# 線路卡因通訊故障而關閉電源故障排除指南

## 目錄



## 簡介

本檔案介紹如何疑難排解Cisco Catalyst 6500系列交換器上因為通訊失敗而關閉電源的線路卡。

## 必要條件

### 需求

本文件沒有特定需求。

### 採用元件

本檔案中的資訊是根據Cisco Catalyst 6500系列交換器，並不限於特定軟體版本。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

## 背景資訊

安全複製通訊協定(SCP)是在Catalyst 6500上透過乙太網路帶外通道(EOBC)從交換器處理器(SP)和非分散式轉送卡（非DFC）線路卡進行通訊所使用的通訊協定。SCP或keep-alive輪詢失敗可能代表管理引擎和線卡之間的通訊問題。

每當模組關閉電源時，都執行以下檢查：

- 檢視日誌，以確定模組是否由於「SCP dnld」故障而關閉。

- 排除Supervisor與有問題的線卡之間的通訊故障。

# 檢視日誌

檢查日誌以檢視「SCP dnld」或「keep-alive」輪詢失敗是否是模組關閉電源的原因：

```
%C6KPWR-SP-4-DISABLED: power to module in slot 2 set off (Module Failed SCP dnld)
%C6KPWR-SP-4-DISABLED: power to module in slot 2 set off (Module not responding to
Keep Alive polling)
```

# 通訊故障排除

以下過程介紹了如何對Supervisor和線卡之間的通訊進行故障排除。

1. 從SP端檢查全域性SCP計數器是否有任何增量錯誤。

```
6500#remote command switch show scp counters
6500-sp#
received packets            = 586786
transmitted packets         = 584442
retransmitted packets       = 13        (increasing re-transmissions indicate
congested EOBC)
loop back packets           = 0
transmit failures           = 0         (increasing transmit failures indicate
congested/stuck EOBC)
recv pkts not for me        = 0
recv pkts to dead process   = 0
recv pkts not enqueuable    = 0         (increasing counters indicate lack of
EOBC buffers)
response has wrong opcode   = 0
response has wrong seqnum   = 0
response is not an ack      = 0
response is too big         = 0
```

2. 檢查每個模組的SCP接收/傳輸計數器，並檢查遞增SCP重試次數。

```
6500#remote command switch show scp status
6500-sp#
Rx 586786 ,  Tx 584442 ,  Sap 15
Id     Channel name    current/peak/retry/total  time(queue/process)
-- ------------------ ----------------------  ------------------
0  SCP async: LCP#8     0/ 11/  1/   13            4/   4
1  SCP async: LCP#4     0/ 13/  0/  550           92/ 108
2  SCP async: LCP#2     0/ 34/  0/ 1540          628/ 456
3  SCP async: LCP#5     0/ 17/  1/  716         2228/1252
4  SCP async: LCP#1     0/ 29/  0/  137          200/ 452
5  SCP async: LCP#9     0/ 13/  0/  895          176/ 428
```

3. 檢查從Supervisor ping相關模組的SCP。

```
6500#remote command switch test scp ping 3
6500-sp#
pinging addr 5(0x5)
assigned sap 0x11
```

```
addr 5(0x5) is alive       (Communication between the supervisor and line
card is fine)

6500#remote command switch test scp ping 2
6500-sp#
pinging addr 11(0xB)
assigned sap 0x11
no response from addr 11(0xB)  (Communication between the supervisor
and linecard is broken)
```

4. 線上卡上配置聯機診斷。

```
6500(config)#diagnostic level complete      (12.1(8a)EX or above)
```

5. 重新拔插線卡並檢視測試結果，以檢視是否有任何測試失敗。

```
6500#show diagnostic result module 2
Current Online Diagnostic Level = Complete
Online Diagnostic Result for Module 2 : PASS
Online Diagnostic Level when Module 2 came up = Complete
```

6. 可選：使用debug命令檢查SCP下載事件。當線卡聯機時，可以運行這些調試來檢查SCP下載事件。以下是模組工作正常的示例。

```
6500#remote login switch
6500-sp#debug scp download module 2
6500-sp#show debug
<snip>
SCP download debugging for slot 2 is on
     start_timer_online_action: Start OIR online timer for slot: 2,
time: 1380 sec
    scp_dnld_module 2 : 0 : 0: during state enabled, got event 5(registered)
 @@@ scp_dnld_module 2 : 0 : 0: enabled -> wait_til_boot_ready
 Stop timer
 Start BOOT_RDY timer for 2 with 30000 msec
    scp_dnld_module 2 : 0 : 0: during state wait_til_boot_ready, got event
6(boot_ready)
 @@@ scp_dnld_module 2 : 0 : 0: wait_til_boot_ready -> wait_til_downloaded
 Stop timer
 Start DNLD timer for 2 with 120 sec
 (scp_start_download) 2/0
 (scp_start_download) 2/0: Started D/L Process, pid 512
 get_card_image: slot/proc 2/0: UBIN patch image on flash opened
(microcode:/LCP_CPGBIT)
 No download needed for card at slot 2

    scp_dnld_module 2 : 0 : 0: during state wait_til_downloaded, got event
4(dnld_completed)
 @@@ scp_dnld_module 2 : 0 : 0: wait_til_downloaded -> wait_til_ready
 Stop timer
 Start EXEC_CODE timer for 2 with 90 sec
 Received Run-ready from slot 2
 scp_download_process_teardown() mypid 512, slot/proc 2/0, image_fd -1
    scp_dnld_module 2 : 0 : 0: during state wait_til_ready, got event
8(ready)
 @@@ scp_dnld_module 2 : 0 : 0: wait_til_ready -> wait_til_running
 Stop timer
 Start RUN_RDY timer for 5 with 90 sec
    scp_dnld_module 2 : 0 : 0: during state wait_til_running, got
event 9(running)
```

```
 @@@ scp_dnld_module 2 : 0 : 0: wait_til_running -> wait_til_online
 Stop timer
<snip>
```