

اهحال صا و IS-IS رواجت ءاطخا فاشكتسا

تايتوت حمل

[عمدقملا](#)

[تيساسالا تابلطت ملا](#)

[تابلطت ملا](#)

[عمدختسملا تانوك ملا](#)

[Down ةزيم عم \(IS\) طيسو ماظنلا طيسو ماظنلا رواجت](#)

[\(MTU قباطت مدعب ةطبترملا ريغ\) ISIS ةاذاحم](#)

[IS-IS رواجت رارق تسامدع](#)

[\(ةيئاوشع تارج\) رقتسم ريغ IS-IS رواجت](#)

عمدقملا

ةصنم Cisco IOS® XE ل لوكوتورب IS-IS ىرحتي نأ فيك ةقيثو اذه فصتي.

تيساسالا تابلطت ملا

تابلطت ملا

ةيلاتلا عيضاوملاب ةفرعم كي دل نوكت نأ Cisco ي صوت:

- (IS-IS) طيسولا ماظنلا ىل طيسولا ماظنلا لوكوتورب
- Cisco نم IOS XE

عجار، تاعوضوملا هذه لوح تامولعمل نم ديزمل:

- [ISIS نيوكت لي لد IP: هيچوت](#)
- [ةقطنملا عاونأو IS-IS رواجت نيوكت](#)

عمدختسملا تانوك ملا

Cisco IOS XE جم انرب ىل دن تسملا اذه يف ةدراولا تامولعمل دن تست.

ةصاخ ةيلمعم ةئيبي يف ةدوجوملا ةزهجال نم دن تسملا اذه يف ةدراولا تامولعمل عاشنإ مت تناك اذا. (يضا رتفا) حوسمم نيوكتب دن تسملا اذه يف عم دختسملا ةزهجال عي مج تأدب رما يأل لم تحملا ريثاتلل كم هف نم دكأتف، ليغشتلا ديق ك تكبش.

Down ةزيم عم (IS) طيسو ماظن ىلإ طيسو ماظن رواجت

م تي (IS-IS) طيسو ماظن ىلإ طيسو ماظن ل طعتل ةعئاشلا ةلكش ملل الح مسقلا اذه رفوي
لا ثمك ةكبش لىل طي طختلا مسرلا اذه مادختسا:



ساسألا ايجولوبط

IS-IS م نيب ل طعم DeviceA و DeviceB.

<#root>

DeviceA#

show isis neighbors detail

System Id	Type Interface	IP Address	State Holdtime	Circuit Id
DeviceA#				

<#root>

DeviceB#

show isis neighbors detail

System Id	Type Interface	IP Address	State Holdtime	Circuit Id
DeviceA	L1L2 Tve1/0/9	192.0.2.1	DOWN 28	05

Area Address(es): 49.0001
SNPA: a84f.b1c3.9484
State Changed: never
Format: Phase V
Remote TID: 0
Local TID: 0
Interface name: TwentyFiveGigE1/0/9
Neighbor Circuit Id: 5
Adj sync: Full

ةلش م لا صيخش ت:

ةزهأال ني ب لاصتال ةحص نم ققحتال 1.

<#root>

DeviceA#

ping 192.0.2.2 size 1500 df-bit

Type escape sequence to abort.

Sending 5, 1500-byte ICMP Echos to 192.0.2.2, timeout is 2 seconds:

Packet sent with the DF bit set

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

DeviceA#

<#root>

DeviceB#

ping 192.0.2.1 size 1500 df-bit

Type escape sequence to abort.

Sending 5, 1500-byte ICMP Echos to 192.0.2.1, timeout is 2 seconds:

Packet sent with the DF bit set

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

DeviceB#

ن.ني ب ناأال ال ك ىل ع ني وك تال ةعأارم 2.

<#root>

DeviceA#

show running-config | sec router isis

ip router isis

router isis

net 49.0001.0000.0000.000a.00

DeviceA#

<#root>

DeviceB#

show running-config | sec router isis

ip router isis

```
router isis
 net 49.0001.0000.0000.000b.00
DeviceB#
```

3. كلذمدقي (CLNS) ةلصتملاريغ ةكبشللةمدخي ف رواجتلاناك اذلام ةحصنم ققحتال.
كزاهجب نيلصتملارياريجلل اصخلم

<#root>

DeviceA#

show clns neighbors detail

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
0000.0000.000B	Te0/0/4					
6c31.0edb.3b5f						

Up

257 IS ES-IS
Area Address(es): 49.0001

Uptime: 02:02:11

Interface name: TenGigabitEthernet0/0/4
DeviceA#

<#root>

DeviceB#

show clns neighbors detail

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
0000.0000.000A	Twe1/0/9					
a84f.b1c3.9484						

Down

20 L1L2 IS-IS
Area Address(es): 49.0001
IP Address(es): 192.0.2.1*

Uptime: 02:02:09

NSF capable
Interface name: TwentyFiveGigE1/0/9
DeviceB#

يُتلاو ٤ديعبال ةزهجألاب ةصاخلا MAC نيوانع يه CLNS ةراج لك ىلع ةجر دمل MAC نيوانع
ىلحمل زاهجل عم قفاوتت.

<#root>

DeviceA#

```
show interface TenGigabitEthernet0/0/4
```

```
TenGigabitEthernet0/0/4 is up, line protocol is up
  Hardware is 8xSFP+, address is
```

a84f.b1c3.9484 (bia a84f.b1c3.9484) < mac address appeared on SNPA DeviceB

```
Internet address is 192.0.2.1/30
MTU 1500 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
```

<#root>

DeviceB#

```
show interface TwentyFiveGigE1/0/9
```

TwentyFiveGigE1/0/9 is up, line protocol is up (connected)
Hardware is Twenty Five Gigabit Ethernet, address is

6c31.0edb.3b5f (bia 6c31.0edb.3b5f) < mac address appeared on SNPA DeviceA

```
Internet address is 192.0.2.2/30
MTU 9216 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
```

4. show clsns interface

رېښه لامل عم تام ل عمل قباطت ءحص نم ققحتلل

مىقلا هذه عقباطم نم دكات

- (MTU) يوصقلا لاسرالا ةدحو
- ةرئادلا عون

DeviceA
<#root>
DeviceA#
show clns interface TenGigabitEthernet0/0/4
TenGigabitEthernet0/0/4 is up, line protocol is up
Attached to: isis
Checksums enabled,

MTU 1497

, Encapsulation SAP
ERPDUs enabled, min. interval 10 msec.
CLNS fast switching disabled
CLNS SSE switching disabled
DEC compatibility mode OFF for this interface
Next ESH/ISH in 19 seconds
Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0x5
Neighbor Extended Local Circuit ID: 0x0
Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-1 IPv6 Metric: 10
Number of active level-1 adjacencies: 0
Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-2 IPv6 Metric: 10
Number of active level-2 adjacencies: 0
Next IS-IS Hello in 908 milliseconds

if state DOWN

DeviceB

<#root>

DeviceB#

show clns interface TwentyFiveGigE1/0/9

TwentyFiveGigE1/0/9 is up, line protocol is up
Attached to: isis
Checksums enabled,

MTU 9213

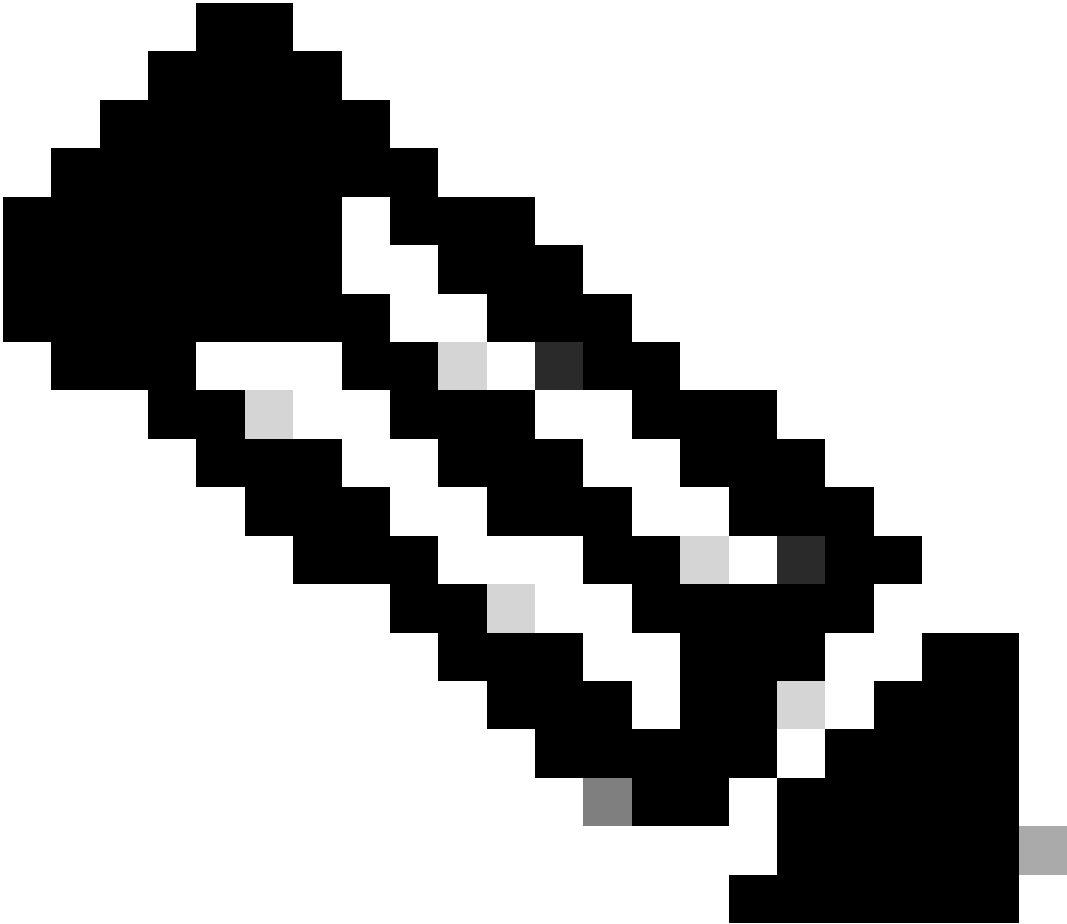
, Encapsulation SAP
ERPDUs enabled, min. interval 10 msec.
CLNS fast switching disabled
CLNS SSE switching disabled
DEC compatibility mode OFF for this interface
Next ESH/ISH in 8 seconds
Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0xB
Neighbor Extended Local Circuit ID: 0x5
Neighbor System-ID: 0000.0000.000A
P2P retransmit queue size: 0
Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B
Level-1 IPv6 Metric: 10
Number of active level-1 adjacencies: 0
Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B
Level-2 IPv6 Metric: 10
Number of active level-2 adjacencies: 0
Next IS-IS Hello in 2 seconds

if state INIT

نكمي ديغبال ريظنللكي مل اذلا MTU. قباطت مدعب ةلكشمال قلعتت ،ويرانيسلا اذه ي ف
debug isis adj-packets نأ نكمي ،هيلي لوصول
اهالابقتساواهل اسرا متي يتي ال MTU ةمي ق ضرعي



رمألا عبطيif state INIT. show clns interfaceامدنع طقف اذه قبطي :ةطحالم

<#root>

DeviceA#

debug isis adj-packets TenGigabitEthernet 0/0/4

IS-IS Adjacency related packets debugging is on for router process null
*Jul 18 23:24:16.598: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:16.599: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN,

length 1496 < MTU sent to the neighbor >

```
*Jul 18 23:24:25.189: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:25.189: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length
*Jul 18 23:24:34.057: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:34.057: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length
*Jul 18 23:24:42.866: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:42.866: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length
*Jul 18 23:24:51.646: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:51.646: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length
*Jul 18 23:24:59.606: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 18 23:24:59.606: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length
```

<#root>

DeviceB#

debug isis adj-packets twentyFiveGigE 1/0/9

```
*Jul 18 23:53:22.420: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:INIT,
length 9212 < MTU sent to the neighbor >
```

```
*Jul 18 23:53:22.591: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)
*Jul 18 23:53:22.591: ISIS-Adj: cir type L1L2, cir id 05,
```

length 1496 < MTU received from neighbor >

```
*Jul 18 23:53:22.592: ISIS-Adj: rcvd state DOWN, old state INIT, new state INIT, nbr usable TRUE
*Jul 18 23:53:22.592: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x49000184 Length:5
*Jul 18 23:53:22.592: ISIS-Adj: Nghbr Ckt ID changed: FALSE
*Jul 18 23:53:22.592: ISIS-Adj: newstate:1, state_changed:0, going_up:0, going_down:0
*Jul 18 23:53:22.592: ISIS-Adj: Action = ACCEPT
*Jul 18 23:53:22.592: ISIS-Adj: ACTION_ACCEPT:
...
```

MTU قباطات مدعب ةطبترم ال ريغ) ISIS ةاذاحم

ىلع (MTU) لقنلل ىصقألا دحلا ةدحو تاقباطتو ل طعم (IS-IS) طيسو ماظن ىلإ طيسو ماظن
تاهجاولا.

<#root>

DeviceA#

show clns neighbors

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
DeviceA#						

<#root>

DeviceB#

show clns neighbors

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
DeviceB#						

1. ريظنلل قباطملا نيوكتلالة حص نم ققحت .
2. (ةلكشم يوتسم فيفخ وأ أطخ نم ام) ثبي نأ ةديج ةلاح ي في عيب بط نراقلا نأ تنمض .
3. يصقألا دحلا ةدحو مجح ةفاضلا لاصتالا رابتخا رابتخا) ءارظنلا ني ب لاصتالا نم ققحت .
ل قنلل (MTU) تبو (DF).
4. ءارظنلا ني ب CLNS ناري ةحص نم ققحتلا .
5. ةرئادللا عون س فنو (MTU) ل قنلل يصقألا دحلا ةدحو س فن ني ف رطالا لك نأ نم دكأت .
ةلودلا عم .

DeviceA

<#root>

DeviceA#

show clns interface TenGigabitEthernet 0/0/4

TenGigabitEthernet0/0/4 is up, line protocol is up
Attached to: isis
Checksums enabled,

MTU 1497

, Encapsulation SAP
ERPDUs enabled, min. interval 10 msec.
CLNS fast switching disabled
CLNS SSE switching disabled
DEC compatibility mode OFF for this interface
Next ESH/ISH in 41 seconds
Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0x5
Neighbor Extended Local Circuit ID: 0x0
Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-1 IPv6 Metric: 10
Number of active level-1 adjacencies: 0
Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-2 IPv6 Metric: 10
Number of active level-2 adjacencies: 0
Next IS-IS Hello in 2 seconds

if state DOWN

DeviceB

<#root>

DeviceB#

show clns interface twentyFiveGigE 1/0/9

TwentyFiveGigE1/0/9 is up, line protocol is up

Attached to: isis

Checksums enabled,

MTU 1497

, Encapsulation SAP

ERPDUs enabled, min. interval 10 msec.

CLNS fast switching disabled

CLNS SSE switching disabled

DEC compatibility mode OFF for this interface

Next ESH/ISH in 42 seconds

Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0xB

Neighbor Extended Local Circuit ID: 0x0

P2P retransmit queue size: 0

Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B

Level-1 IPv6 Metric: 10

Number of active level-1 adjacencies: 0

Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B

Level-2 IPv6 Metric: 10

Number of active level-2 adjacencies: 0

Next IS-IS Hello in 5 seconds

if state DOWN

6. **debug isis adj-packet** نيك متب مق

اهت حص نم ققحت لاواهل ابقت ساواهل اسرا متي يتل مزحلا

<#root>

DeviceA#

debug isis adj-packets TenGigabitEthernet 0/0/4

IS-IS Adjacency related packets debugging is on for router process null

*Jul 19 13:32:52.788: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5

*Jul 19 13:32:52.788: ISIS-Adj:

Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496

*Jul 19 13:33:00.708: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5

*Jul 19 13:33:00.709: ISIS-Adj:

Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496

*Jul 19 13:33:09.726: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5

*Jul 19 13:33:09.726: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496

```
*Jul 19 13:33:18.376: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 19 13:33:18.376: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496
*Jul 19 13:33:26.132: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
*Jul 19 13:33:26.132: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496
DeviceA#
```

<#root>

DeviceB#

debug isis adj-packets TwentyFiveGigE1/0/9

IS-IS Adjacency related packets debugging is on for router process null

```
*Jul 19 14:01:32.125: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
*Jul 19 14:01:32.125: ISIS-Adj:
```

Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496

```
*Jul 19 14:01:40.005: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
*Jul 19 14:01:40.005: ISIS-Adj:
```

Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496

```
*Jul 19 14:01:49.602: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
*Jul 19 14:01:49.602: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496
*Jul 19 14:01:58.284: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
*Jul 19 14:01:58.284: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496
```

امه ناريچ نم "ابحرم" ةمزنح نايق لتي ال امه نكلو ، نيزاهجلا لك لاسرا متي
ةي لمع لامتك ادرجم ب. راج لك الى مزحلا لاسرا نم ققحتلل طاقتلال نيكم تب مق 7.
(flash) ةتقؤملا ةركاذلا وَا (ةتقؤملا ةركاذلا) Bootflash ةركاذ الى هري دصتب مق ، طاقتلال
لي صافاتلا نم ديزم يلع لوصحلل TFTP مداخ الى هلي محتو ةئي يه pcap file يلع

<#root>

DeviceA#

show monitor cap cap parameter

```
monitor capture cap interface TenGigabitEthernet0/0/4 BOTH < Interface from where send and receive the packets >
monitor capture cap control-plane IN < Packets to be process and generated by the CPU >
monitor capture cap access-list TAC < ACL for capture only the IS-IS packets >
monitor capture cap buffer size 10
monitor capture cap limit pps 1000
```

DeviceA#

show access-list TAC

```
Extended MAC access list TAC
 permit host
```

a84f.b1c3.9484

host

0900.2b00.0005 < Local MAC address towards the IS-IS Hello >

permit host

6c31.0edb.3b5f host 0900.2b00.0005 < Remote MAC address towards the IS-IS Hello >

<#root>

DeviceB#

show monitor capture cap parameter

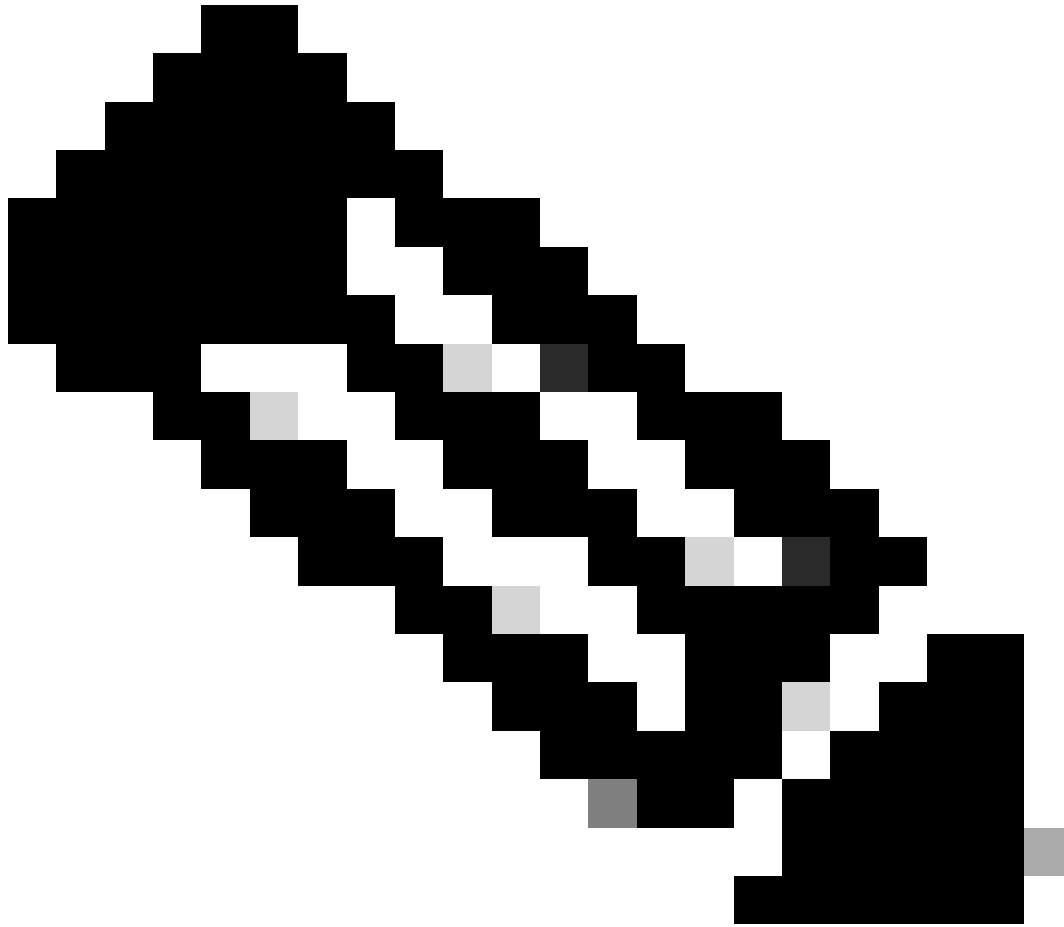
monitor capture cap interface TwentyFiveGigE1/0/9 BOTH < Interface from where send and receive the Hello >

monitor capture cap control-plane BOTH < Packets to be process and generated by the CPU >

monitor capture

cap match any < match all the packets on the switch >

monitor capture cap buffer size 10



ىلع الو IS-IS ج راخ طقف حاتفم cisco IOS XE ةزافح ةدام في EPC ضبط ىلع :ةظحال م
طاقتل نسحتسي نيتماعد نيب ةحسف ،ليدبك .طبر لخدملا

لودجال اذه في Hello مزح ىلا عجرم ضرع متي

م سالا	ناونع كام ةياغ
L1 IS تاقحل م عيمج	0180,c200,0014
L2 تامقلم عيمج	0180,c200,0015
ISs لك	0900.2b00.005
ESs ةفاك	0900.2b00.004

ناريجال نيب ابجرم مزح لدابت نم دكأتو ردصملا ليحستلا عجار 8.

نم. اهب صاخال (رمحأال ع برملال) م اظنل فرعم فيضت يتلل HELLO مزح DeviceA لسري ري دقت كنكمي، طاقتللال اذه في. هب صاخال م اظنل فرعم ب هراج نم ةمزح ملتسي نأ عقوتمل ريظنللال إلل مزحلل هذه لسري الل DeviceB نأ

eth.dst == 09:00:2b:00:00:05

Nr	Time	Source	Destination	seq
1	2023-07-19 08:31:55.703958	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
3	2023-07-19 08:32:05.236987	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
4	2023-07-19 08:32:14.076991	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
5	2023-07-19 08:32:23.127984	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a

> Frame 3: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits)

IEEE 802.3 Ethernet

> Destination: DEC-MAP-(or-OSI?)-Intermediate-System-Hello? (09:00:2b:00:00:05)

> Source: Cisco_c3:94:84 (a8:4f:b1:c3:94:84)

Length: 1499

Logical-Link Control

ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol

Intradomain Routing Protocol Discriminator: ISIS (0x83)

Length Indicator: 20

Version/Protocol ID Extension: 1

ID Length: 0

000. = Reserved: 0x0

...1 0001 = PDU Type: P2P HELLO (17)

Version: 1

Reserved: 0

Maximum Area Addresses: 0

ISIS HELLO

.... ..11 = Circuit type: Level 1 and 2 (0x3)

0000 00.. = Reserved: 0x00

SystemID {Sender of PDU}: 0000.0000.000a

Holding timer: 30

PDU length: 1496

Local circuit ID: 5

> Restart Signaling (t=211, l=3)

> Point-to-point Adjacency State (t=240, l=5)

> Protocols Supported (t=129, l=1)

> Area address(es) (t=1, l=4)

> IP Interface address(es) (t=132, l=4)

> Padding (t=8, l=255)

> Padding (t=8, l=255)

> Padding (t=8, l=255)

> Padding (t=8, l=255)

> Padding (t=8, l=255)

> Padding (t=8, l=162)

Hello packet

Source from local interface(MAC)

Destination MAC IS-IS Point to Point

System ID sent to the neighbor

DeviceA ISIS Down Capture

امكو، كلذ عمو. (رمحأال ع برملال) اهتراج إلل اهل اسرلا متي بيحرتلل مزح نأ DeviceB طاقتلل رهظي هراج نم Hello مزح لبقتسي الل هنإف، ريخأال طاقتللالل في لالحل وه

eth.dst == 09:00:2b:00:00:05				
Nr	Time	Source	Destination	seq
1	2023-07-19 09:00:28.028914	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2	2023-07-19 09:00:35.603384	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
3	2023-07-19 09:00:45.386207	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
4	2023-07-19 09:00:54.772284	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b

> Frame 1: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits) on interface /tmp/epc_ws/wif_to_ts_pipe, id 0	
✓ IEEE 802.3 Ethernet > Destination: DEC-MAP-(or-OSI?)-Intermediate-System-Hello? (09:00:2b:00:00:05) > Source: Cisco_db:3b:5f (6c:31:0e:db:3b:5f) Length: 1499	Hello packet Source MAC address (local interface) Destination MAC IS-IS Point to Point
> Logical-Link Control	
✓ ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol Intradomain Routing Protocol Discriminator: ISIS (0x83) Length Indicator: 20 Version/Protocol ID Extension: 1 ID Length: 0 000. = Reserved: 0x0 ...1 0001 = PDU Type: P2P HELLO (17) Version: 1 Reserved: 0 Maximum Area Addresses: 0	
✓ ISIS HELLO11 = Circuit type: Level 1 and 2 (0x3) 0000 00.. = Reserved: 0x00 SystemID {Sender of PDU}: 0000.0000.000b Holding timer: 30 PDU length: 1496 Local circuit ID: 11 > Restart Signaling (t=211, l=3) > Point-to-point Adjacency State (t=240, l=5) > Protocols Supported (t=129, l=1) > Area address(es) (t=1, l=4) > IP Interface address(es) (t=132, l=4) > Padding (t=8, l=255) > Padding (t=8, l=255) > Padding (t=8, l=255) > Padding (t=8, l=255) > Padding (t=8, l=255) > Padding (t=8, l=162)	

DeviceB ISIS Down Capture

ظالحالي نإ. بيحرتلالمزح لاسراب حمسي ال طس وتم زاهج لىل ويراني س اذه يف ةلكشملا عجرت Cisco TAC ةلاح حتفا ،رثكأ ىرحتي نأ جاتحي و ةلثامم ةلاح تنأ

IS-IS رواجت رارق تسإ مدع

IS-IS تافارجل ةعئاشلال ةلكشملل الح مسقلا اذه رفوي

ةلكشملا صيخش

IS-IS ريغ DeviceA و DeviceB نيب رقتسم

<#root>

DeviceA#

show logging

Jul 19 15:05:03.623:

%CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold time expired

Jul 19 15:05:15.075: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new adjacency
Jul 19 15:07:04.575: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold time expired
Jul 19 15:07:15.759: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new adjacency
Jul 19 15:09:04.983: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold time expired
Jul 19 15:09:14.835: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new adjacency

<#root>

DeviceB#

show logging

Jul 19 15:05:02.316:

%CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold time expired

Jul 19 15:05:18.191: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjacency
Jul 19 15:07:09.280: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold time expired
Jul 19 15:07:18.876: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjacency
Jul 19 15:09:06.080: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold time expired
Jul 19 15:09:17.948: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjacency

1. تب ةومجم و MTU مچ عم لاصتال رابتخا رابتخا) عارظنل نيب لاصتال نم ققحت.
 2. تايوتسم يف لكاشم واطاخأ دجوت ال) لاسرالل ةديج ةلاح يف ةيڊامال ةهجاوال نأ نم دكأت (عوضال).
 3. ضعبل مهضعب ىلإ تانايبال رورم ةكرح لاسراب نوموقي CLNS ناريچ نأ نم ققحت.
- show clns traffic interface
- رمأل مادختساب
- .

<#root>

DeviceA#

show clns traffic interface TenGigabitEthernet0/0/4

CLNS: Time since last clear: 00:01:57
CLNS & ISIS Output: 3, Input: 21
Dropped Protocol not enabled on interface: 0
CLNS Local: 0, Forward: 0

Interface TenGigabitEthernet0/0/4:

IS-IS: Time since last clear: 00:01:57

IS-IS: Level-1 Hellos (sent/rcvd): 0/0

IS-IS: Level-2 Hellos (sent/rcvd): 0/0

IS-IS: PTP Hellos (sent/rcvd): 15/11 < DeviceA sends hello packets and receives less than its sends

IS-IS: Level-1 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-2 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-1 CSNPs (sent/rcvd): 1/1

IS-IS: Level-2 CSNPs (sent/rcvd): 1/1

IS-IS: Level-1 PSNPs (sent/rcvd): 1/1

IS-IS: Level-2 PSNPs (sent/rcvd): 1/1

IS-IS: Level-1 DR Elections: 0

IS-IS: Level-2 DR Elections: 0

<#root>

DeviceB#

show clns traffic interface TwentyFiveGigE1/0/9

CLNS: Time since last clear: 00:00:27

CLNS queue depth: 0/100, drops: 0, highest: 2

CLNS & ISIS Output: 1, Input: 14

Dropped Protocol not enabled on interface: 0

CLNS Local: 0, Forward: 0

Interface TwentyFiveGigE1/0/9:

IS-IS: Time since last clear: 00:00:27

IS-IS: Level-1 Hellos (sent/rcvd): 0/0

IS-IS: Level-2 Hellos (sent/rcvd): 0/0

IS-IS: PTP Hellos (sent/rcvd): 4/5 < DeviceB, sends and receives a couple of hellos in comparison v

IS-IS: Level-1 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-2 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-1 CSNPs (sent/rcvd): 1/1

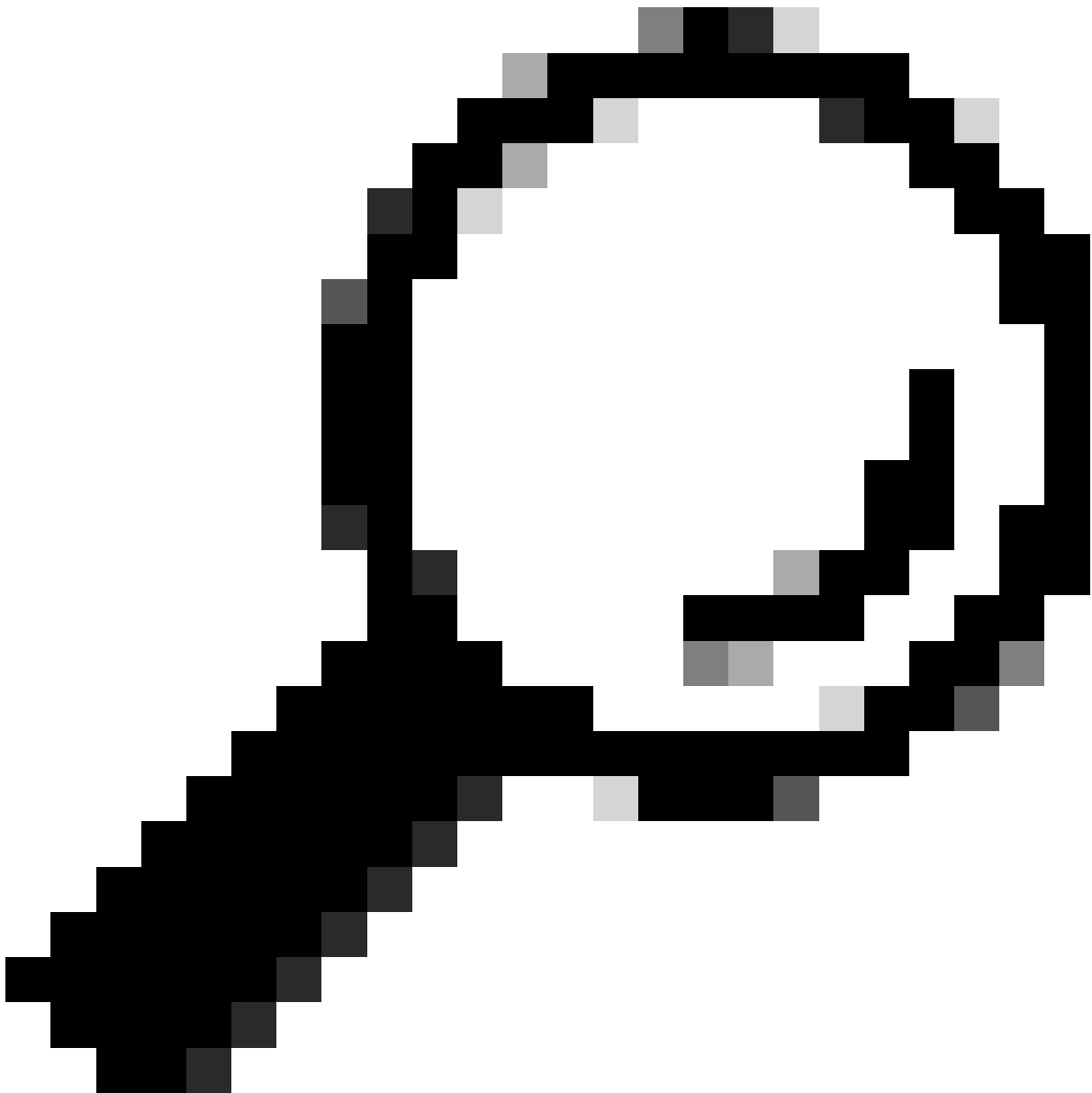
IS-IS: Level-2 CSNPs (sent/rcvd): 1/1

IS-IS: Level-1 PSNPs (sent/rcvd): 1/1

IS-IS: Level-2 PSNPs (sent/rcvd): 1/1

IS-IS: Level-1 DR Elections: 0

IS-IS: Level-2 DR Elections: 0



IS-IS ةكبش عونو IS-IS ىوتسم ىلإ اءانتسا IS-IS ةمالع traffic رملأا ضرعي :خملت

4. debug ISIS adj-packets نكم
in order to ناريچال نيپ اهلءا بت متي طبري تيأر

<#root>

DeviceA#

show isis adj-packets TenGigabitEthernet0/0/4

< Hellos sent to the DeviceB with no response >

Jul 19 18:58:34.779: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15

Jul 19 18:58:34.779: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 149
Jul 19 18:58:42.719: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 19 18:58:42.719: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 149
Jul 19 18:58:50.430: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 19 18:58:50.430: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 149
Jul 19 18:58:58.356: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 19 18:58:58.356: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 149

< IS-IS declares the protocol down >

Jul 19 18:59:01.879: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4)
Down, hold time expired

< IS-IS sends hellos to the neighbor and receives a response from DeviceB >

Jul 19 18:59:01.879: ISIS-Adj: L2 adj count 0
Jul 19 18:59:07.724: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
Jul 19 18:59:07.724: ISIS-Adj:

Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496

Jul 19 18:59:15.894: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x0 Length:5
Jul 19 18:59:15.894: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:DOWN, length 1496
Jul 19 18:59:15.896: ISIS-Adj:

Rec serial IIH from 6c31.0edb.3b5f (TenGigabitEthernet0/0/4)

Jul 19 18:59:15.896: ISIS-Adj: cir type L2, cir id 0B, length 1496
Jul 19 18:59:15.896: ISIS-Adj:

RCV:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15

Jul 19 18:59:15.896: ISIS-Adj: Nghbr Ckt ID changed: TRUE
Jul 19 18:59:15.896: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000A
Jul 19 18:59:15.896: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0x5
Jul 19 18:59:15.896: ISIS-Adj: newstate:1, state_changed:1, going_up:0, going_down:0
Jul 19 18:59:15.896: ISIS-Adj: Action = GOING UP, new type = L2

< DeviceA declares that the adjacency is UP and starts to establish the session >

Jul 19 18:59:15.896: ISIS-Adj: New serial adjacency
Jul 19 18:59:15.896: ISIS-Adj:

rcvd state INIT, old state DOWN, new state INIT, nbr usable TRUE

Jul 19 18:59:15.898: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 19 18:59:15.898: ISIS-Adj:

Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:INIT, length 1496

Jul 19 18:59:15.900: ISIS-Adj: Rec serial IIH from 6c31.0edb.3b5f (TenGigabitEthernet0/0/4)
Jul 19 18:59:15.900: ISIS-Adj: cir type L2, cir id 0B, length 1496
Jul 19 18:59:15.900: ISIS-Adj:

rcvd state UP, old state INIT, new state UP, nbr usable TRUE

Jul 19 18:59:15.900: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 19 18:59:15.900: ISIS-Adj: Nghbr Ckt ID changed: FALSE

Jul 19 18:59:15.900: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000A
Jul 19 18:59:15.900: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0x5
Jul 19 18:59:15.900: ISIS-Adj: newstate:0, state_changed:1, going_up:1, going_down:0
Jul 19 18:59:15.900: ISIS-Adj: Action = GOING UP, new type = L2
Jul 19 18:59:15.900: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4)

Up, new adjacency

<#root>

DeviceB#

debug isis adj-packets TwentyFiveGigE1/0/9

< Hello sent to the DeviceA with no response >

Jul 19 18:58:44.105: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 19 18:58:44.105: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496
Jul 19 18:58:51.814: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 19 18:58:51.814: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496
Jul 19 18:58:59.768: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 19 18:58:59.768: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

< IS-IS declares the protocol down >

Jul 19 18:59:07.886: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9)

Down, hold time expired

< IS-IS sends hellos to the neighbor and receives a response from DeviceA >

Jul 19 18:59:07.887: ISIS-Adj: L2 adj count 0
Jul 19 18:59:08.422: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
Jul 19 18:59:08.422: ISIS-Adj:

Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496

Jul 19 18:59:16.144: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x0 Length:5
Jul 19 18:59:16.144: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:DOWN, length 1496
Jul 19 18:59:19.001: ISIS-Adj:

Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)

Jul 19 18:59:19.001: ISIS-Adj: cir type L2, cir id 05, length 1496
Jul 19 18:59:19.001: ISIS-Adj:

RCV:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0x49000184 Length:5

Jul 19 18:59:19.001: ISIS-Adj: Nghbr Ckt ID changed: TRUE
Jul 19 18:59:19.001: ISIS-Adj: newstate:1, state_changed:1, going_up:0, going_down:0
Jul 19 18:59:19.001: ISIS-Adj: Action = GOING UP, new type = L2

< DeviceB declares that the adjacency is UP and starts to establish the session >

Jul 19 18:59:19.001: ISIS-Adj: New serial adjacency
Jul 19 18:59:19.001: ISIS-Adj:

rcvd state DOWN, old state DOWN, new state INIT, nbr usable TRUE

Jul 19 18:59:19.002: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 19 18:59:19.002: ISIS-Adj:

Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:INIT, length 1496

Jul 19 18:59:19.004: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)
Jul 19 18:59:19.004: ISIS-Adj: cir type L2, cir id 05, length 1496
Jul 19 18:59:19.004: ISIS-Adj:

rcvd state INIT, old state INIT, new state UP, nbr usable TRUE

Jul 19 18:59:19.004: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 19 18:59:19.004: ISIS-Adj: Nghbr Ckt ID changed: FALSE
Jul 19 18:59:19.004: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000B
Jul 19 18:59:19.004: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0xB
Jul 19 18:59:19.004: ISIS-Adj: newstate:0, state_changed:1, going_up:1, going_down:0
Jul 19 18:59:19.004: ISIS-Adj: Action = GOING UP, new type = L2
Jul 19 18:59:19.004: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9)

Up, new adjacency

5. في لمع لامتك ادرج م. راج لك الى مزحل لاسرر نم ققحت لل طاقتل الانيكمت ب مق. (bootflash) ةتقؤم ال ديهمت ال ةركاذ الى طاقتل ال ةيلمع ري دصت ب مق، طاقتل ال ل. صافات ال نم ديزم الى لوصحل ل TFTP م داخ الى اهل يمت و .pcap file

ه بيحرت DeviceA لسري. ةمزحل هذه مالتس ا دع ب (19:15.05) DeviceB نم ةمزح DeviceA ملتسي ةينات 30 وهو ةيحل الصال يهت نم راطت نال تقو الى لصي يتح راجل نم دري ا نودب قباطم ال (رمخال ع برمل) يضارت فا لكشب متي و ه بيحرت DeviceB لسري، ةرتفل هذه دع ب. لفسا رواجت ال نع هجوم ال اذه نلعي ام دنع اذه (رضخال ع برمل) ةلكشم نودب مزحل هذه لدابت متي و DeviceA ةطساوب هلابقتس ا

eth.dst == 09:00:2b:00:00:05				
Nr	Time	Source	Destination	seq
1	19:14:48.784947	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2	19:14:49.664958	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
3	19:14:57.201985	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
4	19:14:57.520969	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
5	19:15:05.147987	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
6	19:15:06.439964	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
7	19:15:16.015990	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
8	19:15:25.153983	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
9	19:15:32.868943	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:15:35.149986	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:15:45.071987	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:15:51.718956	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:15:51.720955	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:15:51.721947	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:15:51.722954	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:15:51.723961	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:00.949947	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:01.164984	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:08.904951	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:09.835955	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:16.435966	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:19.244982	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:23.987940	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:28.034986	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:33.752951	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:37.050992	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:41.765951	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:44.948940	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:49.618956	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:16:53.623960	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:16:58.815952	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:17:01.182989	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:17:08.310973	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
	19:17:09.463965	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
	19:17:10.705954	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
> Frame 5: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits) > IEEE 802.3 Ethernet > Logical-Link Control > ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol > ISIS HELLO				

ISIS ل رقتسم ريغ زاهج

هتراج نم بيحرتلا مزح زاهجال لبقتسي ال .ريظنلا نم ضرعلل لثامم DeviceB نم طاقثا قيلعتلا تقؤم ىلإ لصت ىتح DeviceA نم در نودب DeviceB نم قريخألا ةمزلال لاسرا متي ىقلتي ،لشفلا اذه دعب .لفسأ ىلإ رواجثلا رابتعالا في حاتفملا اذه ذخأي .ةيناث 30 في رواجثلا أدبيو DeviceA نم ةيحتلا حاتفملا

eth.dst == 09:00:2b:00:00:05				
Nr	Time	Source	Destination	seq
4	01:11:27.332388	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
5	01:11:27.894819	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:11:34.859121	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:11:35.738192	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:11:43.274969	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:11:43.594020	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:11:51.221556	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:11:52.513395	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:11:59.401211	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:08.669824	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:17.078248	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:22.514746	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:31.351461	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:37.791466	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:37.793033	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:12:37.794384	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:37.794895	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:12:37.796641	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:47.022577	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:47.237364	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:12:54.976460	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:12:55.908343	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:02.507283	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:13:05.317018	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:10.059795	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:13:14.106249	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:19.824557	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:13:23.122303	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:27.837176	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:13:31.019915	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:35.690382	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b
	01:13:39.695453	Cisco_c3:94:84	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000a
	01:13:44.887023	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)	P2P HELLO, System-ID: 0000.0000.000b

```

> Frame 32: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits) on interface \Device\NPF_{D6BBE860-9886-4A6C-BDD5-8E2837C66FB0}, id 0
> IEEE 802.3 Ethernet
> Logical-Link Control
> ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol
> ISIS HELLO

```

(ب)رقتسم ريغ ةيماالسإلا ةلودلا ميظنت زاهج

مزحل نادقف ببس ةعجارم لكيل عيجو لقنلا يف ةلكشم كانه نأ جتنتسي اذه

(ةيئاوشع تارج) رقتسم ريغ IS-IS رواجت

ةيئاوشع تاوطخ لوكوتوربل مءاوي DeviceA و DeviceB ني ب رقتسم ريغ IS-IS.

<#root>

DeviceA#

show logging

```

Jul 21 10:03:38.633: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold
Jul 21 10:05:10.272: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new ad
Jul 21 10:33:41.528: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold
Jul 21 10:35:07.979: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new ad
Jul 21 11:03:42.442: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold
Jul 21 11:05:08.469: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Up, new ad

```

<#root>

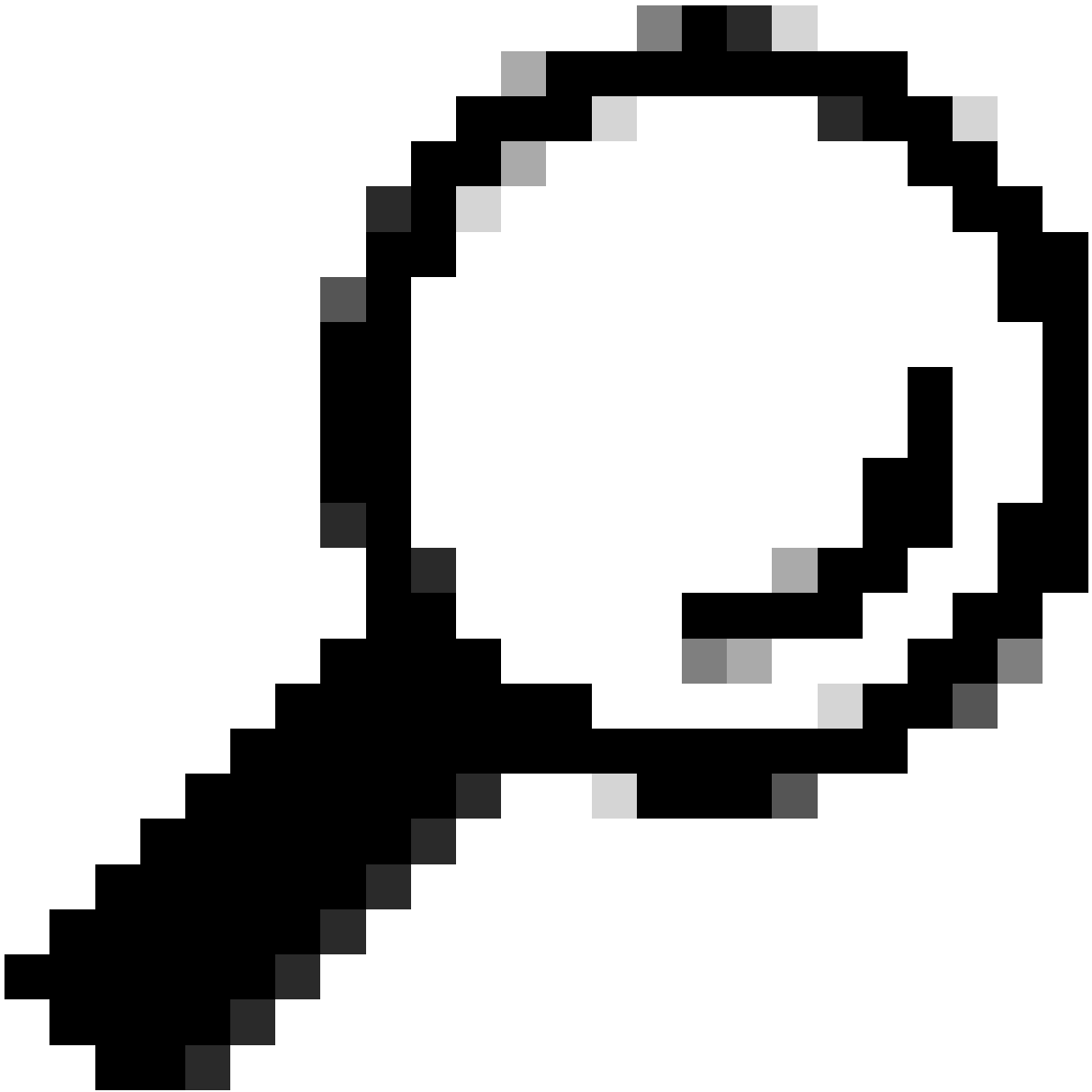
DeviceB#

show logging

```
Jul 21 10:03:44.535: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold tim
Jul 21 10:05:13.281: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjace
Jul 21 10:33:38.408: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold tim
Jul 21 10:35:10.989: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjace
Jul 21 11:03:39.291: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold tim
Jul 21 11:05:11.479: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Up, new adjace
```

تاءارجإل هذه ةعباتم نم دكأت ،ةلكشملا ثودح دنع

1. ريظنللا عم نيوكتللا قباطت نم ققحت .
2. (ةلكشم يوتسم في فخ وأ أطخ نم ام) ثبي نأ ةديج ةلاح ي في عي بط نراقلا نأ تنمض .
3. يصقألا دحلا ةدحو مجح مادختساب لاصتالا رابتخا) عارظنلا ني ب لاصتالا نم ققحت .
(DF تب تادحو ةعومجمو (MTU) لقنلل



بب سب اه ا ح ا ل ص ا و ل ك ا ش م ا ل ن م ع ا و ن ا ل ا ه ذ ه ا ط ا خ ا ف ا ش ك ت س ا ل ه س ل ا ن م س ي ل : ح ي م ل ت
ة ي ذ ي ف ن ت ص و ص ن م ا د خ ت س ا ي ف ر ك ف ، ة ل ا ح ا ل ه ذ ه ل ح ل . ة ي ا و ا ش ع ل ا ت ا ح ي ن ج ل ا ة ل ا ح
ا ه ا ح ا ل ص ا و ا ط ا خ ا ل ا ف ا ش ك ت س ا ة ع ب ا ت م و ة ي ر و ر ض ل ا ر م ا و ا ل ا ل ي غ ش ت ل

4. ل و ح ا د ي د ح ت ر ث ك ا ن و ك ت ل ل و ص و ل ا ة م ئ ا ق م ا د خ ت س ا ب ة ش ا ش ط ا ق ت ل ا ن ي و ك ت ي ل ل ق ت ن ا .
ا ه ا ح ا ل ص ا و ا ط ا خ ا ل ا ف ا ش ك ت س ا

5. debug isis adj-packets ن م ت و ل ي ج س ت ل ا م ك ح ت ة د ح و ل ي ط ع ت ب م ق .

<#root>

DeviceA(config)#

no logging console

```
DeviceA(config)#exit
DeviceA#
```

```
debug isis adj-packets TenGigabitEthernet0/0/4
```

ه. طيشنت و زاهجلا ىلع ةمزحلا طاقتلا نيكمت 6.

<#root>

DeviceA#

```
show monitor capture cap parameter
```

```
monitor capture cap interface TenGigabitEthernet0/0/4 BOTH
monitor capture cap control-plane IN
monitor capture cap
```

```
access-list TAC > match only the packets allowed on the ACL
```

```
monitor capture cap buffer size 100
```

circular > when the capture reaches the size of 100 MB this overwrite the previous information.

```
monitor capture cap limit pps 1000
```

DeviceA#

```
show access-lists TAC
```

```
Extended MAC access list TAC
permit
```

```
host a84f.b1c3.9484 host 0900.2b00.0005 < Local MAC address towards the IS-IS Hello >
```

permit

```
host 6c31.0edb.3b5f host 0900.2b00.0005 < Remote MAC address towards the IS-IS Hello >
```

DeviceA#monitor capture cap start

7. شقن syslog لى رادصل الى ري شي ن ا ام Cisco. زاهج لى لى (IM) ن مضم لى لى ري دم ني وكت ب مق . TFTP م داخ لى لى اهل لي محت ل عة بات م ل اب مق .txt. در ب م ك ق رب لى لى ع تن ز خ نو كي ن ا ل ج س د لى اذه . تام و ل عمل م ن م د ي ز م لى لى لى لى لى لى لى لى لى لى لى لى لى L.

<#root>

DeviceA#

```
show running-config | sec event
```

event manager applet ISIS_Flap authorization bypass

```
event syslog pattern "%CLNS-5-ADJCHANGE:.*hold time expired"
```

```
action 1.0 syslog msg "ISIS down Please wait - capturing the traffic"
action 1.1 cli command "enable"
action 1.2 cli command "show clns interface ten0/0/4 | append bootflash:ISIS_DeviceA.txt"
action 1.3 cli command "show clns traffic interface tenGigabitEthernet 0/0/4 |
```

```
append bootflash:ISIS_DeviceA.txt"
```

```
action 2.0 cli command "show logging | append bootflash:debug_DeviceA.txt"
action 2.1 cli command "undebg all"
action 2.2 cli command "monitor capture cap stop"
action 3.0 cli command "end"
```

For switches to append the logs it is necessary to use the

append flash:

, as example:

```
event manager applet ISIS_Flap authorization bypass
event syslog pattern "%CLNS-5-ADJCHANGE:.*hold time expired"
action 1.0 syslog msg "ISIS down Please wait - capturing the traffic"
action 1.1 cli command "enable"
action 1.2 cli command "show clns interface ten0/0/4 | append
flash:ISIS_DeviceB.txt"
```

```
action 3.0 cli command "end"
```

دکأتو bootflash/flash یلع طاقتلالا ریڊصت یلإ لقتنا ،ةلكشملا أدبت نأ درجم ب .
عقومال سفن یف حیحص لكشب تافلمال نیختت.txtنم

<#root>

DeviceA#

```
monitor capture cap export bootflash:ISIS_DeviceA.pcap
```

Exported Successfully

DeviceA#

dir bootflash:*.txt

Directory of bootflash:/*.txt

Directory of bootflash:/

19 -rw- 6048 Jul 22 2023 13:33:40 +00:00

ISIS_DeviceA.txt

20 -rw- 103153 Jul 22 2023 13:33:40 +00:00

debug_DeviceA.txt

26975526912 bytes total (20527607808 bytes free)

DeviceB#

monitor capture cap export location flash:ISIS_DeviceB.pcap

Exported Successfully

DeviceB#

dir bootflash:*.txt

Directory of bootflash:/*.txt

Directory of bootflash:/

356939 -rw- 660 Jul 22 2023 13:33:42 +00:00

ISIS_DeviceB.txt

356943 -rw- 103283 Jul 22 2023 13:33:42 +00:00

debug_DeviceB.txt

9. ةزهجألا نيب تالچسلا ةنراقم ل TFTP مداخ ىلإ تافلما لىمحت ب مق .

<#root>

DeviceA#

copy bootflash:ISIS_DeviceA.txt tftp:

Address or name of remote host []?

< TFTP IP address >

Destination filename [

ISIS_DeviceA.txt

]?

!!
18144 bytes copied in 0.095 secs (190989 bytes/sec)

اهل اباقت ساو مزحلا لاسرا مت اذا ام ةحص نم ققحتلل تالچسل او طاقتلال تاي لمع نراق 10.
نیهچومل ال ک نم

IS-IS تالچسل لیلحت

- L1-L2 ةكبشل عون سفن مادختساب IS-IS تاهچاو ال ک نیوكت متي
- ابجرم ةمزح ملتست ال تاهچاول ال ک نأ (لفسأ ةلاحل تناک اذا) تاهچاول ةلاح رهظت
- IS-IS: PTP Hellos هب قباطت مدع DeviceA لسري امنی ب. ةملتسملاو ةلسررملا مزحلا یف قباطت مدع هب IS-IS: PTP Hellos نأ یلإ ریشی اذهو. 202 نم 202 یلع DeviceB یوتحي، ریظنل نم 199 ملتسیو مزح 205 هب قوٹوم ریغ لقنل

<#root>

DeviceA

TenGigabitEthernet0/0/4 is up, line protocol is up
Attached to: isis
Checksums enabled, MTU 1497, Encapsulation SAP
ERPDUs enabled, min. interval 10 msec.
CLNS fast switching disabled
CLNS SSE switching disabled
DEC compatibility mode OFF for this interface
Next ESH/ISH in 30 seconds
Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0x5
Neighbor Extended Local Circuit ID: 0x0
Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-1 IPv6 Metric: 10
Number of active level-1 adjacencies: 0
Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceA.05
Level-2 IPv6 Metric: 10
Number of active level-2 adjacencies: 0
Next IS-IS Hello in 574 milliseconds

if state DOWN

CLNS: Time since last clear: 00:29:37
CLNS & ISIS Output: 33, Input: 241
Dropped Protocol not enabled on interface: 0
CLNS Local: 0, Forward: 0

Interface TenGigabitEthernet0/0/4:
IS-IS: Time since last clear: 00:29:37
IS-IS: Level-1 Hellos (sent/rcvd): 0/0
IS-IS: Level-2 Hellos (sent/rcvd): 0/0

IS-IS: PTP Hellos (sent/rcvd): 205/199
IS-IS: Level-1 LSPs flooded (sent/rcvd): 2/2
IS-IS: Level-2 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-1 CSNPs (sent/rcvd): 0/0
IS-IS: Level-2 CSNPs (sent/rcvd): 0/0
IS-IS: Level-1 PSNPs (sent/rcvd): 2/2
IS-IS: Level-2 PSNPs (sent/rcvd): 2/2
IS-IS: Level-1 DR Elections: 0
IS-IS: Level-2 DR Elections: 0

DeviceB

TwentyFiveGigE1/0/9 is up, line protocol is up
Attached to: isis
Checksums enabled, MTU 1497, Encapsulation SAP
ERPDUs enabled, min. interval 10 msec.
CLNS fast switching disabled
CLNS SSE switching disabled
DEC compatibility mode OFF for this interface
Next ESH/ISH in 20 seconds
Routing Protocol: IS-IS

Circuit Type: level-1-2

Interface number 0x0, local circuit ID 0xB
Neighbor Extended Local Circuit ID: 0x0
P2P retransmit queue size: 0
Level-1 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B
Level-1 IPv6 Metric: 10
Number of active level-1 adjacencies: 0
Level-2 Metric: 10, Priority: 64, Circuit ID: DeviceB.0B
Level-2 IPv6 Metric: 10
Number of active level-2 adjacencies: 0
Next IS-IS Hello in 7 seconds

if state DOWN

CLNS: Time since last clear: 00:29:34
CLNS queue depth: 0/100, drops: 0, highest: 1
CLNS & ISIS Output: 34, Input: 243
Dropped Protocol not enabled on interface: 0
CLNS Local: 0, Forward: 0

Interface TwentyFiveGigE1/0/9:
IS-IS: Time since last clear: 00:29:34
IS-IS: Level-1 Hellos (sent/rcvd): 0/0
IS-IS: Level-2 Hellos (sent/rcvd): 0/0

IS-IS: PTP Hellos (sent/rcvd): 202/202
IS-IS: Level-1 LSPs flooded (sent/rcvd): 2/2
IS-IS: Level-2 LSPs flooded (sent/rcvd): 2/2

IS-IS: Level-1 CSNPs (sent/rcvd): 0/0
IS-IS: Level-2 CSNPs (sent/rcvd): 0/0
IS-IS: Level-1 PSNPs (sent/rcvd): 2/2
IS-IS: Level-2 PSNPs (sent/rcvd): 2/2
IS-IS: Level-1 DR Elections: 0
IS-IS: Level-2 DR Elections: 0

طاقات او عطاءات احيى صحت تايل م ع نراقم في في التالات ووطخل ل ثمت

<#root>

DeviceA

Jul 22 19:17:24.929: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:24.929: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:17:31.685: ISIS-Adj: Rec serial IIH from 6c31.0edb.3b5f (TenGigabitEthernet0/0/4)

Jul 22 19:17:31.685: ISIS-Adj: cir type L1L2, cir id 0B, length 1496
Jul 22 19:17:31.685: ISIS-Adj: rcvd state UP, old state UP, new state UP, nbr usable TRUE
Jul 22 19:17:31.685: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:17:31.685: ISIS-Adj: Nghbr Ckt ID changed: FALSE
Jul 22 19:17:31.685: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000A
Jul 22 19:17:31.685: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0x5
Jul 22 19:17:31.685: ISIS-Adj: newstate:0, state_changed:0, going_up:0, going_down:0
Jul 22 19:17:31.685: ISIS-Adj: Action = ACCEPT
Jul 22 19:17:31.685: ISIS-Adj: ACTION_ACCEPT:

Jul 22 19:17:33.626: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:33.627: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:17:42.671: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:42.672: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496

Jul 22 19:17:52.008: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:52.008: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:18:01.475: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:18:01.475: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496

Jul 22 19:18:01.685: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold
Jul 22 19:18:01.685: ISIS-Adj: L1 adj count 0
Jul 22 19:18:01.685: ISIS-Adj: L2 adj count 0

DeviceB

Jul 22 19:17:25.693: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15

Jul 22 19:17:25.693: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

Jul 22 19:17:27.882: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)

Jul 22 19:17:27.882: ISIS-Adj: cir type L1L2, cir id 05, length 1496
Jul 22 19:17:27.882: ISIS-Adj: rcvd state UP, old state UP, new state UP, nbr usable TRUE
Jul 22 19:17:27.882: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:27.882: ISIS-Adj: Nghbr Ckt ID changed: FALSE
Jul 22 19:17:27.882: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000B
Jul 22 19:17:27.882: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0xB
Jul 22 19:17:27.882: ISIS-Adj: newstate:0, state_changed:0, going_up:0, going_down:0
Jul 22 19:17:27.882: ISIS-Adj: Action = ACCEPT
Jul 22 19:17:27.882: ISIS-Adj: ACTION_ACCEPT:

Jul 22 19:17:34.637: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15

Jul 22 19:17:34.637: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

Jul 22 19:17:36.579: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)

Jul 22 19:17:36.579: ISIS-Adj: cir type L1L2, cir id 05, length 1496
Jul 22 19:17:36.579: ISIS-Adj: rcvd state UP, old state UP, new state UP, nbr usable TRUE
Jul 22 19:17:36.579: ISIS-Adj: RCV:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:36.579: ISIS-Adj: Nghbr Ckt ID changed: FALSE
Jul 22 19:17:36.579: ISIS-Adj: received Neighbor System-ID (must be our) 0000.0000.000B
Jul 22 19:17:36.579: ISIS-Adj: received Neighbor ext.circuit ID (must be our) 0xB
Jul 22 19:17:36.579: ISIS-Adj: newstate:0, state_changed:0, going_up:0, going_down:0
Jul 22 19:17:36.579: ISIS-Adj: Action = ACCEPT
Jul 22 19:17:36.579: ISIS-Adj: ACTION_ACCEPT:

Jul 22 19:17:43.270: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15

Jul 22 19:17:43.271: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

Jul 22 19:17:51.658: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:17:51.658: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496
Jul 22 19:18:00.248: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:18:00.248: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

Jul 22 19:18:06.579: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold time

Jul 22 19:18:06.579: ISIS-Adj: L1 adj count 0
Jul 22 19:18:06.579: ISIS-Adj: L2 adj count 0

IS-IS: ءاطخأ حي حصت تال جس لي لحت

- (JUL 22 19:17:24) بيجت سي و، DeviceA مزل سري (JUL 22 19:17:25)، ةباجت سالا هذه DeviceA ملت سي و، (JUL 22 19:17:31).

DeviceA

Jul 22 19:17:24.929: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:24.929: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:17:31.685: ISIS-Adj: Rec serial IIH from 6c31.0edb.3b5f (TenGigabitEthernet0/0/4)

DeviceB

Jul 22 19:17:25.693: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:17:25.693: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496
Jul 22 19:17:27.882: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)

- بيحرت الة مزح DeviceB لسري و، (JUL 22 19:17:33) رخأ بيحرت ة مزح DeviceA لسري هريظن نم ة مزح ال ملتسي ني تي ناث دعب و، (JUL 22 19:17:34) هب ة صاخ ال

DeviceA

Jul 22 19:17:33.626: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:33.627: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496

DeviceB

Jul 22 19:17:34.637: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:17:34.637: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496
Jul 22 19:17:36.579: ISIS-Adj: Rec serial IIH from a84f.b1c3.9484 (TwentyFiveGigE1/0/9)

- نلعي، DeviceB ة طساوب ة لسررم الة مزح DeviceA اهيف ملتسي ال تي ال ة رتف ال ءانثأ ة. ني ناث 30 دعب كلذ نع لوكوتورب ال

DeviceA

Jul 22 19:17:42.671: ISIS-Adj: SND:3way Adj. Local Ckt ID:0x5 Nghbr Ckt ID:0xB Length:15
Jul 22 19:17:42.672: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:18:01.475: ISIS-Adj: Sending serial IIH on TenGigabitEthernet0/0/4, 3way state:UP, length 1496
Jul 22 19:18:01.685: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceB (TenGigabitEthernet0/0/4) Down, hold

- ة، ضارثف ال زاجثال ة رتف دعب. هب صاخ ال ريظن ال نم ة مزح ي DeviceB ي قلى تي ال هسفن نع لوكوتورب ال اذه نلعي.

DeviceB

Jul 22 19:17:43.270: ISIS-Adj: SND:3way Adj. Local Ckt ID:0xB Nghbr Ckt ID:0x5 Length:15
Jul 22 19:17:43.271: ISIS-Adj: Sending serial IIH on TwentyFiveGigE1/0/9, 3way state:UP, length 1496

<snip>

Jul 22 19:18:06.579: %CLNS-5-ADJCHANGE: ISIS: Adjacency to DeviceA (TwentyFiveGigE1/0/9) Down, hold tim

طاقات الال لي لحت:

نم هجومل اذه اهم لتسي يتل اريخال اقمزحل نكلو DeviceB، نم مزحل DeviceA لبقتسي
Hello مزحل DeviceA لسري م ث 13:17.31 ةقي قدل ي ف يه ريظنل

ريظنل نم بواجت يا نودب.

eth.dst == 09:00:2b:00:00:05				
Nr	Time	Source	Destination	seq
2023-07-22	13:15:35.638959	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:15:43.516971	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:15:44.531970	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:15:51.320982	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:15:52.786946	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:15:59.511966	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:02.646954	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:09.329969	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:10.505970	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:17.169989	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:19.943936	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:25.480962	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:28.851945	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:34.616957	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:38.643963	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:42.579956	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:47.501972	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:50.839952	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:16:55.382975	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:16:59.049985	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:04.634961	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:17:07.215976	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:14.446967	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:17:15.226978	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:22.740958	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:17:24.928937	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:31.684962	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000b
2023-07-22	13:17:33.626966	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:42.671962	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:17:52.007995	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
2023-07-22	13:18:01.474966	Cisco_c3:94:84	DEC-MAP-(or-OSI?)...	P2P HELLO, System-ID: 0000.0000.000a
> Frame 679: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits)				
> IEEE 802.3 Ethernet				
> Logical-Link Control				
> ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol				
> ISIS HELLO				

كلذ عمو، هريظن نم بيحرت ةمزنخآ ملتسي حاتفملا، لثامم طارش DeviceB طاقتلا رهظي، ةباجتسا نودب هب ةصاخلا بيحرتلا مزح لاسرا في DeviceB أدبي.

eth.dst == 09:00:2b:00:00:05				
Nc	Time	Source	Destination	seq
	2023-07-22 19:12:55.830021	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:12:57.006588	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:03.670751	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:06.443750	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:11.981159	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:15.351570	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:21.116502	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:25.143430	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:29.080123	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:34.001185	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:37.340177	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:41.882512	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:45.549749	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:13:51.134064	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:13:53.715223	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:14:00.945408	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:01.725783	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:14:09.240033	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:11.428283	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:14:18.183708	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:20.125427	Cisco_c3:94:84	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000a
	2023-07-22 19:14:26.817279	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:35.204661	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:43.794273	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
	2023-07-22 19:14:50.126106	Cisco_db:3b:5f	DEC-MAP-(or-OSI?)--	P2P HELLO, System-ID: 0000.0000.000b
> Frame 1971: 1513 bytes on wire (12104 bits), 1513 bytes captured (12104 bits) on interface \Device\NPF_{D6BBE860-9886-4A6C-BDD5-8E2837C66FB0}, id 0 > IEEE 802.3 Ethernet > Destination: DEC-MAP-(or-OSI?)-Intermediate-System-Hello? (09:00:2b:00:00:05) > Source: Cisco_c3:94:84 (a8:4f:b1:c3:94:84) Length: 1499 > Logical-Link Control > ISO 10589 ISIS InTRA Domain Routing Information Exchange Protocol > ISIS HELLO				

(ب) رقتسم ريغ ةيمالسلا ةلودلا ميظنت زاهج

هذه نأ ودبي. نارقألا نيب بيحرتلا مزح ميلست متي ال، ةردصملا طاقتلا تاي لمع في لقنلا عم ةلكشملا.

ةمچرتل هذه ل و ح

ةيلآل ا تاي ن ق ت ل ا ن م ة و م ج م ا د خ ت س ا ب د ن ت س م ل ا ا ذ ه Cisco ت م چ ر ت م ل ا ع ل ا ا ح ن ا ع م ج ي ف ن ي م د خ ت س م ل ل م ع د ي و ت ح م م ي د ق ت ل ة ي ر ش ب ل ا و ا م ك ة ق ي ق د ن و ك ت ن ل ة ي ل آ ة م چ ر ت ل ض ف ا ن ا ة ط ح ا ل م ي ج ر ي . ة ص ا خ ل ا م ه ت غ ل ب Cisco ي ل خ ت . ف ر ت ح م م چ ر ت م ا ه م د ق ي ي ت ل ا ة ي ف ا ر ت ح ا ل ا ة م چ ر ت ل ا ع م ل ا ح ل ا و ه ي ل ا ا م ا د ع و ج ر ل ا ب ي ص و ت و ت ا م چ ر ت ل ا ه ذ ه ة ق د ن ع ا ه ت ي ل و ئ س م Systems (ر ف و ت م ط ب ا ر ل ا) ي ل ص ا ل ا ي ز ي ل ج ن ا ل ا د ن ت س م ل ا