts: 0x42, ddbits: 0x7,
seq: 0x7273409a
2013 May 16 10:50:58.093033 ospf 5 [9386]: : Sent DBD with 0 entries to 5.5.5.2
on Vlan5
2013 May 16 10:50:58.093029 ospf 5 [9386]: : Sending DBD to 5.5.5.2 on Vlan5
2013 May 16 10:50:58.092915 ospf 5 [9386]: : Nbr 5.5.5.2: INIT --> EXSTART,
event TWOWAYRCVD
2013 May 16 10:50:58.092862 ospf 5 [9386]: : Nbr 5.5.5.2: TWOWAY --> EXSTART,
event ADJOK
2013 May 16 10:50:58.092763 ospf 5 [9386]: [9446]: Interface Vlan5 ---> BDR
2013 May 16 10:50:58.092757 ospf 5 [9386]: [9446]: Elected 5.5.0.2 as DR,
5.5.0.1 as BDR
2013 May 16 10:50:58.092690 ospf 5 [9386]: [9446]: This nbr 5.5.5.2 promoted
to current dr
2013 May 16 10:50:58.092687 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.2
(0x93e3524), state TWOWAY
2013 May 16 10:50:58.092683 ospf 5 [9386]: [9446]: Neighbor not declared DR,
ignoring
2013 May 16 10:50:58.092680 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.1
(0xaclf7514), state SELF
2013 May 16 10:50:58.092676 ospf 5 [9386]: [9446]: DR election starting
2013 May 16 10:50:58.092673 ospf 5 [9386]: [9446]: This neighbor is greater
than 2way
2013 May 16 10:50:58.092670 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.2
(0x93e3524), state TWOWAY
2013 May 16 10:50:58.092666 ospf 5 [9386]: [9446]: Compare done, new current
bdr 5.5.5.1
2013 May 16 10:50:58.092663 ospf 5 [9386]: [9446]: Current BDR set to this
neighbor
2013 May 16 10:50:58.092660 ospf 5 [9386]: [9446]: This neighbor is in
consideration for bdr
2013 May 16 10:50:58.092657 ospf 5 [9386]: [9446]: This neighbor is greater
than 2way
2013 May 16 10:50:58.092654 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.1
(0xaclf7514), state SELF
2013 May 16 10:50:58.092650 ospf 5 [9386]: [9446]: BDR election starting
2013 May 16 10:50:58.092647 ospf 5 [9386]: [9446]: DR/BDR Status of this router
changed, new election run
2013 May 16 10:50:58.092643 ospf 5 [9386]: [9446]: This nbr 5.5.5.2 promoted
to current dr
2013 May 16 10:50:58.092639 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.2
```

```

(0x93e3524), state TWOWAY
2013 May 16 10:50:58.092635 ospf 5 [9386]: [9446]: Neighbor not declared DR,
ignoring
2013 May 16 10:50:58.092632 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.1
(0xaclf7514), state SELF
2013 May 16 10:50:58.092628 ospf 5 [9386]: [9446]: DR election starting
2013 May 16 10:50:58.092625 ospf 5 [9386]: [9446]: This neighbor is greater
than 2way
2013 May 16 10:50:58.092622 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.2
(0x93e3524), state TWOWAY
2013 May 16 10:50:58.092618 ospf 5 [9386]: [9446]: Compare done, new current
bdr 5.5.5.1
2013 May 16 10:50:58.092613 ospf 5 [9386]: [9446]: Current BDR set to this
neighbor
2013 May 16 10:50:58.092610 ospf 5 [9386]: [9446]: This neighbor is in
consideration for bdr
2013 May 16 10:50:58.092607 ospf 5 [9386]: [9446]: This neighbor is greater
than 2way
2013 May 16 10:50:58.092604 ospf 5 [9386]: [9446]: Walking neighbor 5.5.5.1
(0xaclf7514), state SELF
2013 May 16 10:50:58.092597 ospf 5 [9386]: [9446]: BDR election starting
2013 May 16 10:50:58.092573 ospf 5 [9386]: [9446]: Current 0.0.0.0 as DR,
0.0.0.0 as BDR
2013 May 16 10:50:58.092567 ospf 5 [9386]: [9446]: Begin OSPF DR election on
Vlan5
2013 May 16 10:50:58.092432 ospf 5 [9386]: : Nbr 5.5.5.2: DOWN --> INIT,
event HELLORCVD

```

Troubleshooting

Se a investigação da Conectividade L2/3, da configuração, e do tráfego OSPF-permitido não descobriu o problema e mostrou o vizinho na lista, abra um exemplo do centro de assistência técnica da Cisco (TAC). Incorpore estes comandos e fonte TAC com a informação de ambas as saídas dos vizinhos:

- Show run
- Mostre o OSPF do tecnologia-apoio

Vizinho de OSPF colado no estado da iniciação (INIT)

Há umas épocas quando o vizinho é colado no estado de INIT, que indica que o nexho 7000 considera pacotes Hello do vizinho, mas não vê seu roteador-ID no pacote Hello a fim mover-se para o estado seguinte de em dois sentidos.

```
router2#show ip ospf neighbor
```

```

Neighbor ID      Pri   State       Dead Time   Address        Interface
170.170.5.1      1     INIT/-      00:00:34   170.170.1.1   ethernet 1/1
router-2#

```

Esta edição pôde ser causada por:

- Um lado está obstruindo o pacote Hello com ACL.
- Um lado está traduzindo, com o Network Address Translation (NAT), os hellos de OSPF.
- A potencialidade de transmissão múltipla de um lado é quebrada (L2).

Termine estas etapas a fim investigar a edição:

1. Verifique que o plano do controle do Protocolo IP multicast funciona.


```
N7K4# ping multicast 224.0.0.5 interface Ethernet 1/1
```

Se você não vê o endereço IP de Um ou Mais Servidores Cisco ICM NT dos vizinhos nos resultados do sibilo, a seguir há uma edição. Verifique-a em ambos os lados.

2. Verifique que os pacotes Hello estão recebidos do vizinho.

```
N7K4# show ip ospf 5 event-history adjacency
```

Nota: Os pacotes Hello que parte não são indicados.

3. Permita a adjacência de OSPF debugam em cada relação, e verificam que os pacotes Hello estão enviados.

```
N7K4# debug logfile debug-ospf size 10000
```

```
N7K4# debug-filter ip ospf 5 interface Ethernet 1/1
```

```
N7K4# debug ip ospf 5 adjacency detail
```

Nota: Não esqueça desabilitar debuga.

```
N7K4# undebug all
```

```
N7K4# no debug-filter all
```

```
N7K4# clear debug logfile debug-ospf
```

4. Verifique que os pacotes estão enviados pelo OSPF a 224.0.0.5.

```
N7K4# debug logfile ospf_vj
```

```
N7K4# debug-filter ip mpacket interface e1/5
```

```
N7K4# debug-filter ip mpacket direction outbound
```

```
N7K4# debug-filter ip mpacket dest 224.0.0.5
```

```
N7K4# debug ip ospf 5 hello
```

```
N7K4# show debug logfile ospf_vj
```

```
N7K1-RP# show debug logfile ospf_vj
```

```
2013 May 16 11:18:55.202270 ospf: 5 [9386] (default) LAN hello in, ivl 10/40,
options 0x02, mask /24, prio 1, dr 5.5.5.1, bdr 5.5.5
.2 on Vlan5 from 5.5.5.2
```

```
2013 May 16 11:19:00.527640 ospf: 5 [9386] (default) LAN hello out, ivl 10/40,
options 0x02, mask /24, prio 1, dr 5.5.5.1, bdr 5.5.
5.2 nbrs 1 on Vlan5 (area 0.0.0.0)
```

```
2013 May 16 11:19:03.500785 ospf: 5 [9386] (default) LAN hello in, ivl 10/40,
options 0x02, mask /24, prio 1, dr 5.5.5.1, bdr 5.5.5
.2 on Vlan5 from 5.5.5.2
```

```
2013 May 16 11:19:09.515150 ospf: 5 [9386] (default) LAN hello out, ivl 10/40,
options 0x02, mask /24, prio 1, dr 5.5.5.1, bdr 5.5.
5.2 nbrs 1 on Vlan5 (area 0.0.0.0)
```

```
2013 May 16 11:19:10.406800 ospf: 5 [9386] (default) LAN hello in, ivl 10/40,
options 0x02, mask /24, prio 1, dr 0.0.0.0, bdr 0.0.0
.0 on Vlan5 from 5.5.5.2
```

```
2013 May 16 11:19:10.417602 ospf: 5 [9386] (default) LAN hello in, ivl 10/40,
options 0x02, mask /24, prio 1, dr 0.0.0.0, bdr 0.0.0
.0 on Vlan5 from 5.5.5.2
```

```
N7K1-RP#
```

Nota: Não esqueça desabilitar debuga.

```
N7K4# clear debug logfile ospf_vj
```

```
N7K4# undebug all
```

```
N7K4# no debug-fil all
```

```
no debug-filter ip mpacket interface Ethernet1/5
```

```
no debug-filter ip mpacket direction outbound
```

```
no debug-filter ip mpacket dest 224.0.0.5
```

```
N7K4#
```

5. Verifique que o pacote está no ethanalyzer.

```
N7K4# ethanalyzer local interface inband capture-filter "ip proto \ospf"
```

```
N7K1# ethanalyzer local interface inband capture-filter "ip proto \ospf"
```

Capturing on inband

50 packets captured

```
2013-05-16 11:06:34.387196      5.5.5.2 -> 224.0.0.5    OSPF Hello Packet
2013-05-16 11:06:34.397553      5.5.5.2 -> 224.0.0.5    OSPF Hello Packet
2013-05-16 11:06:38.895343      5.5.5.1 -> 224.0.0.5    OSPF Hello Packet
```

Nota: Deve haver um no contexto do dispositivo virtual do padrão (VDC).

Troubleshooting

Se a investigação da Conectividade L2/3, da configuração, e do tráfego OSPF-permitido não descobre o problema e mostra que o vizinho se transforma FULL, abra um caso de TAC. Incorpore estes comandos e fonte TAC com a informação de ambas as saídas dos vizinhos:

- Show run
- Mostre o OSPF do tecnologia-apoio

Vizinho de OSPF colado em um estado bidirecional

Há as épocas em que o vizinho de OSPF é colado em um estado bidirecional. Esta encenação é normal nos tipos de rede de transmissão, e reduz a quantidade de inundação no fio. Esta encenação igualmente ocorre se todo o Roteadores é configurado com uma prioridade igual a zero.

Nota: Somente os roteadores de extremidade baixa devem ser configurados com uma prioridade de zero assim que não participam na eleição do Designated Router (DR).

Refira [porque faz o comando show ip ospf neighbor revelam os vizinhos colados no estado bidirecional?](#) artigo para mais informação.

Vizinho de OSPF colado em Exstart/troca

Há as épocas em que o vizinho de OSPF é colado no estado de intercâmbio/exstart.

Se há uma má combinação MTU entre as relações dos vizinhos de OSPF ou não podem se sibililar com o tamanho do pacote do MTU configurado devido aos meios de transmissão, a seguir o vizinho de OSPF está colado no estado de intercâmbio/exstart.

```
router-6# show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
170.170.11.7	1	EXCHANGE/	- 00:00:36	170.170.11.7	Serial2.7

```
router-6#router-7# show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
170.170.11.6	1	EXSTART/	- 00:00:33	170.170.11.6	Serial0.6

```
router-7#
```

Esta edição pôde ser causada por:

- Má combinação MTU - TROCA em um roteador e EXSTART no outro
Nota: Você pode configurar com o comando **ip ospf mtu-ignore**.
- O ID de roteador vizinho (LIVRADO) é o mesmo que seu vizinho - EXSTART

- O unicast é quebrado - TROCA Problema com MTU - não pode sibilar transversalmente com mais do que um pacote do certo-comprimentoACL que obstrui o unicast - após o OSPF em dois sentidos envia o pacote do unicast exceto os links (P2P) pontos a pontoO NAT traduz o pacote do unicast

Termine estas etapas a fim investigar a edição:

1. Verifique o sibilo normal com mordeu don't fragment (DF) e com no IP MTU do máximo na relação.

```
N7K4# ping 10.10.12.2 df-bit packet-size 1472
```

Nota: No Cisco IOS, quando você incorpora o **comando do <size> do tamanho do sibilo x.x.x.x**, o tamanho refere o tamanho de pacote IP. Em Linux, você especifica o payload do Internet Control Message Protocol (ICMP) do sibilo um pouco do que especificando o tamanho de pacote IP como no Cisco IOS. Porque você pôde já saber, o nexa é construído em Linux. O MTU é ajustado ainda a 1,500 bytes - 20 daqueles bytes são o cabeçalho IP e uns outros 8 são o cabeçalho ICMP. $1,500 - 20 - 8 = 1,472$ bytes de payload. Consequentemente, o tamanho real do IP datagram é o mesmo que no Cisco IOS, que é 1,500 bytes.

2. Verifique se os pacotes são deixados cair nas interfaces de entrada com o **comando 1/1 dos Ethernet int da mostra.**

```
N7K1-RP# show int ethernet 1/20 | section RX|TX
```

RX

```
340213 unicast packets 368092 multicast packets 2 broadcast packets
708307 input packets 233094927 bytes
0 jumbo packets 0 storm suppression packets
0 runs 0 giants 0 CRC/FCS 0 no buffer
0 input error 0 short frame 0 overrun 0 underrun 0 ignored
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
0 input with dribble 0 input discard
0 Rx pause
```

TX

```
1374131 unicast packets 324752 multicast packets 3 broadcast packets
1698886 output packets 196282264 bytes
0 jumbo packets
0 output error 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble 0 output discard
0 Tx pause
```

```
N7K1-RP#
```

3. Verifique se CoPP deixa cair o pacote de OSPF com o comando da **classe test1-copp-class-critical do controle plano da relação do mapa de política da mostra.**

```
Control Plane
```

```
service-policy input test1-copp-policy-lenient
```

```
class-map test1-copp-class-critical (match-any)
  match access-group name test1-copp-acl-bgp
  match access-group name test1-copp-acl-pim
  match access-group name test1-copp-acl-rip
  match access-group name test1-copp-acl-vpc
  match access-group name test1-copp-acl-bgp6
  match access-group name test1-copp-acl-igmp
  match access-group name test1-copp-acl-lisp
  match access-group name test1-copp-acl-msdp
  match access-group name test1-copp-acl-ospf
  match access-group name test1-copp-acl-pim6
  match access-group name test1-copp-acl-rip6
```

```

match access-group name test1-copp-acl-rise
match access-group name test1-copp-acl-eigrp
match access-group name test1-copp-acl-lisp6
match access-group name test1-copp-acl-ospf6
match access-group name test1-copp-acl-rise6
match access-group name test1-copp-acl-eigrp6
match access-group name test1-copp-acl-otv-as
match access-group name test1-copp-acl-mac-l2pt
match access-group name test1-copp-acl-mps-ldp
match access-group name test1-copp-acl-mps-oam
match access-group name test1-copp-acl-mps-rsvp
match access-group name test1-copp-acl-mac-l3-isis
match access-group name test1-copp-acl-mac-otv-isis
match access-group name test1-copp-acl-mac-fabricpath-isis
match protocol mpls router-alert
match protocol mpls exp 6
set cos 7
police cir 39600 kbps bc 375 ms
  conform action: transmit
  violate action: drop
module 1:
  conformed 539964945 bytes,
    5-min offered rate 5093 bytes/sec
    peak rate 5213 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec
module 2:
  conformed 784228080 bytes,
    5-min offered rate 5848 bytes/sec
    peak rate 7692 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec
module 3:
  conformed 5114206 bytes,
    5-min offered rate 41 bytes/sec
    peak rate 6656 bytes/sec
  violated 0 bytes,
    5-min violate rate 0 bytes/sec

```

N7K1#

4. Verifique a troca do descritor da base de dados do OSPF (DBD) com o comando da **adjacência da evento-história OSPF 5 da mostra IP** ou o comando da **adjacência OSPF 5 debug IP**.

```

N7K1-RP# debug logfile debug-ospf size 10000
N7K1-RP# debug-filter ip ospf 5 interface Vlan 5
N7K1-RP# debug ip ospf 5 adjacency detail

```

Aqui está um exemplo:

```

N7K1-RP# show debug logfile debug-ospf
2013 May 20 05:36:23.414376 ospf: 5 [8325] (default)      Nbr 5.5.5.2 FSM start:
old state FULL, event HELLORCVD
2013 May 20 05:36:23.414424 ospf: 5 [8325] (default)      Nbr 5.5.5.2: FULL -->
FULL, event HELLORCVD
2013 May 20 05:36:23.414438 ospf: 5 [8325] (default)      Nbr 5.5.5.2 FSM start:
old state FULL, event TWOWAYRCVD
2013 May 20 05:36:23.414450 ospf: 5 [8325] (default)      Nbr 5.5.5.2: FULL -->
FULL, event TWOWAYRCVD
2013 May 20 05:36:28.832638 ospf: 5 [8325] (default)      Nbr 5.5.5.2 FSM start:
old state FULL, event HELLORCVD
2013 May 20 05:36:28.832674 ospf: 5 [8325] (default)      Nbr 5.5.5.2: FULL -->
FULL, event HELLORCVD
2013 May 20 05:36:28.832695 ospf: 5 [8325] (default)      Nbr 5.5.5.2: transitioning

```

to OneWay - did not find ourselves
2013 May 20 05:36:28.832709 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state FULL, event ONEWAYRCVD
2013 May 20 05:36:28.833073 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM state
changed from FULL to INIT, event ONEWAYRCVD
2013 May 20 05:36:28.833120 ospf: 5 [8325] Begin OSPF DR election on Vlan5
2013 May 20 05:36:28.833140 ospf: 5 [8325] Current 5.5.0.1 as DR, 5.5.0.2
as BDR
2013 May 20 05:36:28.833177 ospf: 5 [8325] BDR election starting
2013 May 20 05:36:28.833196 ospf: 5 [8325] Walking neighbor 5.5.5.1
(0xaec59188), state SELF
2013 May 20 05:36:28.833211 ospf: 5 [8325] This neighbor is greater
than 2way
2013 May 20 05:36:28.833235 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state INIT
2013 May 20 05:36:28.833249 ospf: 5 [8325] DR election starting
2013 May 20 05:36:28.833265 ospf: 5 [8325] Walking neighbor 5.5.5.1
(0xaec59188), state SELF
2013 May 20 05:36:28.833281 ospf: 5 [8325] This nbr 5.5.5.1 promoted to
current dr
2013 May 20 05:36:28.833297 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state INIT
2013 May 20 05:36:28.833404 ospf: 5 [8325] Elected 5.5.0.1 as DR,
0.0.0.0 as BDR
2013 May 20 05:36:28.833440 ospf: 5 [8325] Interface Vlan5 ---> DR
2013 May 20 05:36:28.833456 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state INIT, event ADJOK
2013 May 20 05:36:28.833474 ospf: 5 [8325] (default) Nbr 5.5.5.2: INIT -->
INIT, event ADJOK
2013 May 20 05:36:28.833492 ospf: 5 [8325] (default) Nbr 5.5.5.2: FULL -->
INIT, event ONEWAYRCVD
2013 May 20 05:36:28.843309 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state INIT, event HELLORCVD
2013 May 20 05:36:28.843339 ospf: 5 [8325] (default) Nbr 5.5.5.2: INIT -->
INIT, event HELLORCVD
2013 May 20 05:36:28.843357 ospf: 5 [8325] (default) Nbr 5.5.5.2: transitioning
to OneWay - did not find ourselves
2013 May 20 05:36:28.843370 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state INIT, event ONEWAYRCVD
2013 May 20 05:36:28.843386 ospf: 5 [8325] (default) Nbr 5.5.5.2: INIT -->
INIT, event ONEWAYRCVD
2013 May 20 05:36:34.244541 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 0 entries
2013 May 20 05:36:34.244567 ospf: 5 [8325] (default) seqnr 0x9247f5e,
dbdbits 0x7, mtu 1600, options 0x42
2013 May 20 05:36:34.244622 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state INIT, event TWOWAYRCVD
2013 May 20 05:36:34.244798 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM state
changed from INIT to EXSTART, event ADJOK
2013 May 20 05:36:34.244859 ospf: 5 [8325] Begin OSPF DR election on Vlan5
2013 May 20 05:36:34.244880 ospf: 5 [8325] Current 5.5.0.1 as DR, 0.0.0.0
as BDR
2013 May 20 05:36:34.244916 ospf: 5 [8325] BDR election starting
2013 May 20 05:36:34.244935 ospf: 5 [8325] Walking neighbor 5.5.5.1
(0xaec59288), state SELF
2013 May 20 05:36:34.244949 ospf: 5 [8325] This neighbor is greater
than 2way
2013 May 20 05:36:34.244965 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state EXSTART
2013 May 20 05:36:34.244978 ospf: 5 [8325] This neighbor is greater
than 2way
2013 May 20 05:36:34.244991 ospf: 5 [8325] This neighbor is in consideration
for bdr
2013 May 20 05:36:34.245004 ospf: 5 [8325] Current BDR set to this neighbor

```

2013 May 20 05:36:34.245019 ospf: 5 [8325] Compare done, new current
bdr 5.5.5.2
2013 May 20 05:36:34.245033 ospf: 5 [8325] DR election starting
2013 May 20 05:36:34.245049 ospf: 5 [8325] Walking neighbor 5.5.5.1
(Oxaec59288), state SELF
2013 May 20 05:36:34.245065 ospf: 5 [8325] This nbr 5.5.5.1 promoted to
current dr
2013 May 20 05:36:34.245080 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state EXSTART
2013 May 20 05:36:34.245094 ospf: 5 [8325] Neighbor not declared DR,
ignoring
2013 May 20 05:36:34.245202 ospf: 5 [8325] Elected 5.5.0.1 as DR,
5.5.0.2 as BDR
2013 May 20 05:36:34.245247 ospf: 5 [8325] Interface Vlan5 ---> DR
2013 May 20 05:36:34.245262 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state EXSTART, event ADJOK
2013 May 20 05:36:34.245299 ospf: 5 [8325] (default) Nbr 5.5.5.2:
EXSTART --> EXSTART, event ADJOK
2013 May 20 05:36:34.245318 ospf: 5 [8325] (default) Nbr 5.5.5.2:
INIT --> EXSTART, event TWOWAYRCVD
2013 May 20 05:36:34.245335 ospf: 5 [8325] (default) We are SLAVE,
5.5.5.2 is master
2013 May 20 05:36:34.245348 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state EXSTART, event NEGDONE
2013 May 20 05:36:34.245366 ospf: 5 [8325] (default) Preparing DBD exchange
for nbr 5.5.5.2, 387/5
2013 May 20 05:36:34.245463 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM state
changed from EXSTART to EXCHANGE, event NEGDONE
2013 May 20 05:36:34.245483 ospf: 5 [8325] (default) Nbr 5.5.5.2: EXSTART -->
EXCHANGE, event NEGDONE
2013 May 20 05:36:34.245843 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 0 entries
2013 May 20 05:36:34.245862 ospf: 5 [8325] (default) seqnr 0x9247f5e,
dbdbits 0x7, mtu 1600, options 0x42
2013 May 20 05:36:34.245997 ospf: 5 [8325] (default) Sending DBD to
5.5.5.2 on Vlan5
2013 May 20 05:36:34.246031 ospf: 5 [8325] (default) Add 5.5.0.2(0x1)5.5.0.2
(0x80000084) (0x2c26) (109) to DBD
2013 May 20 05:36:34.246062 ospf: 5 [8325] (default) Add 5.5.0.1(0x1)5.5.0.1
(0x8000007f) (0xa3c7) (5)(0) to DBD
2013 May 20 05:36:34.246078 ospf: 5 [8325] (default) Filled DBD to 5.5.5.2
with 2 entries
2013 May 20 05:36:34.246111 ospf: 5 [8325] (default) Sent DBD with 2 entries to
5.5.5.2 on Vlan5
2013 May 20 05:36:34.246128 ospf: 5 [8325] (default) mtu 1600, opts: 0x42,
ddbbits: 0x2, seq: 0x9247f5e
2013 May 20 05:36:34.258616 ospf: 5 [8325] (default) Recv LSR from Nbr 5.5.5.2
2013 May 20 05:36:34.258634 ospf: 5 [8325] (default) schedule flood
2013 May 20 05:36:34.258674 ospf: 5 [8325] (default) Answering LSR from 5.5.5.2
2013 May 20 05:36:34.258690 ospf: 5 [8325] (default) 1 requests in LSR (1 left)
2013 May 20 05:36:34.258707 ospf: 5 [8325] (default) Building reply LSU to 5.5.5.2
2013 May 20 05:36:34.258726 ospf: 5 [8325] (default) Found requested LSA
5.5.0.1(1)5.5.0.1 for 5.5.5.2
2013 May 20 05:36:34.258791 ospf: 5 [8325] (default) Added 5.5.0.1(0x1)
5.5.0.1 (0x8000007f) (0xa3c7) (5)(0)
2013 May 20 05:36:34.258872 ospf: 5 [8325] (default) Built reply LSU with 1 LSAs
for 5.5.5.2 96 bytes
2013 May 20 05:36:34.286591 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 2 entries
2013 May 20 05:36:34.286615 ospf: 5 [8325] (default) seqnr 0x9247f5f,
dbdbits 0x3, mtu 1600, options 0x42
2013 May 20 05:36:34.286751 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 2 entries
2013 May 20 05:36:34.286784 ospf: 5 [8325] (default) seqnr 0x9247f5f,

```

dbdbits 0x3, mtu 1600, options 0x42
2013 May 20 05:36:34.286804 ospf: 5 [8325] (default) Found 5.5.5.1(0x2)
5.5.0.1 (0x80000004) (0x46de) (111) in DBD
2013 May 20 05:36:34.286870 ospf: 5 [8325] (default) Added 5.5.5.1(0x2)
5.5.0.1 (0x80000004) (0x46de) (111)(DO) to request list
2013 May 20 05:36:34.286889 ospf: 5 [8325] (default) Found 5.5.0.2(0x1)
5.5.0.2 (0x800000085) (0x91d0) (5) in DBD
2013 May 20 05:36:34.286917 ospf: 5 [8325] (default) Added 5.5.0.2(0x1)
5.5.0.2 (0x800000084) (0x2c26) (109) to request list
2013 May 20 05:36:34.286932 ospf: 5 [8325] (default) Added 2 out of 2 LSAs
to request list
2013 May 20 05:36:34.287046 ospf: 5 [8325] (default) Sending DBD to
5.5.5.2 on Vlan5
2013 May 20 05:36:34.287066 ospf: 5 [8325] (default) Filled DBD to
5.5.5.2 with 0 entries
2013 May 20 05:36:34.287101 ospf: 5 [8325] (default) Sent DBD with 0 entries to
5.5.5.2 on Vlan5
2013 May 20 05:36:34.287121 ospf: 5 [8325] (default) mtu 1600, opts: 0x42,
dbdbits: 0, seq: 0x9247f5f
2013 May 20 05:36:34.291760 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 0 entries
2013 May 20 05:36:34.291789 ospf: 5 [8325] (default) seqnr 0x9247f60,
dbdbits 0x1, mtu 1600, options 0x42
2013 May 20 05:36:34.291915 ospf: 5 [8325] (default) Got DBD from 5.5.5.2
with 0 entries
2013 May 20 05:36:34.291934 ospf: 5 [8325] (default) seqnr 0x9247f60,
dbdbits 0x1, mtu 1600, options 0x42
2013 May 20 05:36:34.291953 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state EXCHANGE, event EXCHDONE
2013 May 20 05:36:34.292101 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM state
changed from EXCHANGE to LOADING, event EXCHDONE
2013 May 20 05:36:34.292124 ospf: 5 [8325] (default) Nbr 5.5.5.2: EXCHANGE -->
LOADING, event EXCHDONE
2013 May 20 05:36:34.293200 ospf: 5 [8325] (default) Building LS Request packet
to 5.5.5.2
2013 May 20 05:36:34.293231 ospf: 5 [8325] (default) Add 5.5.0.2(0x1)
5.5.0.2 (0x800000084) (0x2c26) (110) to LSR
2013 May 20 05:36:34.293262 ospf: 5 [8325] (default) Add 5.5.5.1(0x2)
5.5.0.1 (0x80000004) (0x46de) (111)(DO) to LSR
2013 May 20 05:36:34.293281 ospf: 5 [8325] (default) Built LS Request packet for
5.5.5.2 with 2 entries
2013 May 20 05:36:34.297954 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state LOADING, event LDDONE
2013 May 20 05:36:34.298069 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM state
changed from LOADING to FULL, event LDDONE
2013 May 20 05:36:34.298206 ospf: 5 [8325] (default) Nbr 5.5.5.2: LOADING -->
FULL, event LDDONE
2013 May 20 05:36:34.299179 ospf: 5 [8325] (default) Sending DBD to 5.5.5.2
on Vlan5
2013 May 20 05:36:34.299199 ospf: 5 [8325] (default) Filled DBD to 5.5.5.2
with 0 entries
2013 May 20 05:36:34.299233 ospf: 5 [8325] (default) Sent DBD with 0 entries to
5.5.5.2 on Vlan5
2013 May 20 05:36:34.299253 ospf: 5 [8325] (default) mtu 1600, opts: 0x42,
dbdbits: 0, seq: 0x9247f60
2013 May 20 05:36:38.746942 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state FULL, event HELLORCVD
2013 May 20 05:36:38.747010 ospf: 5 [8325] (default) Nbr 5.5.5.2: FULL -->
FULL, event HELLORCVD
2013 May 20 05:36:38.747024 ospf: 5 [8325] (default) Nbr 5.5.5.2 FSM start:
old state FULL, event TWOWAYRCVD
2013 May 20 05:36:38.747046 ospf: 5 [8325] (default) Nbr 5.5.5.2: FULL -->
FULL, event TWOWAYRCVD

```

2013 May 20 05:36:38.747073 ospf: 5 [8325] (default) Different BDR in hello,
invoking nbrchange
2013 May 20 05:36:38.747090 ospf: 5 [8325] (default) Neighbor
priority/options/DR/BDR value changed
2013 May 20 05:36:38.747265 ospf: 5 [8325] Begin OSPF DR election on Vlan5
2013 May 20 05:36:38.747288 ospf: 5 [8325] Current 5.5.0.1 as DR,
5.5.0.2 as BDR
2013 May 20 05:36:38.747329 ospf: 5 [8325] BDR election starting
2013 May 20 05:36:38.747348 ospf: 5 [8325] Walking neighbor 5.5.5.1
(0xaec59478), state SELF
2013 May 20 05:36:38.747362 ospf: 5 [8325] This neighbor is greater
than 2way
2013 May 20 05:36:38.747648 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state FULL
2013 May 20 05:36:38.747662 ospf: 5 [8325] This neighbor is greater
than 2way
2013 May 20 05:36:38.747676 ospf: 5 [8325] This neighbor is in consideration
for bdr
2013 May 20 05:36:38.747689 ospf: 5 [8325] Current BDR set to this neighbor
2013 May 20 05:36:38.747705 ospf: 5 [8325] Compare done, new current bdr
5.5.5.2
2013 May 20 05:36:38.747733 ospf: 5 [8325] DR election starting
2013 May 20 05:36:38.747750 ospf: 5 [8325] Walking neighbor 5.5.5.1
(0xaec59478), state SELF
2013 May 20 05:36:38.747766 ospf: 5 [8325] This nbr 5.5.5.1 promoted to
current dr
2013 May 20 05:36:38.747782 ospf: 5 [8325] Walking neighbor 5.5.5.2
(0x9777584), state FULL
2013 May 20 05:36:38.747796 ospf: 5 [8325] Neighbor not declared DR,
ignoring
2013 May 20 05:36:38.747948 ospf: 5 [8325] Elected 5.5.0.1 as DR,
5.5.0.2 as BDR
2013 May 20 05:36:38.748004 ospf: 5 [8325] Interface Vlan5 ---> DR

```

Nota: Não esqueça desabilitar debug.

```

N7K1-RP# clear debug logfile debug-ospf
N7K1-RP# undebug all
N7K1-RP# no debug-fil all

```

Pontas da investigação:

Look for combinou mal mensagens MTU. Siga o número de sequência e procure uma retransmissão devido à gota DBD. Verifique para ver se há o recibo de um número de sequência inesperado DBD.

Troubleshooting

Se a investigação da Conectividade L2/3, da configuração, e do tráfego OSPF-permitido não descobriu o problema e mostrou que o vizinho é em linha, abra um caso de TAC. Incorpore estes comandos e fonte TAC com a informação de ambas as saídas dos vizinhos:

- Show run
- Mostre o OSPF do tecnologia-apoio

Vizinho de OSPF colado em um estado de carregamento

Há as épocas em que o vizinho de OSPF é colado em um estado de carregamento.

Esta edição pôde ser causada por:

- Um pedido do estado do link (LS) é feito, e o vizinho envia um pacote ruim ou a corrupção de memória existe. Incorpore o comando **ruim IP OSPF da mostra** a fim ver a propaganda ruim do estado do link (LSA). **O comando show log** mostra a mensagem **OSPF-4-BADLSATYPE**. Um pedido LS é feito, e o vizinho ignora o pedido.

Se um roteador recebe um LSA antiquado, corrompido, ou de falta, o OSPF fica em um estado de carregamento, e gera o Mensagem de Erro **OSPF-4-BADLSA**.

Incorpore este comando a fim investigar:

```
7K1-RP# show ip ospf traffic vlan 5
OSPF Process ID 5 VRF default, Packet Counters (cleared 1d12h ago)
Interface Vlan5, Area 0.0.0.0
Total: 15214 in, 15214 out
LSU transmissions: first 88, rxmit 9(13), for req 0, nbr xmit 289801235
Flooding packets output throttled (IP/tokens): 0 (0/0)
Ignored LSAs: 0, LSAs dropped during SPF: 0
LSAs dropped during graceful restart: 0
Errors: drops in      0, drops out      0, errors in      0,
        errors out    0, hellos in      0, dbds in      0,
        lsreq in      0, lsu in        0, lsacks in    0,
        unknown in    0, unknown out  0, no ospf      0,
        bad version   0, bad crc      0, dup rid      0,
        dup src       0, invalid src  0, invalid dst  0,
        no nbr        0, passive     0, wrong area  0,
        pkt length    0, nbr changed  0, ip addr    0,
        bad auth      0,
        hellos        14957, dbds        42, lsreqs       13, lsus        108, acks        94
In:
Out:
        14957,         46,         14,         110,         87
```

N7K1-RP#

Troubleshooting

Se a investigação da Conectividade L2/3, da configuração, e do tráfego OSPF-permitido não descobriu o problema e mostrou que o vizinho é em linha, abra um caso de TAC. Incorpore estes comandos e fonte TAC com a informação de ambas as saídas dos vizinhos:

- **Mostre o ficheiro histórico do log**
- **Mostre o OSPF do tecnologia-apoio**