

DCX-No ACK dans 100 PDU Message d'erreur

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Introduction

Ce document décrit ce message d'erreur et comment identifier la cause principale : "%ETHPORT-2-IF_DOWN_ERROR_DISABLED : L'interface Ethernet115/1/17 est désactivée (Erreur désactivée). Raison CX-No ACK dans 100 PDU). »

Conditions préalables

Conditions requises

Cisco vous recommande de prendre connaissance des rubriques suivantes :

- CLI Nexus
- Protocole FCoE (Fibre Channel over Ethernet)

Components Used

Les informations de ce document sont basées sur toutes les plates-formes de commutation Nexus 5000 et 5500.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Problème

Les valeurs de longueur de type DCBX (Data Center Bridging Capability Exchange) sont incluses

dans une trame LLDP (Link Layer Discovery Protocol) échangée entre le commutateur et la carte réseau convergée (CNA). L'un de ces sous-TLV de contrôle est utilisé pour l'accusé de réception (ACK), qui est basé sur la séquence. Par exemple, le commutateur envoie un Control Sub-TLV avec un SeqNo de 1 et un AckNo de 2. L'hôte est censé inverser ceci et envoyer une trame LLDP avec un Control Sub-TLV avec un SeqNo de 2 et un AckNo de 1. Reportez-vous à la section Captures de paquets de cet article pour plus de détails.

Le commutateur attend cet échange de l'hôte toutes les 30 secondes. Si le commutateur ne voit pas cet échange pour 100 unités de données de protocole (PDU) , soit 3 000 secondes ou 50 minutes, il désactive avec cette erreur :

```
N5k %ETHPORT-2-IF_DOWN_ERROR_DISABLED: Interface Ethernet115/1/17 is down
(Error disabled. Reason:DCX-No ACK in 100 PDUs)
N5k %ETHPORT-2-IF_DOWN_ERROR_DISABLED: Interface Ethernet116/1/16 is down
(Error disabled. Reason:DCX-No ACK in 100 PDUs)
```

Solution

Vous pouvez résoudre ce problème si vous désactivez LLDP. Cependant, si vous exécutez FCoE, LLDP est requis car le port Fibre Channel virtuel ne s'active pas sans lui. Afin de désactiver LLDP, entrez ces commandes :

```
N5k(config)# interface E1/1
N5k(config-if)# no lldp receive
N5k(config-if)# no lldp send
```

Voici quelques commandes sur le commutateur qui permettent de réduire la cause première.

```
N5k# show lldp interface ethernet 1/22
Interface Information:
  Enable (tx/rx/dcbx): Y/Y/Y      Port Mac address: 00:05:73:ab:29:bd

Peer's LLDP TLVs:
Type Length Value
-----
001 007 040000c9 9d2372
002 007 030000c9 9d2372
003 002 0078
006 045 456d756c 6578204f 6e65436f 6e6e6563 74203130 4762204d 756c7469
2066756e 6374696f 6e204164 61707465 72
007 004 00800080
127 055 001b2102 020a0000 00000002 00000001 04110000 c0000001 00003232
00000000 00000206 060000c0 00080808 0a0000c0 00890600 1b2108
000 000

N5k# show lldp dcbx interface ethernet 1/22

Local DCBXP Control information:
Operation version: 00 Max version: 00 Seq no: 1 Ack no: 2 <----Our sequence
# and Ack #
Type/
Subtype Version En/Will/Adv Config
003/000 000 Y/N/Y 0808
004/000 000 Y/N/Y 8906001b21 08
002/000 000 Y/N/Y 0001000032 32000000 00000002
```

Peer's DCBXP Control information:

Operation version: 00 Max version: 00 Seq no: 2 Ack no: 1 <<---Peer sequence #

and Ack # should be reversed.

Type/	Max/Oper		
Subtype	Version	En/Will/Err	Config
002/000	000/000	Y/Y/N	0001000032 32000000 00000002
003/000	000/000	Y/Y/N	0808
004/000	000/000	Y/Y/N	8906001b21 08

La cause principale de ce problème est généralement un comportement incorrect de CNA/serveur ou un microprogramme/pilote incorrect sur le CNA. Une commande a été introduite pour les plates-formes de commutation Nexus 5000 dans les versions 5.2(1)N1(1) et ultérieures afin de récupérer automatiquement de cet état désactivé par erreur.

N5k(config)# **errdisable recovery cause dcbx-no-ack**

Note: ID de bogue Cisco [CSCtg30118](#) Enh : DCX-No ACK dans 100 PDU a été classé afin d'améliorer les fonctionnalités afin de résoudre ce problème. Cette correction permet également aux clients d'activer la récupération à partir de cette condition.

Vues des paquets

Capture de paquets en ligne de Nexus 5000 envoyant une trame LLDP DCBX Control Sub-TLV de SeqNo 1 et AckNo 2

10 FR	08/29 20:03:10.575_052_649	00.706_750_925	GE Port(1,4,2)	LLDP
10 FR	08/29 20:03:39.867_113_179	29.292_060_530	GE Port(1,4,1)	LLDP
10 FR	08/29 20:03:40.576_388_319	00.709_275_140	GE Port(1,4,2)	LLDP
10 FR	08/29 20:04:09.865_923_214	29.289_534_895	GE Port(1,4,1)	LLDP
10 FR	08/29 20:04:10.577_700_451	00.711_777_238	GE Port(1,4,2)	LLDP
10 FR	08/29 20:04:39.864_735_359	29.287_034_907	GE Port(1,4,1)	LLDP
10 FR	08/29 20:04:40.579_057_684	00.714_322_325	GE Port(1,4,2)	LLDP
10 FR	08/29 20:05:09.863_548_219	29.284_490_535	GE Port(1,4,1)	LLDP
10 FR	08/29 20:05:10.580_492_379	00.716_944_160	GE Port(1,4,2)	LLDP
10 FR	08/29 20:05:39.862_363_081	29.281_870_702	GE Port(1,4,1)	LLDP
10 FR	08/29 20:05:40.581_813_856	00.719_450_775	GE Port(1,4,2)	LLDP
10 FR	08/29 20:06:09.861_173_574	29.279_359_718	GE Port(1,4,1)	LLDP

Tree 10 Bit General

- ...interface number = 0x05000000
- ...OID string length = 0
- [-] **DCBX TLV v1.01**
 - ...TLV type = 0x7F Organizationally Specific TLV (DCBX)
 - ...TLV information string length = 55 Bytes
 - ...organizationally unique identifier = Intel
 - ...organizationally defined subtype = 0x02 DCBX is version 1.01
 - [-] **DCBX Control Sub-TLV**
 - ...type = 0x01 DCBX Control
 - ...length = 10
 - ...Oper_Version = 0
 - ...Max_Version = 0
 - ...SeqNo = 1 ←
 - ...AckNo = 2 ←
 - [-] **Priority-based Flow Control Sub-TLV**
 - ...type = 0x03 Priority-based Flow Control

Capture de paquets en ligne de CNA Envoi de trames LLDP Contrôle DCBX Sous-TLV de SeqNo 2 et AckNo 1

10 FR	08/29 20:03:39.867_113_179	29.292_060_530	GE Port(1,4,1)	LLDP
10 FR	08/29 20:03:40.576_388_319	00.709_275_140	GE Port(1,4,2)	LLDP
10 FR	08/29 20:04:09.865_923_214	29.289_534_895	GE Port(1,4,1)	LLDP
10 FR	08/29 20:04:10.577_700_451	00.711_777_238	GE Port(1,4,2)	LLDP
10 FR	08/29 20:04:39.864_735_359	29.287_034_907	GE Port(1,4,1)	LLDP
10 FR	08/29 20:04:40.579_057_684	00.714_322_325	GE Port(1,4,2)	LLDP
10 FR	08/29 20:05:09.863_548_219	29.284_490_535	GE Port(1,4,1)	LLDP
10 FR	08/29 20:05:10.580_492_379	00.716_944_160	GE Port(1,4,2)	LLDP
10 FR	08/29 20:05:39.862_363_081	29.281_870_702	GE Port(1,4,1)	LLDP
10 FR	08/29 20:05:40.581_813_856	00.719_450_775	GE Port(1,4,2)	LLDP
10 FR	08/29 20:06:09.861_173_574	29.279_359_718	GE Port(1,4,1)	LLDP

General

Tree 10 Bit

DCBX TLV v1.01

- TLV type = 0x7F Organizationally Specific TLV (DCBX)
- TLV information string length = 55 Bytes
- organizationally unique identifier = Intel
- organizationally defined subtype = 0x02 DCBX is version 1.01
- DCBX Control Sub-TLV**
 - type = 0x01 DCBX Control
 - length = 10
 - Oper_Version = 0
 - Max_Version = 0
 - SeqNo = 2
 - AckNo = 1
- Priority Group Sub-TLV**
 - type = 0x02 Priority Groups
 - length = 17
 - Oper_Version = 0

Wireshark ne décode pas les sous-TLV LLDP. Ils sont affichés en tant que « sous-type inconnu » dans l'en-tête LLDP. Utilisez les numéros de séquence des commandes de la section précédente afin de les localiser dans la trace Wireshark. Voici les traces d'une session SPAN (Switched Port Analyzer).

Capture Wireshark de Nexus 5000 Envoi de trames LLDP Contrôle DCBX Sub-TLV de SeqNo 1 et AckNo 2

```
4 2011-08-31 08:23:58.483005390 Cisco_ab:29:bd
5 2011-08-31 08:24:00.217113680 Emulex_9d:23:72
6 2011-08-31 08:24:28.484536460 Cisco_ab:29:bd
7 2011-08-31 08:24:30.216221870 Emulex_9d:23:72
```

```
Interface Subtype: ifIndex (2)
Interface Number: 83886080
OID String Length: 0
▼ Unknown - Unknown
  1111 111. .... .... = TLV Type: Organization Specific (127)
  .... ...0 0011 0111 = TLV Length: 55
  Organization Unique Code: Unknown (0x001b21)
  Unknown Subtype Content: 02020202000000000000100000000206060000080000
▼ Unknown - Unknown
  1111 111. .... .... = TLV Type: Organization Specific (127)
  .... ...0 0000 0101 = TLV Length: 5
  Organization Unique Code: Unknown (0x000142)
  Unknown Subtype Content: 0101
▼ IEEE 802.1 - Port VLAN ID
  1111 111. .... .... = TLV Type: Organization Specific (127)
  .... ...0 0000 0110 = TLV Length: 6
  Organization Unique Code: IEEE 802.1 (0x0080c2)
  IEEE 802.1 Subtype: Port VLAN ID (0x01)
  Port VLAN Identifier: 1 (0x0001)
▼ End of LLDPDU
  0000 000. .... .... = TLV Type: End of LLDPDU (0)
  .... ...0 0000 0000 = TLV Length: 0
```



Capture Wireshark de CNA Envoi de trame LLDP DCBX Control Sub-TLV de SeqNo 2 et AckNo 1

```
5 2011-08-31 08:24:00.217113680 Emulex_9d:23:72
```

```
6 2011-08-31 08:24:28.484536460 Cisco_ab:29:bd
```

```
7 2011-08-31 08:24:30.216221870 Emulex_9d:23:72
```

```
.... ...0 0000 0010 = TLV Length: 2
```

```
Seconds: 120
```

```
▼ System Description = Emulex OneConnect 10Gb Multi function Adapter
```

```
0000 110. .... .... = TLV Type: System Description (6)
```

```
.... ...0 0010 1101 = TLV Length: 45
```

```
System Description = Emulex OneConnect 10Gb Multi function Adapter
```

```
▼ Capabilities
```

```
0000 111. .... .... = TLV Type: System Capabilities (7)
```

```
.... ...0 0000 0100 = TLV Length: 4
```

```
▼ Capabilities: 0x0080
```

```
.... .... 1... .... = Station only
```

```
▼ Enabled Capabilities: 0x0080
```

```
.... .... 1... .... = Station only
```

```
▼ Unknown - Unknown
```

```
1111 111. .... .... = TLV Type: Organization Specific (127)
```

```
.... ...0 0011 0111 = TLV Length: 55
```

```
Organization Unique Code: Unknown (0x001b21)
```

```
Unknown Subtype Content: 02020a000000000020000000104110000c000000
```

```
▼ End of LLDPDU
```

```
0000 000. .... .... = TLV Type: End of LLDPDU (0)
```

```
.... ...0 0000 0000 = TLV Length: 0
```

Vous pouvez également utiliser le renifleur intégré dans la plate-forme de commutation Nexus 5000 afin de voir également les trames LLDP. Utilisez l'adresse MAC source comme filtre d'affichage.

Capture d'analyseur de CNA envoyant la trame LLDP DCBX Control Sub-TLV de SeqNo 2 et AckNo 1.

```
N5k# ethanalyzer local interface inbound-hi det display-filter eth.src==  
00:00:c9:9d:23:72
```

```
Capturing on eth4
```

```
Frame 1215 (152 bytes on wire, 152 bytes captured)
```

```
Arrival Time: Aug 31, 2011 09:06:25.549049000
```

```
[Time delta from previous captured frame: 0.021367000 seconds]
```

```
[Time delta from previous displayed frame: 1314795985.549049000 seconds]
```

```
[Time since reference or first frame: 1314795985.549049000 seconds]
```

```
Frame Number: 1215
```

```
Frame Length: 152 bytes
```

```
Capture Length: 152 bytes
```

```
[Frame is marked: False]
```

```

[Protocols in frame: eth:vlan:lldp]
Ethernet II, Src: 00:00:c9:9d:23:72 (00:00:c9:9d:23:72), Dst: 01:80:c2:00:00:0e
(01:80:c2:00:00:0e)
  Destination: 01:80:c2:00:00:0e (01:80:c2:00:00:0e)
    Address: 01:80:c2:00:00:0e (01:80:c2:00:00:0e)
      .... ..1 .... = IG bit: Group address (multicast/broadcast)
      .... ..0. .... = LG bit: Globally unique address (factory default)
  Source: 00:00:c9:9d:23:72 (00:00:c9:9d:23:72)
    Address: 00:00:c9:9d:23:72 (00:00:c9:9d:23:72)
      .... ..0 .... = IG bit: Individual address (unicast)
      .... ..0. .... = LG bit: Globally unique address (factory default)
  Type: 802.1Q Virtual LAN (0x8100)
802.1Q Virtual LAN
  000. .... = Priority: 0
  ...0 .... = CFI: 0
  .... 0000 0001 0100 = ID: 20
  Type: 802.1 Link Layer Discovery Protocol (LLDP) (0x88cc)
Link Layer Discovery Protocol
  Chassis Subtype = MAC address
    0000 001. .... = TLV Type: Chassis Id (1)
    .... ...0 0000 0111 = TLV Length: 7
    Chassis Id Subtype: MAC address (4)
    Chassis Id: 00:00:c9:9d:23:72 (00:00:c9:9d:23:72)
  Port Subtype = MAC address
    0000 010. .... = TLV Type: Port Id (2)
    .... ...0 0000 0111 = TLV Length: 7
    Port Id Subtype: MAC address (3)
    Port Id: 00:00:c9:9d:23:72 (00:00:c9:9d:23:72)
  Time To Live = 120 sec
    0000 011. .... = TLV Type: Time to Live (3)
    .... ...0 0000 0010 = TLV Length: 2
    Seconds: 120
  System Description = Emulex OneConnect 10Gb Multi function Adapter
    0000 110. .... = TLV Type: System Description (6)
    .... ...0 0010 1101 = TLV Length: 45
    System Description = Emulex OneConnect 10Gb Multi function Adapter
  Capabilities
    0000 111. .... = TLV Type: System Capabilities (7)
    .... ...0 0000 0100 = TLV Length: 4
    Capabilities: 0x0080
      .... .... 1... = Station only
    Enabled Capabilities: 0x0080
      .... .... 1... = Station only
  Unknown - Unknown
    1111 111. .... = TLV Type: Organization Specific (127)
    .... ...0 0011 0111 = TLV Length: 55
    Organization Unique Code: Unknown (0x001b21)
    Unknown Subtype Content: 02020A000000000002000000104110000C0000001000032... <<<<<
  End of LLDPDU
    0000 000. .... = TLV Type: End of LLDPDU (0)
    .... ...0 0000 0000 = TLV Length: 0

```

N5k# 1 packets captured