

Solución de problemas de adyacencia OSPF de Nexus 7000

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Introducción

Este documento describe varios escenarios comunes encontrados donde el vecino OSPF (Open Shortest Path First) no se conecta como se esperaba. Para evitar este tipo de comportamiento inesperado en los switches Nexus de Cisco serie 7000, asegúrese de seguir las directrices y restricciones sobre la capa 3 (L3) y el canal de puerto virtual (vPC).

Antecedentes

Antes de resolver problemas, asegúrese de que se cumplen las pautas y restricciones. Consulte la [Guía de diseño y configuración: Prácticas recomendadas para Virtual Port Channels \(vPC\) en switches Nexus de Cisco serie 7000](#) para obtener más información sobre L3 y vPC.

El procedimiento utilizado para resolver problemas de adyacencia OSPF en el Nexus 7000 es similar a los procedimientos para Cisco IOS[®], pero Nexus 7000 tiene más herramientas y filtros integrados para identificar fácilmente el problema.

La adyacencia OSPF no se conecta

Hay momentos en que la adyacencia OSPF no se conecta. El comando `show ip ospf neighbor` no muestra al vecino.

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

```
R3#
```

Este problema podría deberse a:

- Problema de conectividad L2/L3
- OSPF no habilitado en la interfaz
- La interfaz se define como pasiva
- Máscara de subred no coincidente
- Intervalo de saludo/muerto no coincidente
- Clave de autenticación no coincidente
- ID de área no coincidente
- Opción de tránsito/stub/Not-So-Stubby Area (NSSA) no coincidentes

Para investigar el problema, verifique la conectividad, la configuración y la lista de control de acceso (ACL)/ política de plano de control (CoPP).

Comprobación de la conectividad L2/L3

1. Verifique la conectividad de unidifusión con ping.

Si hay un problema de conectividad, descubra si se debe al proveedor de servicios de Internet (ISP) L2, un puerto físico, un convertidor de interfaz Gigabit (GBIC) o un cable.

Nota: Suponga que no hay ACL/CoPP que bloquee el tráfico. Si el problema se debe a un hardware o un cable defectuosos, reemplácelo o muévelo a otro puerto para resolver el problema.

2. Verifique la conectividad multicast con ping.

```
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 la interfaz esté limpia y que no haya caídas o errores con el comando **show int ethernet 1/1**.

```
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 si estas funciones descartan paquetes en la tarjeta de línea entrante, la interfaz o la CPU.

- ACL: entrante/saliente de la interfaz
- Calidad de servicio (QoS): en la interfaz
- 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#

Verificar la Configuración OSPF

Utilice estos comandos para verificar la configuración OSPF (subred, intervalo hello/dead, ID de área, tipo de área, clave de autenticación (si la hay) y no pasivo) y asegurarse de que coincide en ambos lados.

1. Show run ospf

2. Show ip ospf 5 interfaz

3. Show ip ospf 5

Este es un ejemplo del primer 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#
```

Este es un ejemplo del segundo comando:

```
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#
```

Este es un ejemplo del tercer 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 los mensajes OSPF

Ingrese el comando **show ip ospf event-history adjacency** para verificar que el proceso OPSF envíe y reciba los mensajes de depuración.

Nota: Los últimos mensajes aparecen en la parte superior.

El resultado muestra todos los mensajes de adyacencia OSPF que se intercambian entre vecinos OSPF. Cuando se forma una adyacencia OSPF, un router pasa por varios cambios de estado antes de que se vuelva completamente adyacente con su vecino. Este resultado muestra todos los cambios de estado y las negociaciones. Si hay un problema (unidad de transición máxima (MTU), problemas de conectividad, pérdida de paquetes), se refleja en el resultado.

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, dbdbits 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, dbdbits 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

```

Troubleshoot

Si la investigación de la conectividad L2/3, la configuración y el tráfico permitido por OSPF no descubrieron el problema y mostraron al vecino en la lista, abra un caso de Cisco Technical Assistance Center (TAC). Ingrese estos comandos y suministre al TAC la información de los resultados de ambos vecinos:

- 'Show run'
- Show tech-support ospf

Vecino OSPF atascado en el estado de inicialización (INIT)

Hay momentos en que el vecino se encuentra atascado en el estado INIT, lo que indica que el Nexus 7000 ve los paquetes hello del vecino, pero no ve su router-ID en el paquete hello para pasar al siguiente estado de dos vías.

```
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#
```

Este problema podría deberse a:

- Un lado está bloqueando el paquete hello con ACL.
- Un lado está traduciendo, con la traducción de direcciones de red (NAT), el saludo OSPF.
- La capacidad de multidifusión de un lado está dañada (L2).

Complete estos pasos para investigar el problema:

1. Verifique que el plano de control IP Multicast funcione.

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

Si no ve la dirección IP de los vecinos en los resultados de ping, entonces hay un problema. Compruébelo en ambos lados.

2. Verifique que los paquetes HELLO se reciban del vecino.

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

Nota: No se muestran los paquetes hello salientes.

3. Habilite el debug de adyacencia OSPF en cada interfaz y verifique que se envíen paquetes hello.

```
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: No olvide deshabilitar las depuraciones.

```
N7K4# undebug all
N7K4# no debug-filter all
N7K4# clear debug logfile debug-ospf
```

4. Verifique que los paquetes sean enviados por 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: No olvide deshabilitar las depuraciones.

```

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 el paquete esté en el etanalyzer.

```

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: Debe haber uno en el contexto de dispositivo virtual predeterminado (VDC).

Troubleshoot

Si la investigación de la conectividad L2/3, la configuración y el tráfico permitido por OSPF no descubre el problema y muestra que el vecino se vuelve COMPLETO, abra un caso TAC. Ingrese estos comandos y suministre al TAC la información de los resultados de ambos vecinos:

- 'Show run'
- Show tech-support ospf

Vecino OSPF atascado en un estado bidireccional

Hay momentos en que el vecino OSPF se bloquea en un estado bidireccional. Este escenario es normal en los tipos de red de broadcast y reduce la cantidad de inundación en el cable. Este escenario también ocurre si todos los routers están configurados con una prioridad igual a cero.

Nota: Sólo los routers de gama baja deben configurarse con una prioridad de cero para que no participen en la elección de router designado (DR).

Refiérase a [¿Por Qué el Comando show ip ospf neighbor Revela Que Los Vecinos Están Atascados en el Estado Bidireccional?](#) para obtener más información.

Vecino OSPF atascado en Exstart/Exchange

Hay veces en que el vecino OSPF se atasca en el estado Exstart/Exchange.

Si hay discordancia de MTU entre las interfaces de los vecinos OSPF o no pueden hacer ping entre sí con el tamaño del paquete de la MTU configurada debido a los medios de transmisión, entonces el vecino OSPF se atasca en el estado exstart/exchange.

```
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#
```

Este problema podría deberse a:

- Discordancia de MTU - INTERCAMBIO en un router y EXSTART en el otro
Nota: Puede configurar con el comando `ip ospf mtu-ignore`.
- La ID del router vecino (RID) es la misma que la de su vecino - EXSTART
- La unidifusión está dañada - EXCHANGE Problema de MTU: no se puede hacer ping con más de un paquete de cierta longitud Bloqueo de ACL unidifusión: después de que OSPF bidireccional envíe paquetes de unidifusión excepto enlaces punto a punto (P2P) NAT traduce el paquete de unidifusión

Complete estos pasos para investigar el problema:

1. Verifique el ping normal con un bit Don't Fragment (DF) activado y con la MTU IP máxima en la interfaz.

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

Nota: En Cisco IOS, cuando ingresa el comando `ping x.x.x.x size <size>`, el tamaño hace referencia al tamaño del paquete IP. En Linux, se especifica la carga útil del protocolo de mensajes de control de Internet (ICMP) del ping en lugar de especificar el tamaño del paquete IP como en Cisco IOS. Como ya sabrá, Nexus está construido en Linux. La MTU

todavía está configurada en 1,500 bytes - 20 de esos bytes son el encabezado IP y otros 8 son el encabezado ICMP. $1,500 - 20 - 8 = 1,472$ bytes de carga útil. Por lo tanto, el tamaño real del datagrama IP es el mismo que en Cisco IOS, que es de 1500 bytes.

2. Verifique si los paquetes se descartan en las interfaces entrantes con el comando **show int ethernet 1/1**.

```
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 si CoPP descarta el paquete OSPF con el comando **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#

4. Verifique el intercambio de OSPF Database Descriptor (DBD) con el comando **show ip ospf 5 event-history adjacency** o el comando **debug ip ospf 5 adjacency**.

```

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

```

Aquí tiene un ejemplo:

```

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
(0xaec59288), 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 li
st
2013 May 20 05:36:34.286889 ospf: 5 [8325] (default) Found 5.5.0.2(0x1)
5.5.0.2 (0x80000085) (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 (0x80000084) (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,
ddbits: 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 (0x80000084) (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,
ddbits: 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: No olvide deshabilitar las depuraciones.

```

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

```

Consejos de investigación:

Busque mensajes MTU no coincidentes. Siga el número de secuencia y busque una retransmisión debido a la caída DBD. Compruebe si se recibe un número de secuencia DBD inesperado.

Troubleshoot

Si la investigación de la conectividad L2/3, la configuración y el tráfico permitido por OSPF no revelaron el problema y mostraron que el vecino está en línea, abra un caso TAC. Ingrese estos comandos y suministre al TAC la información de los resultados de ambos vecinos:

- 'Show run'
- Show tech-support ospf

Vecino OSPF atascado en estado de carga

Hay momentos en que el vecino OSPF se bloquea en un estado de carga.

Este problema podría deberse a:

- Se realiza una solicitud de estado de link (LS) y el vecino envía un paquete incorrecto o existe una corrupción de memoria. Ingrese el comando **show IP OSPF bad** para ver el anuncio de estado de link (LSA) incorrecto. El comando **show log** muestra el **mensaje OSPF-4-BADLSATYPE**. Se realiza una solicitud LS y el vecino ignora la solicitud.

Si un router recibe un LSA obsoleto, dañado o faltante, OSPF permanece en estado de carga y

