

# 回答Firepower可擴展作業系統(FXOS)常見問題

## 目錄

---

### [簡介](#)

### [背景資訊](#)

[問：如何從FXOS系統產生Show Tech？](#)

[問：如何驗證和更改機箱管理IP地址、網路掩碼和網關？](#)

[問：如何執行FXOS Ping測試？](#)

[問：如何驗證帶外管理介面的Mac地址？](#)

[問：如何驗證頻外管理介面是否已開啟？](#)

[問：如何檢查FXOS路由表？](#)

[問：如何檢查FXOS ARP表？](#)

[問：如何檢查FXOS故障事件？](#)

[問：如何變更系統的主機名稱？](#)

[問：show server status Output中的「Compute Mismatch」是什麼？](#)

[問：show slot輸出中「令牌不匹配」的含義是什麼？](#)

[問：如何透過CLI設定時區、NTP和DNS？](#)

[問：如何設定智慧許可和HTTP代理？](#)

[問：如何透過CLI配置系統日誌？](#)

[問：如何在Firepower裝置上配置SNMP？](#)

[問：如何安裝/更換機箱管理器使用的SSL證書？](#)

[問：如何排除透過FPR9300機箱的流量故障？](#)

[問：如何檢視機箱Mac地址表？](#)

[問：如何檢視機箱介面MAC地址？](#)

[問：如何在FXOS Supervisor \(MIO\)上執行指令恢復？](#)

[問：如何在ASA或FTD邏輯裝置上執行指令恢復？](#)

[問：如何更改FXOS使用者 \(例如admin\) 的當前密碼？](#)

[問：如何降級FXOS？](#)

[問：如何降級/升級ASA邏輯裝置？](#)

[問：如何透過CLI檢查FXOS升級狀態？](#)

[問：如何從FXOS CLI重新載入邏輯裝置？](#)

[問：如何檢查FXOS機箱正常運行時間和上次重新載入的原因？](#)

[問：如何檢查FXOS上的可用磁碟空間？](#)

[問：如何將FXOS組態重設為出廠預設值？](#)

[問：如何從FXOS CLI檢查邏輯裝置的載入程式配置 \(分配的介面、版本等\)？](#)

[問：如何檢查FXOS介面的狀態 \(埠型別、狀態\)？](#)

[問：如何檢查機箱上的CPU和記憶體使用率？](#)

[問：如何檢查機箱介面收發器型別？](#)

[問：如何檢查模組/刀片/伺服器/網路模組資訊 \(硬體型別/PID/SN/記憶體/核心等\)？](#)

[問：如何從FXOS GUI和CLI中刪除ASA或FTD映像？](#)

[問：如何從CLI檢查FXOS版本？](#)

[問：如何驗證FXOS上的介面MTU？](#)

[問：如何檢查已安裝的應用程式？](#)

[問：如何從FXOS CLI驗證埠通道配置？](#)

[問：如何從Show Tech Output中找到FXOS捆綁包版本？](#)

[問：MIO如何將介面資訊（增加/刪除）傳播到刀片應用\(FTD、ASA\)？](#)

[問：在Firepower機箱的RMA中，必須使用什麼序列號\(SN\)？](#)

[問：您能否在2個不同的FXOS機箱之間交換SSD1？](#)

[問：如何檢查機箱功耗？](#)

[問：如何檢查開機載入器版本？](#)

[問：如何升級引導載入程式？](#)

[問：如何停用絕對SSH超時？](#)

[問：如何捕獲發往機箱管理引擎（控制平面）的LACP資料包？](#)

[問：如何查詢SSD資訊？](#)

[問：如何設定內部交換器\(FXOS\)擷取？](#)

[參考資料](#)

---

## 簡介

本文檔介紹與FXOS平台相關的常見問題。

## 背景資訊

Firepower可擴展作業系統(FXOS)是Firepower或安全防火牆平台上的底層作業系統。根據FXOS用於配置功能、監控機箱狀態和訪問高級故障排除功能的平台。

Firepower 4100/9300和Firepower 2100上的FXOS以及平台模式下的自適應安全裝置軟體允許配置更改，而在其他平台中，除特定功能外，FXOS是只讀的。

## 問：如何從FXOS系統產生Show Tech？

自2.8.x版起，fprm已棄用。因此，FXOS 2.8.x僅支援機箱和刀片顯示技術。

```
<#root>
```

```
KSEC-FPR4115-2-1(local-mgmt)#
```

```
show tech-support fprm detail
```

```
WARNING: show tech-support fprm detail command is deprecated.  
Please use show tech-support chassis 1 detail command instead.
```

- 機箱：包含機箱、刀鋒、介面卡、基板管理控制器(BMC)和思科整合式管理控制器(CIMC)的

## 記錄檔

- 模組：包含邏輯裝置自適應安全裝置(ASA)或Firepower威脅防禦(FTD)所在刀片/模組的日誌檔案。這包括諸如appAgent等元件的日誌)

在2.8.x之前的版本中，FXOS提供三種不同的show tech輸出。FPRM捆綁包包含管理輸入/輸出(MIO) ( 管理引擎 ) 和服務管理器)的日誌檔案

通常，生成全部3個捆綁。使用show tech-support <option> detail生成用於TAC分析的3個不同日誌捆綁：

<#root>

```
FPR4140-A# connect local-mgmt
FPR4140-A(local-mgmt)#
```

```
show tech-support fprm detail
```

```
FPR4140-A(local-mgmt)#
```

```
show tech-support chassis 1 detail
```

```
FPR4140-A(local-mgmt)#
```

```
show tech-support module 1 detail
```

- 如果不指定細節選項，則會在螢幕上獲得輸出
- detail選項會建立tar檔案

檢查產生的檔案名稱：

<#root>

```
FPR4140-A(local-mgmt)#
```

```
dir techsupport/
```

```
1 15595520 Apr 09 17:29:10 2017 20170409172722_FPR4140_FPRM.tar
```

```
1 962560 Apr 09 17:32:20 2017 20170409172916_FPR4140_BC1_all.tar
```

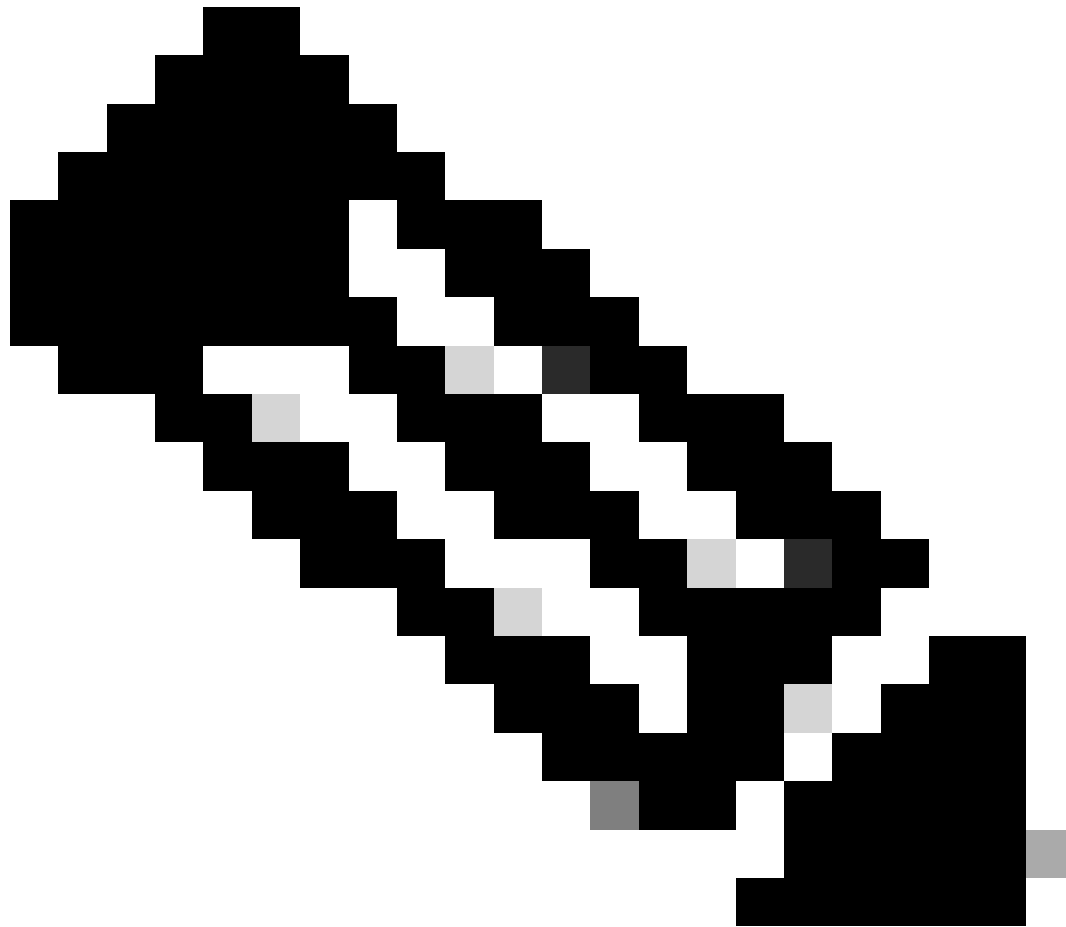
```
1 7014400 Apr 09 18:06:25 2017 Firepower-Module1_04_09_2017_18_05_59.tar
```

若要從CLI匯出套件組合，請執行下列動作：

<#root>

```
FPR4140-A(local-mgmt)#
```

```
copy workspace:///techsupport/20170409172722_FPR4140_FPRM.tar ftp|tftp|scp|sftp://username@192.168.0.1/
```

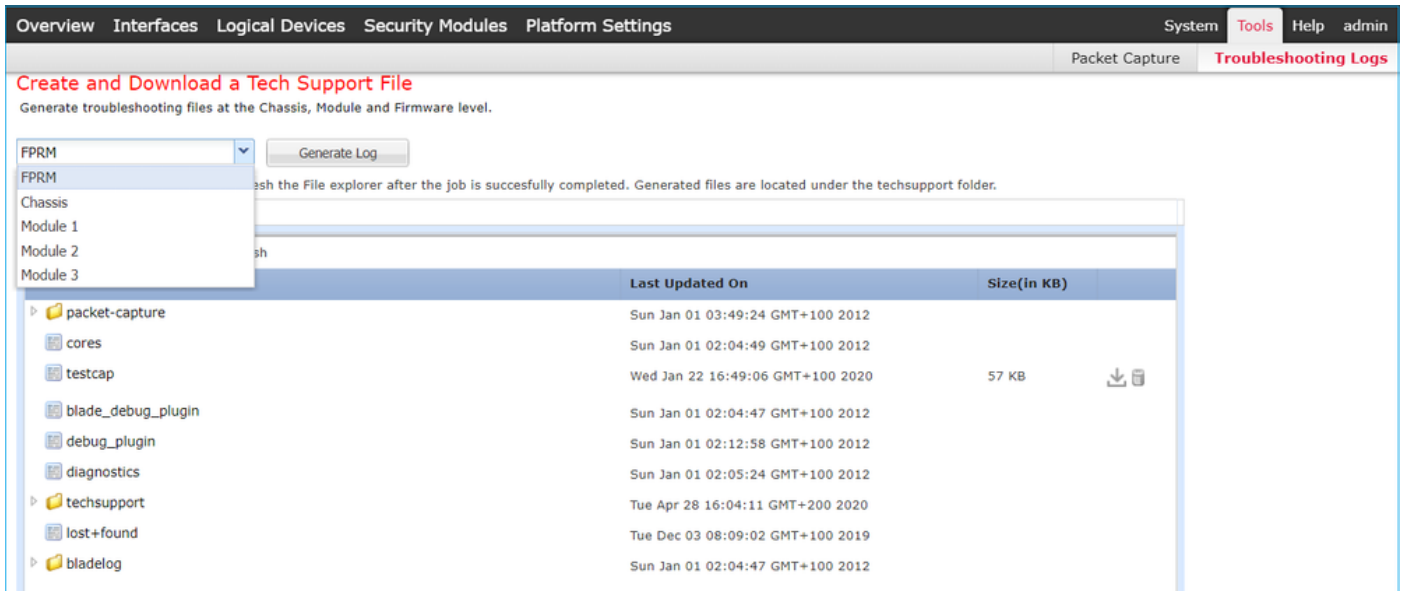


注意：除了FXOS show tech輸出外，邏輯裝置（例如ASA和/或FTD）還具有他們自己的獨立show tech功能。在多例項(MI)的情形中，每個例項還具有自己的獨立show-tech捆綁包。最後，FCM不支援MI show-techs

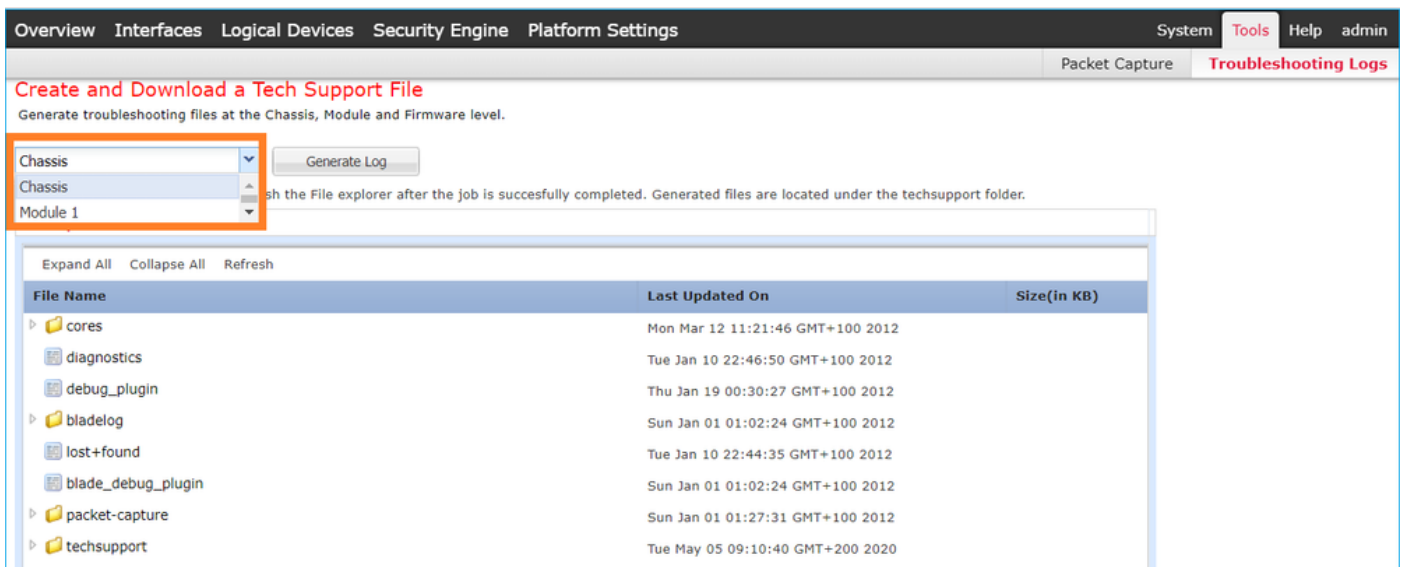
---

從FXOS 2.6開始，透過「工具」>「故障排除日誌」下的「Firepower機箱管理器(FCM) UI，可以生成和下載FXOS技術支援

在FP9300上：



在FP41xx上：



## 問：如何驗證和更改機箱管理IP地址、網路掩碼和網關？

驗證管理介面配置的方法有以下幾種：

<#root>

FP4115-2-1#

show fabric-interconnect

Fabric Interconnect:

ID	OOB IP Addr	OOB Gateway	OOB Netmask	OOB IPv6 Address	OOB IPv6 Gateway	Prefix	Operal
A	10.62.184.19	10.62.184.1	255.255.255.0	::	::	64	Operal

或

```
<#root>
```

```
FPR4115-2-1#
```

```
scope fabric-interconnect a
```

```
FPR4115-2-1 /fabric-interconnect #
```

```
show
```

```
Fabric Interconnect:
```

ID	OOB IP Addr	OOB Gateway	OOB Netmask	OOB IPv6 Address	OOB IPv6 Gateway	Prefix	Operational
A	10.62.184.19	10.62.184.1	255.255.255.0	::	::	64	Operational

```
FPR4115-2-1 /fabric-interconnect #
```

```
show detail
```

```
Fabric Interconnect:
```

```
ID: A
```

```
Product Name: Cisco FPR-4115-SUP
```

```
PID: FPR-4115-SUP
```

```
VID: V01
```

```
Vendor: Cisco Systems, Inc.
```

```
Serial (SN): JAD12345NY6
```

```
HW Revision: 0
```

```
Total Memory (MB): 8074
```

```
OOB IP Addr: 10.62.184.19
```

```
OOB Gateway: 10.62.184.1
```

```
OOB Netmask: 255.255.255.0
```

```
OOB IPv6 Address: ::
```

```
OOB IPv6 Gateway: ::
```

```
Prefix: 64
```

```
Operability: Operable
```

```
Thermal Status: Ok
```

```
Ingress VLAN Group Entry Count (Current/Max): 0/500
```

```
Switch Forwarding Path Entry Count (Current/Max): 14/1021
```

```
Current Task 1:
```

```
Current Task 2:
```

```
Current Task 3:
```

要更改IP設定：

```
<#root>
```

```
FPR4115-2-1#
```

```
scope fabric-interconnect a
```

```
FPR4115-2-1 /fabric-interconnect #
```

```
set out-of-band
```

```
gw
```

```
Gw
```

```
ip      Ip
netmask Netmask
KSEC-FPR4115-2-1 /fabric-interconnect #

set out-of-band ip 10.62.184.19 netmask 255.255.255.0 gw 10.62.184.1

KSEC-FPR4115-2-1 /fabric-interconnect* #

commit-buffer
```

關於提交：

```
FPR4115-2-1 /fabric-interconnect # commit-buffer verify-only      ! verify the change for error
FPR4115-2-1 /fabric-interconnect # commit-buffer                  ! commit the change
FPR4115-2-1 /fabric-interconnect # discard-buffer                 ! cancel the change
```

如需詳細資訊，請檢查：

[Cisco Firepower 4100/9300 FXOS命令參考](#)

## 問：如何執行FXOS Ping測試？

導航到本地管理CLI範圍，然後使用ping命令：

```
<#root>

FPR4115-2-1#

connect local-mgmt

FPR4115-2-1(local-mgmt)#

ping 10.62.184.1

PING 10.62.184.1 (10.62.184.1) from 10.62.184.19 eth0: 56(84) bytes of data.
64 bytes from 10.62.184.1: icmp_seq=1 ttl=255 time=0.602 ms
64 bytes from 10.62.184.1: icmp_seq=2 ttl=255 time=0.591 ms
64 bytes from 10.62.184.1: icmp_seq=3 ttl=255 time=0.545 ms
64 bytes from 10.62.184.1: icmp_seq=4 ttl=255 time=0.552 ms
```

## 問：如何驗證帶外管理介面的Mac地址？

導航到本地管理CLI範圍並使用此命令：

```
<#root>

FPR4115-2-1#

connect local-mgmt
```

```
FPR4115-2-1(local-mgmt)#  
show mgmt-ip-debug | begin eth0  
  
eth0      Link encap:Ethernet  HWaddr 78:bc:1a:e7:a4:11  
          inet addr:10.62.184.19  Bcast:10.62.184.255  Mask:255.255.255.0  
          inet6 addr: fe80::7abc:1aff:fee7:a411/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:3420589 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:2551231 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:419362704 (399.9 MiB)  TX bytes:1530147643 (1.4 GiB)
```

## 問：如何驗證頻外管理介面是否已開啟？

除了scope fabric-interconnect a > show下的Operational外，您還可以使用此命令：

```
<#root>  
  
FPR4115-2-1#  
connect local-mgmt  
  
FPR4115-2-1(local-mgmt)#  
show mgmt-port  
  
eth0      Link encap:Ethernet  HWaddr 78:bc:1a:e7:a4:11  
          inet addr:10.62.184.19  Bcast:10.62.184.255  Mask:255.255.255.0  
          inet6 addr: fe80::7abc:1aff:fee7:a411/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:3422158 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:2552019 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:419611452 (400.1 MiB)  TX bytes:1530247862 (1.4 GiB)
```

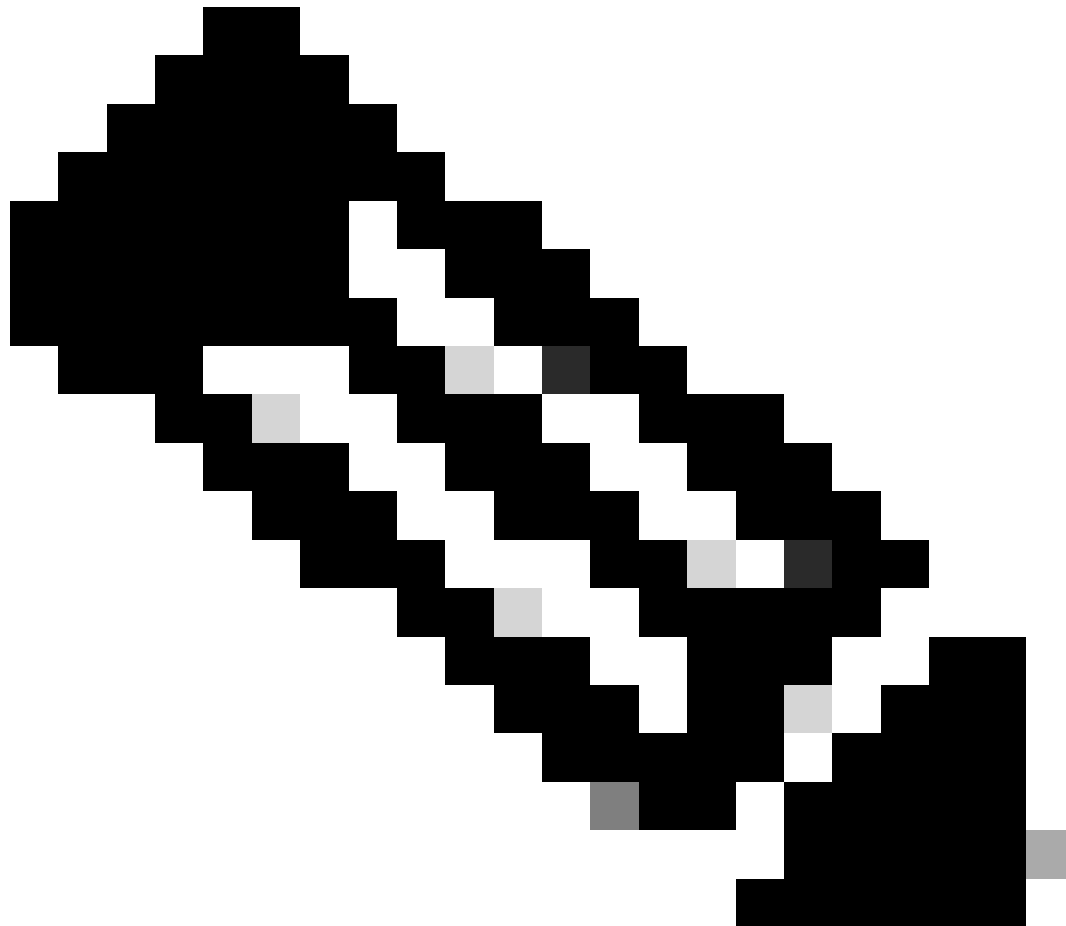
或者，您可以使用此指令。Scope部分顯示Link UP。請注意，UP顯示於下一行：

```
<#root>  
  
FPR4115-2-1#  
connect local-mgmt  
  
FPR4115-2-1(local-mgmt)#  
show mgmt-ip-debug | begin eth0  
  
eth0      Link encap:Ethernet  HWaddr 78:bc:1a:e7:a4:11  
          inet addr:10.62.184.19  Bcast:10.62.184.255  Mask:255.255.255.0  
          inet6 addr: fe80::7abc:1aff:fee7:a411/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
```



```
RX packets:3420589 errors:0 dropped:0 overruns:0 frame:0
TX packets:2551231 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:419362704 (399.9 MiB) TX bytes:1530147643 (1.4 GiB)
```

---



註：UP狀態是介面的管理狀態。即使拔下物理電纜或SFP模組，狀態仍為UP。另一個重要點是RUNNING狀態，這意味著鏈路運行正常（線路協定為運行狀態）。

---

關閉介面的邏輯狀態：

```
<#root>
```

```
FPR4100-3-A(local-mgmt)#
```

```
mgmt-port shut
```

```
FPR4100-3-A(local-mgmt)#
```

```
show mgmt-ip-debug ifconfig | b eth0
```

```
eth0      Link encap:Ethernet  HWaddr 58:97:BD:B9:76:EB
          inet addr:10.62.148.88  Bcast:10.62.148.127  Mask:255.255.255.128
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:3685870 errors:0 dropped:0 overruns:0 frame:0
          TX packets:7068372 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:295216623 (281.5 MiB)  TX bytes:1049391193 (1000.7 MiB)
```

再次提出問題：

<#root>

```
FPR4100-3-A(local-mgmt)#
```

```
mgmt-port no-shut
```

```
FPR4100-3-A(local-mgmt)#
```

```
show mgmt-ip-debug ifconfig | b eth0
```

```
eth0      Link encap:Ethernet  HWaddr 58:97:BD:B9:76:EB
          inet addr:10.62.148.88  Bcast:10.62.148.127  Mask:255.255.255.128
          inet6 addr: fe80::5a97:bdf:feb9:76eb/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:3685885 errors:0 dropped:0 overruns:0 frame:0
          TX packets:7068374 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:295218130 (281.5 MiB)  TX bytes:1049391353 (1000.7 MiB)
```

---

註：fxos模式下的show interface brief和show interface mgmt 0分別顯示mgmt0介面關閉和Admin down。請勿使用此參照它已關閉。

---

```
<#root>
```

```
FPR-4110-A#
```

```
connect fxos
```

```
FPR-4110-A(fxos)#
```

```
show interface brief | include mgmt0
```

```
mgmt0 --          down  172.16.171.83          --          1500
```

```
FPR-4110-A(fxos)#
```

```
show interface mgmt 0
```

```
mgmt0 is down (Administratively down)
  Hardware: GigabitEthernet, address: 5897.bdb9.212d (bia 5897.bdb9.212d)
  Internet Address is 172.16.171.83/24
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec
```

```
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA
auto-duplex, auto-speed
EtherType is 0x0000
1 minute input rate 3080 bits/sec 2 packets/sec
1 minute output rate 0 bits/sec 0 packets/sec
Rx
  977 unicast packets 12571 multicast packets 5229 broadcast packets
  18777 input packets 2333662 bytes
Tx
  0 unicast packets 0 multicast packets 0 broadcast packets
  0 output packets 0 bytes
```

如果您在fxos模式下執行show run interface mgmt0，則在該介面下執行shutdown force。同樣地，請勿使用此參考指出其已關閉：

```
<#root>
```

```
FPR4115-2-1(fxos)#
```

```
show run interface mgmt0
```

```
!Command:
```

```
show running-config interface mgmt0
```

```
!Time: Tue May 5 14:19:42 2020
```

```
version 5.0(3)N2(4.81)
```

```
interface mgmt0
  shutdown force
  ip address 10.62.184.19/24
```

## 問：如何檢查FXOS路由表？

帶外管理僅依賴於預設網關集。因此，請確保選擇的預設網關允許連線到需要訪問系統的客戶端。connect fxos下有一個show ip route vrf all命令，但它不用於帶外管理。

## 問：如何檢查FXOS ARP表？

ARP表在FXOS CLI中不可見。您還可以在fxos模式(ethalyzer)下使用資料包捕獲來捕獲ARP和/或檢查進出管理層的流量。

以下是捕獲ARP資料包的示例。您可以將capture-filter (捕獲過濾器)更改為任何內容。該過濾器

類似於tcpdump過濾器：

```
<#root>
```

```
fp9300-A#
```

```
connect fxos
```

```
fp9300-A(fxos)#
```

```
ethalyzer local interface mgmt capture-filter arp
```

```
Capturing on eth0
```

```
2016-10-14 18:04:57.551221 00:50:56:85:be:44 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.240? Tell 172.16.171.240
2016-10-14 18:04:57.935562 00:12:80:85:a5:49 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.112? Tell 172.16.171.112
2016-10-14 18:04:58.167029 00:50:56:85:78:4e -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.205? Tell 172.16.171.205
2016-10-14 18:04:59.156000 00:50:56:9f:b1:43 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.1? Tell 172.16.171.1
2016-10-14 18:04:59.165701 00:50:56:9f:b1:43 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.1? Tell 172.16.171.1
2016-10-14 18:04:59.166925 00:50:56:85:78:4e -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.205? Tell 172.16.171.205
2016-10-14 18:04:59.268168 00:50:56:9f:b1:43 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.151? Tell 172.16.171.151
2016-10-14 18:05:00.150217 00:50:56:85:78:4e -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.204? Tell 172.16.171.204
2016-10-14 18:05:00.268369 00:50:56:9f:b1:43 -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.151? Tell 172.16.171.151
2016-10-14 18:05:01.150243 00:50:56:85:78:4e -> ff:ff:ff:ff:ff:ff ARP Who has 172.16.171.204? Tell 172.16.171.204
```

```
10 packets captured
```

```
Program exited with status 0.
```

```
fp9300-A(fxos)#
```

此外，您可以將捕獲儲存到檔案，然後將其導出到遠端伺服器：

```
<#root>
```

```
FPR4140-A#
```

```
connect fxos
```

```
FPR4140-A(fxos)#
```

```
ethalyzer local interface mgmt capture-filter arp limit-captured-frames 0 write workspace:///ARP.pcap
```

```
FPR4140-A#
```

```
connect local-mgmt
```

```
FPR4140-A(local-mgmt)#
```

```
dir
```

```
1 23075 Jan 12 13:13:18 2020 ARP.pcap
```

```
FPR4140-A(local-mgmt)#
```

```
copy workspace:///ARP.pcap ftp://anonymous@10.48.40.70/ARP.pcap
```

## 問：如何檢查FXOS故障事件？

使用show fault命令：

```
<#root>
```

```
FPR4115-2-1#
```

```
show fault
```

Severity	Code	Last Transition Time	ID	Description
Major	F0909	2020-04-26T21:19:37.520	554924	default Keyring's certificate is invalid, reason:
Major	F1769	2012-01-19T00:30:02.733	323268	The password encryption key has not been set.
Minor	F1437	2012-01-19T00:30:02.732	32358	Config backup may be outdated

您還可以根據嚴重性過濾故障：

```
<#root>
```

```
FPR4115-2-1#
```

```
show fault ?
```

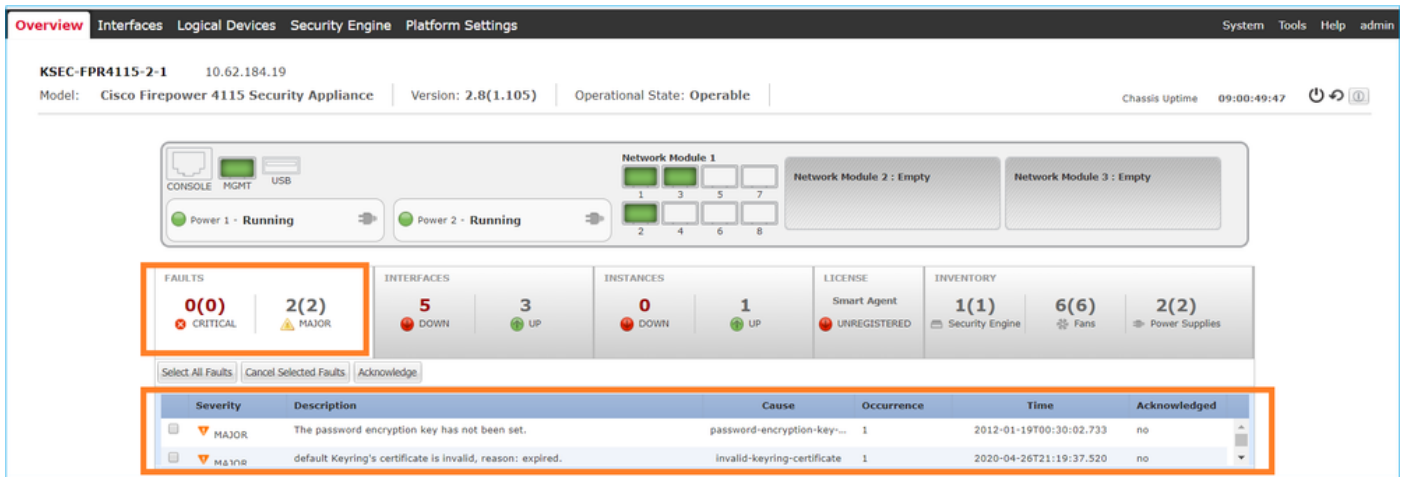
```
0-18446744073709551615 ID
<CR>
> Redirect it to a file
>> Redirect it to a file in append mode
cause Cause
detail Detail
severity Severity
suppressed Fault Suppressed
| Pipe command output to filter
```

```
FPR4115-2-1#
```

```
show fault severity major
```

Severity	Code	Last Transition Time	ID	Description
Major	F0909	2020-04-26T21:19:37.520	554924	default Keyring's certificate is invalid, reason:
Major	F1769	2012-01-19T00:30:02.733	323268	The password encryption key has not been set.

從FXOS UI Overview > FAULTS控制台也可看到相同的故障：



問：如何變更系統的主機名稱？

在系統範圍下使用set name命令：

```
<#root>
```

```
KSEC-FPR4115-2-1#
```

```
scope system
```

```
KSEC-FPR4115-2-1 /system #
```

```
set name new-name
```

Warning: System name modification changes FC zone name and redeploys them non-disruptively

```
KSEC-FPR4115-2-1 /system* #
```

```
commit-buffer
```

```
KSEC-FPR4115-2-1 /system #
```

```
exit
```

```
new-name#
```

問：show server status Output中的「Compute Mismatch」是什麼？

在使用新安裝的安全模組之前，必須對其進行確認和重新初始化。即使透過RMA更換裝置也是如此。

```
<#root>
```

```
FPR9300#
```

```
show server status
```

```

Server Slot Status Overall Status Discovery
-----
1/1 Mismatch Compute Mismatch Complete
1/2 Equipped Ok Complete
1/3 Empty
FPR9300#

```

計算不匹配可能導致此故障事件：

Service profile ssp-sprof-1 configuration failed due to compute-unavailable,insufficient-resources

show service-profile狀態將顯示「Unassociated」，就像模組不存在一樣。

從CLI確認的步驟：

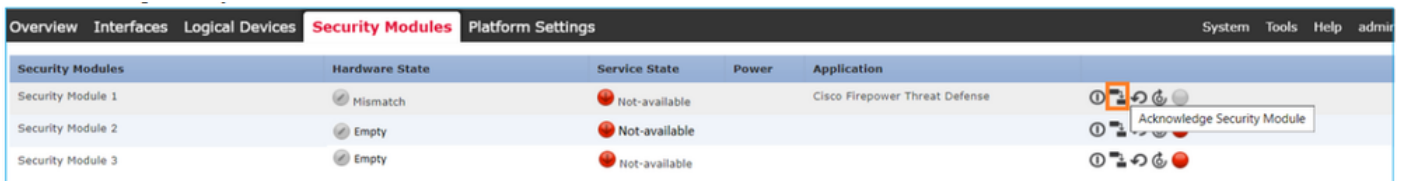
```
<#root>
```

```
scope chassis 1
```

```
acknowledge slot <slot#>
```

```
commit-buffer
```

或者，您可以使用機箱管理器UI來確認模組：



問：show slot輸出中「令牌不匹配」的含義是什麼？

這表示在確認安全模組後，尚未重新初始化：

```
<#root>
```

```
FPR9300#
```

```
scope ssa
```



```
FPR9300 /ssa #
```

```
show slot
```

```
Slot:
```

Slot ID	Log Level	Admin State	Operational State
1	Info	Ok	Token Mismatch
2	Info	Ok	Online
3	Info	Ok	Not Available

```
FPR9300 /ssa #
```

透過CLI重新初始化的步驟：

```
<#root>
```

```
scope ssa
```

```
scope slot <#>
```

```
reinitialize
```

```
commit-buffer
```

在Firepower 41xx上，這也意味著SSD丟失或故障。在scope server 1/1下透過show inventory storage檢查SSD是否仍然存在：

```
<#root>
```

```
FPR4140-A#
```

```
scope ssa
```

```
FPR4140-A /ssa #
```

```
show slot 1
```

```
Slot:
```

Slot ID	Log Level	Admin State	Oper State
1	Info	Ok	Token Mismatch

```
FPR4140-A /ssa #
```

```
show fault severity critical
```

Severity	Code	Last Transition Time	ID	Description
Critical	F1548	2018-03-11T01:22:59.916	38768	Blade swap detected on slot 1

```
FPR4140-A /ssa #
```

```
scope server 1/1
```

FPR4140-A /chassis/server #

show inventory storage

Server 1/1:

Name:  
User Label:  
Equipped PID: FPR4K-SM-36  
Equipped VID: V01  
Equipped Serial (SN): FLM12345KL6  
Slot Status: Equipped  
Acknowledged Product Name: Cisco Firepower 4100 Series Extreme Performance Security Engine  
Acknowledged PID: FPR4K-SM-36  
Acknowledged VID: V00  
Acknowledged Serial (SN): FLM12345KL6  
Acknowledged Memory (MB): 262144  
Acknowledged Effective Memory (MB): 262144  
Acknowledged Cores: 36  
Acknowledged Adapters: 2  
Motherboard:

Product Name: Cisco Firepower 4100 Series Extreme Performance Security Engine  
PID: FPR4K-SM-36  
VID: V01  
Vendor: Cisco Systems Inc  
Serial (SN): FLM12345KL6  
HW Revision: 0

RAID Controller 1:

Type: SATA  
Vendor: Cisco Systems Inc  
Model: CHORLEYWOOD  
Serial: FLM12345KL6  
HW Revision:  
PCI Addr: 00:31.2  
Raid Support:  
OOB Interface Supported: No  
Rebuild Rate: N/A  
Controller Status: Unknown

Local Disk 1:

Vendor:  
Model:  
Serial:  
HW Rev: 0  
Operability: N/A  
Presence: Missing  
Size (MB): Unknown  
Drive State: Unknown  
Power State: Unknown  
Link Speed: Unknown  
Device Type: Unspecified

Local Disk Config Definition:

Mode: No RAID  
Description:  
Protect Configuration: No

## 問：如何透過CLI設定時區、NTP和DNS？

這是在FXOS平台設定下配置的。應用本文檔的說明：[FXOS平台設定。](#)

驗證機箱時間設定：

```
<#root>
KSEC-FPR4115-2-1#
show clock
Tue May 5 21:30:55 CEST 2020
KSEC-FPR4115-2-1#
show ntp
NTP Overall Time-Sync Status: Time Synchronized
```

要從模組引導CLI驗證模組/刀片時間，請使用以下3條命令：

```
<#root>
Firepower-module1>
show ntp peerstatus
remote          local          st poll reach delay  offset  disp
=====
*203.0.113.126  203.0.113.1   2  64  377 0.00006 0.000018 0.02789
remote 203.0.113.126, local 203.0.113.1
hmode client, pmode mode#255, stratum 2, precision -20
leap 00, refid [192.0.2.1], rootdistance 0.19519, rootdispersion 0.17641
ppoll 6, hpoll 6, keyid 0, version 4, association 43834
reach 377, unreachable 0, flash 0x0000, boffset 0.00006, ttl/mode 0
timer 0s, flags system_peer, config, bclient, prefer, burst
reference time:      dbef8823.8066c43a Mon, Dec 5 2016 8:30:59.501
originate timestamp: 00000000.00000000 Mon, Jan 1 1900 2:00:00.000
receive timestamp:  dbefb27d.f914589d Mon, Dec 5 2016 11:31:41.972
transmit timestamp:  dbefb27d.f914589d Mon, Dec 5 2016 11:31:41.972
filter delay:  0.00008  0.00006  0.00008  0.00009
                0.00008  0.00008  0.00008  0.00009
filter offset: 0.000028 0.000018 0.000034 0.000036
                0.000033 0.000036 0.000034 0.000041
filter order:  1      2      6      0
                4      5      3      7
offset 0.000018, delay 0.00006, error bound 0.02789, filter error 0.00412
Firepower-module1>
show ntp association
```

```

remote          refid          st t when poll reach  delay  offset jitter
=====
*203.0.113.126 192.0.2.1     2 u  37  64 377  0.062  0.018  0.017

```

```

ind assid status  conf reach auth condition last_event cnt
=====
  1 43834 961d   yes  yes  none  sys.peer          1

```

```

associd=43834 status=961d conf, reach, sel_sys.peer, 1 event, popcorn,
srcadr=203.0.113.126, srcport=123, dstadr=203.0.113.1, dstport=123,
leap=00, stratum=2, precision=-20, rootdelay=195.190, rootdisp=176.407,
refid=192.0.2.1,
reftime=dbef8823.8066c43a Mon, Dec 5 2016 8:30:59.501,
rec=dbefb27d.f91541fc Mon, Dec 5 2016 11:31:41.972, reach=377,
unreach=0, hmode=3, pmode=4, hpoll=6, ppoll=6, headway=22, flash=00 ok,
keyid=0, offset=0.018, delay=0.062, dispersion=0.778, jitter=0.017,
xleave=0.011,
filtdelay=    0.08    0.06    0.08    0.10    0.08    0.09    0.08    0.10,
filtoffset=   0.03    0.02    0.03    0.04    0.03    0.04    0.03    0.04,
filtdisp=     0.00    0.03    1.04    1.07    2.06    2.09    3.09    3.12

```

Firepower-module1>

show ntp sysinfo

```

associd=0 status=0618 leap_none, sync_ntp, 1 event, no_sys_peer,
version="ntpd 4.2.6p5@1.2349-o Fri Oct 7 17:08:03 UTC 2016 (2)",
processor="x86_64", system="Linux/3.10.62-ltsi-WR6.0.0.27_standard",
leap=00, stratum=3, precision=-23, rootdelay=195.271, rootdisp=276.641,
refid=203.0.113.126,
reftime=dbefb238.f914779b Mon, Dec 5 2016 11:30:32.972,
clock=dbefb2a7.575931d7 Mon, Dec 5 2016 11:32:23.341, peer=43834, tc=6,
mintc=3, offset=0.035, frequency=25.476, sys_jitter=0.003,
clk_jitter=0.015, clk_wander=0.011

```

```

system peer:          203.0.113.126
system peer mode:    client
leap indicator:      00
stratum:             3
precision:           -23
root distance:       0.19527 s
root dispersion:     0.27663 s
reference ID:        [203.0.113.126]
reference time:      dbefb238.f914779b Mon, Dec 5 2016 11:30:32.972
system flags:        auth monitor ntp kernel stats
jitter:              0.000000 s
stability:           0.000 ppm
broadcastdelay:     0.000000 s
authdelay:           0.000000 s

```

```

time since restart:  1630112
time since reset:    1630112
packets received:    157339
packets processed:   48340
current version:     48346
previous version:    0
declined:            0
access denied:       0
bad length or format: 0
bad authentication:  0
rate exceeded:       0

```

Firepower-module1>

有關NTP驗證和故障排除的詳細資訊，請查閱本文檔：[配置、驗證和排除Firepower FXOS裝置上的網路時間協定\(NTP\)設定故障](#)

## 問：如何設定智慧許可和HTTP代理？

對於ASA邏輯裝置，FXOS機箱需要智慧許可。有關詳細資訊，請參閱本文：[ASA許可證管理](#)

以下是許可證狀態的輸出示例：

```
<#root>
FPR4115-2-1#
scope license
FPR4115-2-1 /license #
show license all

Smart Licensing Status
=====

Smart Licensing is ENABLED

Registration:
  Status: REGISTERED
  Smart Account: BU Production Test
  Virtual Account: TAC-BETA
  Export-Controlled Functionality: Not Allowed
  Initial Registration: SUCCEEDED on Dec 15 14:41:55 2015 PST
  Last Renewal Attempt: SUCCEEDED on Dec 23 09:26:05 2015 PST
  Next Renewal Attempt: Jun 21 07:00:21 2016 PST
  Registration Expires: Dec 23 06:54:19 2016 PST

License Authorization:
  Status: AUTHORIZED on Apr 07 15:44:26 2016 PST
  Last Communication Attempt: SUCCEEDED on Apr 07 15:44:26 2016 PST
  Next Communication Attempt: May 07 15:44:25 2016 PST
  Communication Deadline: Jul 06 15:38:24 2016 PST

License Usage
=====

No licenses in use

Product Information
=====
UDI: PID:FPR9K-SUP,SN:JAD123456AB
```

Agent Version

=====

Smart Agent for Licensing: 1.4.1\_rel/31

或者：

<#root>

fp9300-A#

connect local-mgmt

fp9300-A(local-mgmt)#

show license all

Smart Licensing Status

=====

Smart Licensing is ENABLED

Registration:

Status: REGISTERED

Smart Account: Cisco Internal

Virtual Account: Escalations

Export-Controlled Functionality: Allowed

Initial Registration: SUCCEEDED on Feb 10 18:55:08 2016 CST

Last Renewal Attempt: SUCCEEDED on Oct 09 15:07:25 2016 CST

Next Renewal Attempt: Apr 07 15:16:32 2017 CST

Registration Expires: Oct 09 15:10:31 2017 CST

License Authorization:

Status: AUTHORIZED on Sep 20 07:29:06 2016 CST

Last Communication Attempt: SUCCESS on Sep 20 07:29:06 2016 CST

Next Communication Attempt: None Communication Deadline: None

Licensing HA configuration error:

No Reservation Ha config error

License Usage

=====

No licenses in use

Product Information

=====

UDI: PID:FPR9K-SUP,SN:JAD190800VU

Agent Version

=====

Smart Agent for Licensing: 1.6.7\_rel/95

## 問：如何透過CLI配置系統日誌？

檢查下列檔案：

- [在Firepower FXOS裝置上配置系統日誌](#)
- [FXOS配置指南：平台設定系統日誌](#)

## 問題：如何在Firepower裝置上配置SNMP？

檢查此文檔：[在Firepower NGFW裝置上配置SNMP](#)

## 問：如何安裝/更換機箱管理器使用的SSL證書？

本文檔可以幫助您：[安裝FXOS機箱管理器的受信任證書](#)

## 問：如何排除透過FPR9300機箱的流量故障？

檢查下列檔案：

- [Firepower資料路徑故障排除第1階段：資料包入口](#)
- [Firepower資料路徑故障排除：概述](#)
- [分析 Firepower 防火牆擷取，以有效針對網路問題進行疑難排解](#)

## 問題：如何檢視機箱Mac地址表？

對於FP41xx和FP93xx平台，請使用以下任一命令：

```
<#root>
```

```
FPR4115-2-1#
```

```
connect fxos
```

```
FPR4115-2-1(fxos)#
```

```
show l2-table
```

Ingress	MAC	Vlan	Class	VlanGrp	Status	Dst
Eth1/1	78bc.1ae7.a45e	101	1	0	present	1
Veth776	78bc.1ae7.a45e	101	1	0	present	1
Po1	0100.5e00.0005	1001	1	0	present	1
Po1	0100.5e00.0006	1001	1	0	present	1
Po1	78bc.1ae7.a44e	1001	1	0	present	1
Po1	ffff.ffff.ffff	1001	63	0	present	1

```
FPR4115-2-1(fxos)#
```

```
show mac address-table
```

Legend:

\* - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC

age - seconds since first seen,+ - primary entry using vPC Peer-Link

VLAN	MAC Address	Type	age	Secure	NTFY	Ports/SWID.SSID.LID
* 1001	0100.5e00.0005	static	0	F	F	Eth1/1
* 1001	0100.5e00.0006	static	0	F	F	Eth1/1
* 1001	78bc.1ae7.a44e	static	0	F	F	Eth1/1
* 1001	ffff.ffff.ffff	static	0	F	F	Eth1/1
* 101	78bc.1ae7.a45e	static	0	F	F	Eth1/1
* 101	78bc.1ae7.a46f	static	0	F	F	Veth776
* 4047	0015.a501.0100	static	0	F	F	Veth864
* 4047	0015.a501.0101	static	0	F	F	Veth1015
* 4043	78bc.1ae7.b000	static	0	F	F	Eth1/10
* 4043	78bc.1ae7.b00c	static	0	F	F	Eth1/9
* 1	0015.a500.001f	static	0	F	F	Veth887
* 1	0015.a500.002f	static	0	F	F	Veth1018
* 1	0015.a500.01bf	static	0	F	F	Veth905
* 1	0015.a500.01ef	static	0	F	F	Veth1019

## 問：如何檢視機箱介面MAC地址？

使用以下命令：

```
<#root>
```

```
FPR4115-2-1#
```

```
connect fxos
```

```
FPR4115-2-1(fxos)#
```

```
show interface mac-address
```

Interface	Mac-Address	Burn-in Mac-Address
Ethernet1/1	78bc.1ae7.a417	78bc.1ae7.a418
Ethernet1/2	78bc.1ae7.a417	78bc.1ae7.a419
Ethernet1/3	78bc.1ae7.a417	78bc.1ae7.a41a
Ethernet1/4	78bc.1ae7.a417	78bc.1ae7.a41b
Ethernet1/5	78bc.1ae7.a417	78bc.1ae7.a41c
Ethernet1/6	78bc.1ae7.a417	78bc.1ae7.a41d
Ethernet1/7	78bc.1ae7.a417	78bc.1ae7.a41e
Ethernet1/8	78bc.1ae7.a417	78bc.1ae7.a41f
Ethernet1/9	78bc.1ae7.a417	78bc.1ae7.a420
Ethernet1/10	78bc.1ae7.a417	78bc.1ae7.a421
Ethernet1/11	78bc.1ae7.a417	78bc.1ae7.a422
Ethernet1/12	78bc.1ae7.a417	78bc.1ae7.a423
port-channel1	78bc.1ae7.a417	78bc.1ae7.a41a
port-channel48	78bc.1ae7.a417	0000.0000.0000
mgmt0	78bc.1ae7.a411	78bc.1ae7.a411
Vethernet690	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet691	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet692	78bc.1ae7.a417	78bc.1ae7.a417



Vethernet693	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet694	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet695	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet696	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet697	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet698	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet699	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet700	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet774	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet775	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet776	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet777	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet778	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet779	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet861	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet862	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet863	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet864	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet887	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet905	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet906	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet1015	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet1018	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet1019	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet1020	78bc.1ae7.a417	78bc.1ae7.a417
Vethernet1021	78bc.1ae7.a417	78bc.1ae7.a417

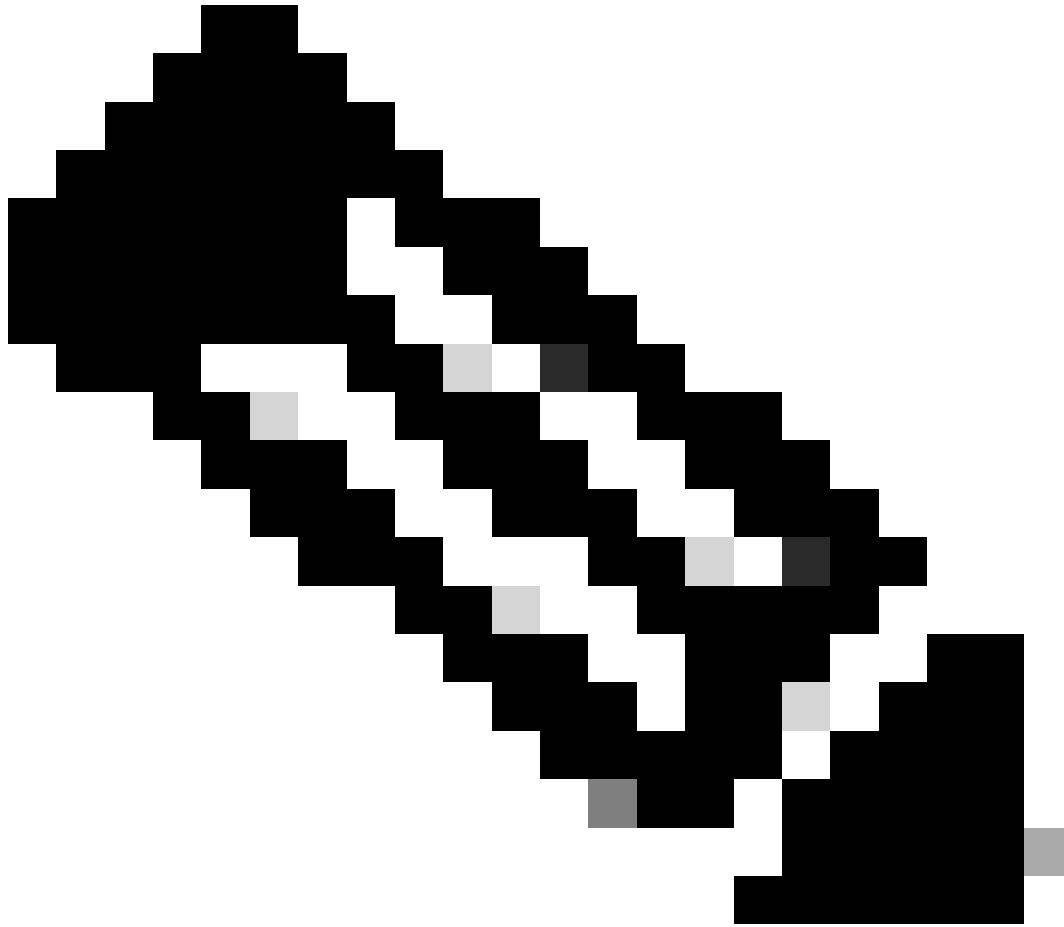
## 問：如何在FXOS Supervisor (MIO)上執行口令恢復？

有關FP41xx和FP9300上的口令恢復過程，請參閱以下文檔：[Firepower 9300/4100系列裝置的口令恢復過程](#)

## 問：如何在ASA或FTD邏輯裝置上執行口令恢復？

要重置邏輯裝置密碼，需要重新引導裝置。使用Bootstrap災難恢復過程，您可以更改以下任何內容：

- ASA/FTD管理IP - IP、網路掩碼、網關、IPv6、字首長度
- ASA密碼
- FTD註冊金鑰、密碼、FMC IP、搜尋網域、防火牆模式、DNS伺服器、FQDN
- ASA集群IP池、網路掩碼、網關、字首長度、虛擬IP。



註：必須在維護窗口(MW)中執行引導恢復過程，因為它需要重新載入邏輯裝置

---

#### 範例 1

您可以使用FXOS UI編輯邏輯裝置的載入程式設定。導航到Logical Devices ( 邏輯裝置 ) 頁籤，Edit a device ( 編輯裝置 )

Overview Interfaces **Logical Devices** Security Engine Platform Settings System Tools Help admin

Editing - mzafeiro\_FTD1 Save Cancel

Standalone | Cisco Firepower Threat Defense | 6.6.0.90

**Data Ports**

- Ethernet1/4
- Ethernet1/5
- Ethernet1/6
- Ethernet1/7
- Ethernet1/8
- Port-channel1**

**Decorators**

Port-channel1

**FTD - 6.6.0.90**  
Ethernet1/1  
Click to configure

設定密碼：

### Cisco Firepower Threat Defense - Bootstrap Configuration

General Information **Settings** Agreement

Management type of application instance:

Search domains:

Firewall Mode:

DNS Servers:

Fully Qualified Hostname:

Password:  Set: Yes

Confirm Password:  Set: Yes

Registration Key:  Set: Yes

Confirm Registration Key:

Firepower Management Center IP:

Firepower Management Center NAT ID:

Eventing Interface:

一旦您儲存此訊息，就會出現：

## Bootstrap Settings Update Confirmation



Updating the bootstrap settings from the Firepower Chassis Manager is for disaster recovery only; we recommend that you instead change bootstrap settings in the application. To update the bootstrap settings from the Firepower Chassis Manager, click **Restart Now**: the old bootstrap configuration will be overwritten, and the application will restart. Or click **Restart Later** so you can manually restart the application at a time of your choosing and apply the new bootstrap settings (**Logical Devices > Restart**).

**Note:** For FTD, if you change the management IP address, be sure to change the device IP address in **FMC (Devices > Device Management > Device tab > Management area)**. This task is not required if you specified the NAT ID instead of the device IP address in FMC.

Restart Now

Restart Later

Cancel

## 範例 2

以下是ASA啟用密碼更改/恢復的示例：

```
<#root>
```

```
FP4110-A#
```

```
scope ssa
```

```
FP4110-A /ssa #
```

```
show logical-device
```

```
Logical Device:
```

Name	Description	Slot ID	Mode	Oper State	Templa
asa		1	Standalone	Ok	asa

```
FP4110-A /ssa #
```

```
scope logical-device asa
```

```
FP4110-A /ssa/logical-device #
```

```
scope mgmt-bootstrap asa
```

```
FP4110-A /ssa/logical-device/mgmt-bootstrap #
```

```
show config
```

```
enter mgmt-bootstrap asa
  create bootstrap-key-secret PASSWORD
  !   set value
  exit
  enter ipv4 1 default
    set gateway 172.16.171.1
    set ip 172.16.171.226 mask 255.255.255.0
```

```
    exit
exit
FP4110-A /ssa/logical-device/mgmt-bootstrap #
enter bootstrap-key-secret PASSWORD

FP4110-A /ssa/logical-device/mgmt-bootstrap/bootstrap-key-secret #
set value

Value: <enter new enable password in here>
Warning: Bootstrap changes are not automatically applied to app-instances. To apply the changes, please

FP4110-A /ssa/logical-device/mgmt-bootstrap/bootstrap-key-secret* #
commit-buffer

FP4110-A /ssa/logical-device/mgmt-bootstrap/bootstrap-key-secret #
top

FP4110-A#
scope ssa

FP4110-A /ssa #
scope slot 1

FP4110-A /ssa/slot #
scope app-instance asa

FP4110-A /ssa/slot/app-instance #
clear-mgmt-bootstrap

Warning: Clears the application management bootstrap. Application needs to be restarted for this action
FP4110-A /ssa/slot/app-instance* #
commit-buffer

FP4110-A /ssa/slot/app-instance #
restart

FP4110-A /ssa/slot/app-instance* #
commit-buffer
```

在連線到ASA之前檢查ASA是否處於聯機狀態，並使用新的啟用密碼。

```
<#root>
```

```
FP4110-A /ssa/slot/app-instance #
```

```
show
```

```
Application Instance:
```

App Name	Admin State	Oper State	Running Version	Startup Version	Profile Name	Cluster State
asa	Enabled	Online	9.9.1.76	9.9.1.76		Not Applicable

```
FP4110-A /ssa/slot/app-instance #
```

問：如何更改FXOS使用者（例如admin）的當前密碼？

使用此程式：

```
<#root>
```

```
FP4110-1-A#
```

```
scope security
```

```
FP4110-1-A /security #
```

```
show local-user
```

User Name	First Name	Last name
admin		

```
-----
```

```
admin
```

```
FP4110-1-A /security #
```

```
enter local-user admin
```

```
FP4110-1-A /security/local-user #
```

```
set password
```

```
Enter a password:
```

```
Confirm the password:
```

```
FP4110-1-A /security/local-user* #
```

```
commit-buffer
```

```
FP4110-1-A /security/local-user #
```

問：如何降級FXOS？

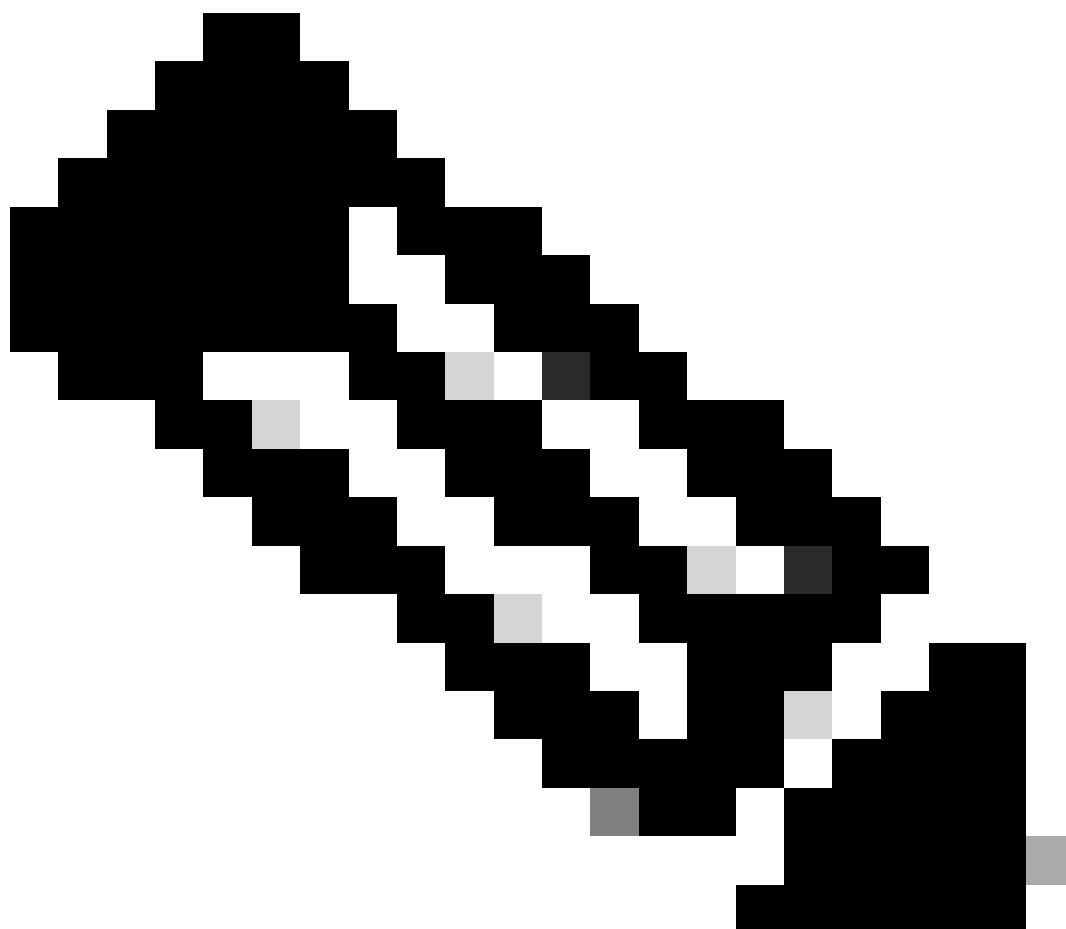
FXOS映像的降級不受正式支援。思科支援的唯一一種降低FXOS映像版本的方法是執行裝置的完整重新映像。[Firepower 4100/9300升級路徑](#)中對此進行了說明

問：如何降級/升級ASA邏輯裝置？

透過機箱管理器降級/升級ASA版本：[更新邏輯裝置的映像版本](#)

要透過CLI進行更改，請使用以下配置指南部分：[更新邏輯裝置的映像版本](#)

---



注意：在CLI上提交緩衝區後，它會立即重新啟動模組。與此類似，在機箱管理器上，一旦按一下「確定」，模組就會重新啟動。無需手動重新啟動。

---

## 問題：如何透過CLI檢查FXOS升級狀態？

所有元件均進入就緒狀態後，升級即完成：

```
<#root>  
FP9300#  
scope system
```



```
FP9300 /system #
```

```
show firmware monitor
```

```
FPRM:
```

```
Package-Vers: 2.0(1.37)
```

```
Upgrade-Status: Ready
```

```
Fabric Interconnect A:
```

```
Package-Vers: 2.0(1.23)
```

```
Upgrade-Status: Upgrading
```

```
Chassis 1:
```

```
Server 1:
```

```
Package-Vers: 2.0(1.23)
```

```
Upgrade-Status: Ready
```

```
Server 2:
```

```
Package-Vers: 2.0(1.23)
```

```
Upgrade-Status: Upgrading
```

## 其他有用的命令

```
<#root>
```

```
FP9300 /firmware/auto-install #
```

```
show fsm status
```

```
FP9300 /firmware/auto-install #
```

```
show fsm status expand
```

## 問：如何從FXOS CLI重新載入邏輯裝置？

首選方法是使用FCM UI。如果由於某種原因無法訪問使用者介面，請使用以下命令：

```
<#root>
```

```
#
```

```
scope chassis 1
```

```
/chassis #
```

```
scope server 1/1
```

```
/chassis/server #
```

reset ?

hard-reset-immediate Perform an immediate hard reset

hard-reset-wait Wait for the completion of any pending management oper

/chassis/server #

commit-buffer

## 問題：如何檢查FXOS機箱正常運行時間和上次重新載入的原因？

FXOS正常運行時間檢查在存在FXOS回溯時非常有用。您可以從UI (FCM)或CLI看到FXOS：

<#root>

FPR9K-1-A#

connect fxos

FPR9K-1-A(fxos)#

show system uptime

```
System start time: Sun Sep 25 09:57:19 2016
System uptime: 28 days, 9 hours, 38 minutes, 14 seconds
Kernel uptime: 28 days, 9 hours, 38 minutes, 41 seconds
Active supervisor uptime: 28 days, 9 hours, 38 minutes, 14 seconds
```

此外，若要判斷上次重新載入原因，請使用以下命令：

<#root>

FPR9K-1-A(fxos)#

show system reset-reason

```
----- reset reason for Supervisor-module 1 (from Supervisor in slot 1) ---
1) At 212883 usecs after Fri Oct 21 22:34:35 2016
Reason: Kernel Panic
Service:
Version: 5.0(3)N2(3.02)

2) At 106690 usecs after Thu May 26 16:07:38 2016
Reason: Reset Requested by CLI command reload
Service:
Version: 5.0(3)N2(3.02)
```

對於FPR2100正常運行時間，請執行以下操作：

1. 獲取「show tech-support fprm detail」捆綁包
2. 提取捆綁包的內容
3. 檢視檔案tmp/inventory\_manager.xml

有一個條目顯示正常運行時間（以秒為單位）：

```
<#root>
```

```
tmp/inventory_manager.xml:
```

```
<uptime>151</uptime>
```

## 問：如何檢查FXOS上的可用磁碟空間？

也稱為「工作區」：

```
<#root>
```

```
FPR9K-1-A#
```

```
connect local-mgmt
```

```
FPR9K-1-A(local-mgmt)#
```

```
dir
```

```
1      29 Sep 25 09:56:22 2016 blade_debug_plugin
1      19 Sep 25 09:56:22 2016 bladelog
1      16 Aug 05 15:41:05 2015 cores
1 2841476 Apr 26 14:13:12 2016 d
2      4096 Dec 01 10:09:11 2015 debug_plugin/
1      31 Aug 05 15:41:05 2015 diagnostics
1 2842049 Feb 23 03:26:38 2016 dp
1 18053120 Feb 23 11:10:19 2016 fpr9k-1-0-sam_logs_all.tar
1 18176000 Feb 23 11:10:43 2016 fpr9k-1-1-sam_logs_all.tar
1 19302400 Feb 23 11:11:07 2016 fpr9k-1-2-sam_logs_all.tar
1 16312320 Feb 23 11:06:53 2016 fpr9k-1-3-sam_logs_all.tar
1 2841476 Feb 22 18:47:00 2016 fxos-dplug.5.0.3.N2.3.13.67g.gSSA
2      4096 Aug 05 15:38:58 2015 lost+found/
1      25 Dec 01 11:11:50 2015 packet-capture
1 18493440 Feb 23 10:44:51 2016 sam_logs_all.tar
2      4096 Sep 14 11:23:11 2016 techsupport/
```

```
Usage for workspace://
4032679936 bytes total
324337664 bytes used
3503489024 bytes free
```

```
<#root>
```

```
FPR9K-1-A(local-mgmt)#
```

```
dir volatile:/
```

```
1 66 Oct 27 08:17:48 2016 xmlout_5816
```

```
Usage for volatile://
251658240 bytes total
4096 bytes used
251654144 bytes free
```

檢查引導快閃記憶體的可用空間。請注意，此輸出也會顯示工作區大小及使用狀況：

```
<#root>
```

```
FPR9K-1-A#
```

```
scope fabric-interconnect a
```

```
FPR9K-1-A /fabric-interconnect #
```

```
show storage
```

```
Storage on local flash drive of fabric interconnect:
  Partition      Size (MBytes)  Used Percentage
  -----
  bootflash      106490         9
  opt             3870           2
  spare           5767           1
  usbdrive        Nothing         Empty
  workspace       3845           9
```

## 問：如何將FXOS組態重設為出廠預設值？

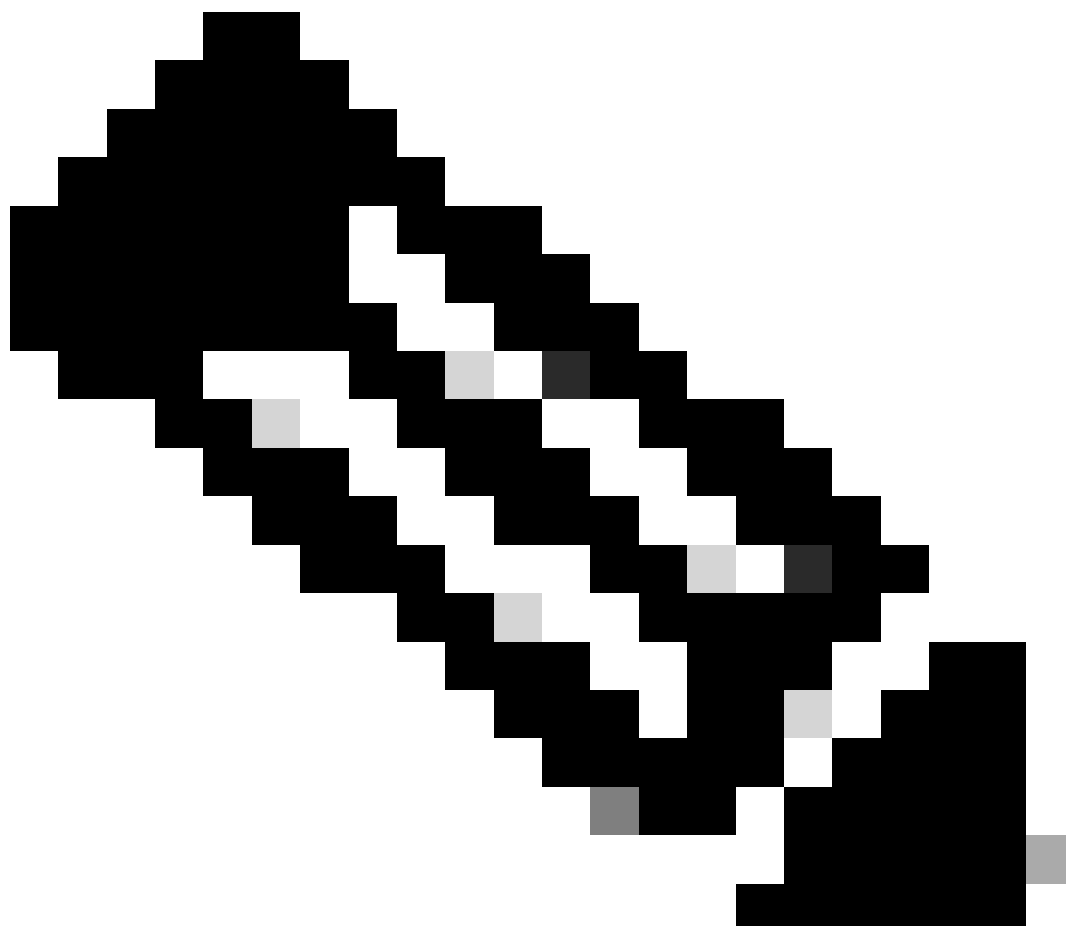
使用以下命令：

```
<#root>
```

```
FPR9K-1-A#
```

```
connect local-mgmt
FPR9K-1-A(local-mgmt)#
erase configuration
```

---



註：此操作將重新啟動系統並清除整個配置，包括管理IP地址。因此，請確保控制檯已連線。系統重新啟動後，安裝應用程式會執行，您可以重新輸入管理組態資訊。

---

## 範例

```
<#root>
FPR9K-1#
connect local-mgmt
FPR9K-1(local-mgmt)#
erase configuration
```

All configurations are erased and system must reboot. Are you sure? (yes/no):

yes

Removing all the configuration. Please wait....

/bin/rm: cannot remove directory `/bootflash/sysdebug//tftpd\_logs': Device or resource busy

sudo: cannot get working directory

sudo: cannot get working directory

Configurations are cleaned up. Rebooting....

...

System is coming up ... Please wait ...

System is coming up ... Please wait ...

2016 Oct 28 06:31:00 %\$ VDC-1 %\$ %USER-0-SYSTEM\_MSG: Starting bcm\_attach - bcm\_usd

System is coming up ... Please wait ...

2016 Oct 28 06:31:06 %\$ VDC-1 %\$ %USER-0-SYSTEM\_MSG: Finished bcm\_attach... - bcm\_usd

2016 Oct 28 06:31:07 %\$ VDC-1 %\$ %USER-0-SYSTEM\_MSG: Enabling Filter on CPU port - bcm\_usd

System is coming up ... Please wait ...

2016 Oct 28 06:31:11 switch %\$ VDC-1 %\$ %VDC\_MGR-2-VDC\_ONLINE: vdc 1 has come online

System is coming up ... Please wait ...

nohup: appending output to `nohup.out'

---- Basic System Configuration Dialog ----

This setup utility guides you through the basic configuration of the system. Only minimal configuration including IP connectivity to the Fabric interconnect and its clustering mode is performed through these steps. Type Ctrl-C at any time to abort configuration and reboot system. To back track or make modifications to already entered values, complete input till end of section and answer no when prompted to apply configuration.

You have chosen to setup a new Security Appliance. Continue? (y/n):

問：如何從FXOS CLI檢查邏輯裝置的載入程式配置（分配的介面、版本等）？

```
<#root>
```

```
FPR4100-3-A#
```

```
scope ssa
```

```
FPR4100-3-A /ssa #
```

```
show configuration
```

```
scope ssa
```

```
enter logical-device FTD4150-3 ftd 1 standalone
```

```
enter external-port-link Ethernet16_ftd Ethernet1/6 ftd
```

```
set decorator ""
```

```
set description ""
```

```
set port-name Ethernet1/6
```

```
exit
```

```
enter external-port-link Ethernet17_ftd Ethernet1/7 ftd
```

```
set decorator ""
```

```
set description ""
```

```
set port-name Ethernet1/7
```

```

exit
enter external-port-link Ethernet18_ftd Ethernet1/8 ftd
    set decorator ""
    set description ""
    set port-name Ethernet1/8
exit
enter mgmt-bootstrap ftd
    enter bootstrap-key DNS_SERVERS
        set value 192.0.2.100
    exit
    enter bootstrap-key FIREPOWER_MANAGER_IP
        set value 10.62.148.57
    exit
    enter bootstrap-key FIREWALL_MODE
        set value routed
    exit
    enter bootstrap-key FQDN
        set value FTD4150-3.lab.com
    exit
    enter bootstrap-key SEARCH_DOMAINS
        set value lab.com
    exit
    enter bootstrap-key-secret PASSWORD
!        set value
    exit
    enter bootstrap-key-secret REGISTRATION_KEY
!        set value
    exit
    enter ipv4 1 firepower
        set gateway 10.62.148.1
        set ip 10.62.148.89 mask 255.255.255.128
    exit
    exit
    set description ""
    set res-profile-name ""
exit
scope slot 1
    enter app-instance ftd
        enable
        set startup-version 6.0.1.1213
    exit
    set log-level info
exit
scope app asa 9.12.4.12
    set-default
exit
scope app ftd 6.0.1.1213
    accept-license-agreement
    set-default
exit
exit

```

這相當於：

Overview Interfaces **Logical Devices** Security Engine Platform Settings

Provisioning - FTD4150-3  
Standalone | Cisco Firepower Threat Defense | 6.0.1.1213

Data Ports

- Ethernet1/1
- Ethernet1/2
- Ethernet1/3
- Ethernet1/4
- Ethernet1/5
- Ethernet1/6
- Ethernet1/8

Application	Version	Management IP	Gateway	Management Port	Status
FTD	6.0.1.1213	10.62.148.89	10.62.148.1	Ethernet1/7	

Ports:

Data Interfaces: Ethernet1/6 Ethernet1/8

如果要檢視所有FXOS配置，則增加關鍵字「all」（輸出有幾頁長）：

```
<#root>
```

```
FPR4100-3-A /ssa #
```

```
show configuration all
```

問：如何檢查FXOS介面的狀態（埠型別、狀態）？

```
<#root>
```

```
FPR4100-3-A#
```

```
scope eth-uplink
```

```
FPR4100-3-A /eth-uplink #
```

```
scope fabric a
```

```
FPR4100-3-A /eth-uplink/fabric #
```

```
show interface
```

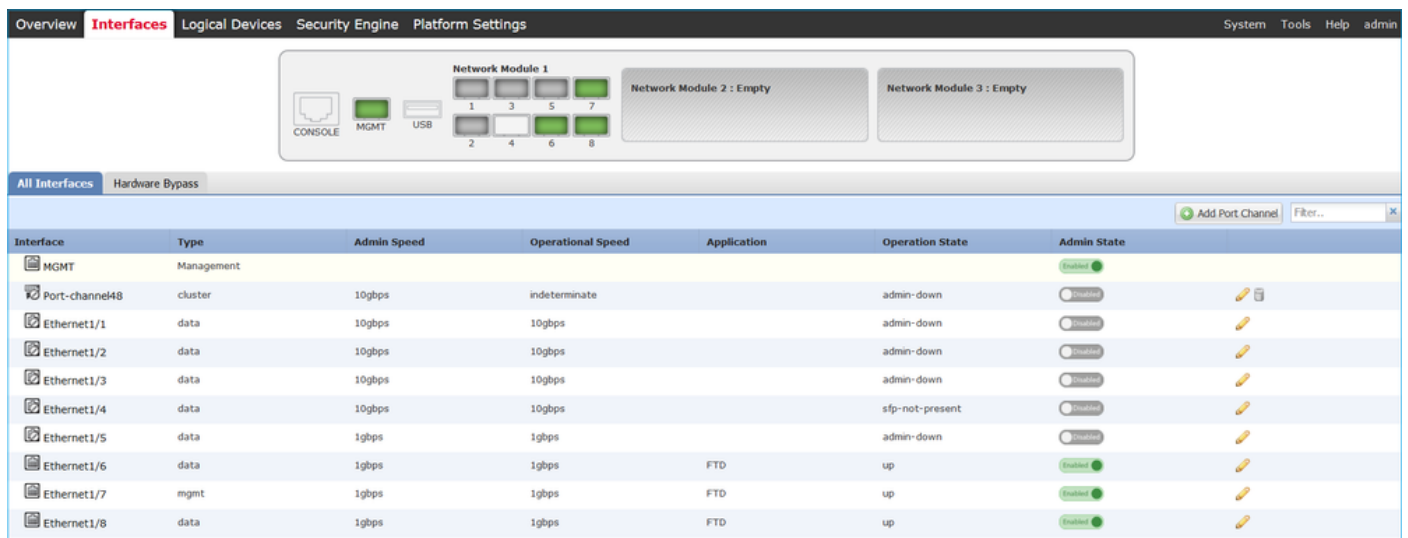


Interface:

Port Name	Port Type	Admin State	Oper State	State Reason
Ethernet1/1	Data	Disabled	Admin Down	Administratively down
Ethernet1/2	Data	Disabled	Admin Down	Administratively down
Ethernet1/3	Data	Disabled	Admin Down	Administratively down
Ethernet1/4	Data	Disabled	Sfp Not Present	Unknown
Ethernet1/5	Data	Disabled	Admin Down	Administratively down
Ethernet1/6	Data	Enabled	Up	
Ethernet1/7	Mgmt	Enabled	Up	
Ethernet1/8	Data	Enabled	Up	

FPR4100-3-A /eth-uplink/fabric #

這相當於：



問：如何檢查機箱上的CPU和記憶體使用率？

<#root>

FPR9K-2-A#

connect fxos

FPR9K-2-A(fxos)#

show system resources

```
Load average: 1 minute: 1.60 5 minutes: 1.30 15 minutes: 1.15
Processes : 967 total, 1 running
CPU states : 1.8% user, 1.1% kernel, 97.1% idle
Memory usage: 16326336K total, 4359740K used, 11966596K free
```

---

註：即使對於屬於同一型號的2台裝置，輸出中顯示的總數也可能不同。具體來說，總數取自自由命令輸出，而自由命令輸出又取自/proc/meminfo。

---

檢查記憶體：

<#root>

FPR4100-8-A /fabric-interconnect #

show detail

Fabric Interconnect:

ID: A  
Product Name: Cisco FPR-4140-SUP  
PID: FPR-4140-SUP  
VID: V02  
Vendor: Cisco Systems, Inc.  
Serial (SN): FLM12345KL6  
HW Revision: 0  
Total Memory (MB): 8074

```
OoB IP Addr: 10.62.148.196
OoB Gateway: 10.62.148.129
OoB Netmask: 255.255.255.128
OoB IPv6 Address: ::
OoB IPv6 Gateway: ::
Prefix: 64
Operability: Operable
Thermal Status: Ok
Current Task 1:
Current Task 2:
Current Task 3:
```

驗證每個進程的記憶體使用率檢查 ( RES =實體記憶體 ) :

```
<#root>
```

```
FPR4100-2-A-A#
```

```
connect local-mgmt
```

```
FPR4100-2-A-A(local-mgmt)#
```

```
show processes
```

```
Cpu(s): 8.0%us, 4.2%sy, 3.9%ni, 83.8%id, 0.0%wa, 0.0%hi, 0.1%si, 0.0%st
Mem: 8267648k total, 3866552k used, 4401096k free, 288k buffers
Swap: 0k total, 0k used, 0k free, 1870528k cached
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
5024	root	-2	0	354m	114m	34m	R	43	1.4	7976:51	/isan/bin/bcm_usd
1096	root	20	0	10352	3992	3332	S	0	0.0	0:00.28	sshd: admin@pts/1
1140	root	20	0	117m	78m	53m	S	0	1.0	0:00.42	/isan/bin/ucssh --ucs-mgmt -p admin
1856	root	20	0	2404	632	512	S	0	0.0	2:29.32	/nuova/bin/cmcmmon -f /etc/cmcmmon.conf
1859	root	20	0	23804	1932	1532	S	0	0.0	1427:47	dmserver -F
1860	root	20	0	2244	472	404	S	0	0.0	0:00.01	/sbin/hotplug2 --persistent --set-rules-fi
1861	root	20	0	57116	10m	6552	S	0	0.1	7:28.76	/isan/sbin/sysmgr -V
1864	root	20	0	14044	4136	1072	S	0	0.1	1:06.19	rsyslogd -c3 -i/var/run/rsyslogd.pid
4909	root	20	0	3568	1100	876	S	0	0.0	0:00.48	/isan/sbin/xinetd -syslog local7 -loop 250
4911	root	20	0	58232	12m	6152	S	0	0.2	18:39.24	/isan/sbin/syslogd -d -n -m 0 -r
4912	root	20	0	20076	3532	2368	S	0	0.0	0:00.02	/isan/bin/sdwrapd
4913	root	21	1	2756	300	192	S	0	0.0	0:00.04	/usr/sbin/in.tftpd -l -c -s /bootflash
4914	root	20	0	58312	17m	8724	S	0	0.2	13:45.34	/isan/bin/pfm
4937	root	20	0	2208	332	272	S	0	0.0	0:00.01	/sbin/klogd -2 -x -c 1
4939	root	20	0	26692	4656	3620	S	0	0.1	0:24.01	/isan/bin/vshd
...											

提示 :

1. 收集show process memory輸出
2. 將輸出貼到Linux機器上的檔案中(cat > top.log)
3. 根據RES欄排序檔案

這會顯示GB、MB等

```
<#root>
```

```
mzafeiro@MZAFEIRO-JA2YS:$
```

```
cat top.log | sort -V -k 6
```

```
1954 root      20   0 1645m 1.6g 1372 S  0.0 20.7 793:32.99 dmserver
7556 root      20   0  207m 9.8m 6184 S  0.0  0.1 73:52.25 udld
5563 root      20   0  333m 9.8m 7032 S  0.0  0.1  5:08.65 cdpd
5523 root      20   0  327m 103m  28m S  0.0  1.3  0:12.38 afm
24040 daemon    23   3  592m 115m  33m S  0.0  1.5 74:56.57 httpd
5329 root      -2   0  384m 132m  29m S  9.4  1.7 27130:09 bcm_usd
5317 root      20   0  401m 150m  35m S  0.0  1.9 33:19.05 fwm
5625 root      24   4  450m 179m  35m S  0.0  2.3 275:38.25 svc_sam_statsAG
5614 root      23   3  495m 247m  54m S  0.0  3.2 355:59.95 svc_sam_dme
21688 root      20   0  2672 1080  880 S  0.0  0.0  3:15.29 ntpd
8819 root      35  15  2408 1084  748 R  5.6  0.0  0:00.06 top
```

## 問：如何檢查機箱介面收發器型別？

在Firepower 4100/9300中，使用此命令：

```
<#root>
```

```
FPR9K-2-A#
```

```
connect fxos
```

```
FPR9K-2-A(fxos)#
```

```
show interface e1/3 transceiver details
```

```
Ethernet1/3
```

```
transceiver is present
type is 1000base-T
name is CISCO-METHODE
part number is SP7041-R
revision is
serial number is FLM12345KL6
nominal bitrate is 1300 MBit/sec
Link length supported for copper is 100 m
cisco id is --
cisco extended id number is 4
```

```
DOM is not supported
```

```
FPR9K-2-A(fxos)#
```

對於光纖，輸出為：

```
<#root>
```

```
FPR4100-1-A(fxos)#
```

```
show interface e1/1 transceiver details
```

```
Ethernet1/1
  transceiver is present
  type is 10Gbase-SR
  name is CISCO-JDSU
  part number is PLRXPL-SC-S43-CS
  revision is 1
  serial number is FLM12345KL6
  nominal bitrate is 10300 MBit/sec
  Link length supported for 50/125um OM2 fiber is 82 m
  Link length supported for 62.5/125um fiber is 26 m
  Link length supported for 50/125um OM3 fiber is 300 m
  cisco id is --
  cisco extended id number is 4

  Calibration info not available
```

在Firepower 1000/2100中，使用此命令：

```
<#root>
```

```
FPR2100#
```

```
scope fabric-interconnect
```

```
FPR2100 /fabric-interconnect #
```

```
show inventory expand detail | egrep ignore-case "Port|Xcvr"
```

```
...
```

```
Slot 1 Port 13:
  Xcvr: 10 Gbase SR
  Xcvr Model: PLRXPL-SC-S43-C
  Xcvr Vendor: Cisco Systems, Inc.
  Xcvr Serial: ABCD1234
Slot 1 Port 14:
  Xcvr: 10 Gbase SR
  Xcvr Model: PLRXPL-SC-S43-C
  Xcvr Vendor: Cisco Systems, Inc.
  Xcvr Serial: VWXY1234
Slot 1 Port 15:
  Xcvr: Non Present
  Xcvr Model:
  Xcvr Vendor:
  Xcvr Serial:
Slot 1 Port 16:
  Xcvr: Non Present
  Xcvr Model:
  Xcvr Vendor:
  Xcvr Serial:
```

## 問：如何檢查模組/刀片/伺服器/網路模組資訊 ( 硬體型別 /PID/SN/記憶體/核心等 ) ？

此命令顯示機箱和模組 ( 網路模組 ) 的產品ID (PID)和序列號(SN)

```
<#root>
```

```
FP4110-7-A#
```

```
connect fxos
```

```
FP4110-7-A(fxos)#
```

```
show inventory
```

```
NAME: "Chassis", DESCR: "Firepower 41xx Security Appliance"  
PID: FPR-4110-SUP      , VID: V02 , SN: FLM12345KL6 <--- Chassis SN
```

```
NAME: "Module 1", DESCR: "Firepower 41xx Supervisor"  
PID: FPR-4110-SUP      , VID: V02 , SN: FLM12345KL6 <--- Embedded module on FPR4100
```

```
NAME: "Module 3", DESCR: "Firepower 6x10G FTW SFP+ SR NM"  
PID: FPR-NM-6X10SR-F   , VID: V00 , SN: FLM12345KL6 <--- FTW Netmode SN
```

FPR4110有2個用於網路模組 ( 2和3 ) 的插槽，示例中的裝置在插槽3中安裝有FTW網路模組。

```
<#root>
```

```
FPR9K-1-A#
```

```
scope chassis 1
```

```
FPR9K-1-A /chassis #
```

```
show inventory server
```

```
Chassis 1:
```

```
Servers:
```

```
Server 1/1:
```

```
Equipped Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Equipped PID: FPR9K-SM-36  
Equipped VID: V01  
Equipped Serial (SN): FLM12345KL6  
Slot Status: Equipped  
Acknowledged Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Acknowledged PID: FPR9K-SM-36  
Acknowledged VID: V01  
Acknowledged Serial (SN): FLM12345KL6  
Acknowledged Memory (MB): 262144  
Acknowledged Effective Memory (MB): 262144  
Acknowledged Cores: 36  
Acknowledged Adapters: 2
```

```
Server 1/2:
```

Equipped Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Equipped PID: FPR9K-SM-36  
Equipped VID: V01  
Equipped Serial (SN): FLM12345KL6  
Slot Status: Equipped  
Acknowledged Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Acknowledged PID: FPR9K-SM-36  
Acknowledged VID: V01  
Acknowledged Serial (SN): FLM12345KL6  
Acknowledged Memory (MB): 262144  
Acknowledged Effective Memory (MB): 262144  
Acknowledged Cores: 36  
Acknowledged Adapters: 2

Server 1/3:

Equipped Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Equipped PID: FPR9K-SM-36  
Equipped VID: V01  
Equipped Serial (SN): FLM12345KL6  
Slot Status: Equipped  
Acknowledged Product Name: Cisco Firepower 9000 Series High Performance Security Module  
Acknowledged PID: FPR9K-SM-36  
Acknowledged VID: V01  
Acknowledged Serial (SN): FLM12345KL6  
Acknowledged Memory (MB): 262144  
Acknowledged Effective Memory (MB): 262144  
Acknowledged Cores: 36  
Acknowledged Adapters: 2

伺服器 1/1 = 模組/刀片 1

伺服器 1/2 = 模組/刀片 2

伺服器 1/3 = 模組/刀片 3

FPR41xx 型號 PID :

- FPR4K-SM-12 = FPR4110
- FPR4K-SM-24 = FPR4120
- FPR4K-SM-36 = FPR4140
- FPR4K-SM-44 = FPR4150
- FPR4K-SM-24S = FPR4115
- FPR4K-SM-32S = FPR4125
- FPR4K-SM-44S = FPR4145

您也可以在 <機箱ID/刀片ID> 範圍內獲取其他資訊 :

<#root>

FP9300-A#

scope server 1/1

FP9300-A /chassis/server #

show inventory

```
<CR>
>      Redirect it to a file
>>    Redirect it to a file in append mode
adapter Adapter
bios   Bios
board  Board
cpu    Cpu
detail Detail
expand Expand
memory Memory
mgmt   Mgmt
storage Storage
|      Pipe command output to filter
```

FP9300-A /chassis/server #

show inventory storage

Server 1/1:

```
Name:
User Label:
Equipped PID: FPR9K-SM-36
Equipped VID: V01
Equipped Serial (SN): FLM12345PBD
Slot Status: Equipped
Acknowledged Product Name: Cisco Firepower 9000 Series High Performance Security Module
Acknowledged PID: FPR9K-SM-36
Acknowledged VID: 01
Acknowledged Serial (SN): FLM67890PBD
Acknowledged Memory (MB): 262144
Acknowledged Effective Memory (MB): 262144
Acknowledged Cores: 36
Acknowledged Adapters: 2
Motherboard:
  Product Name: Cisco Firepower 9000 Series High Performance Security Module
  PID: FPR9K-SM-36
  VID: V01
  Vendor: Cisco Systems Inc
  Serial (SN): FLM12345KL6
  HW Revision: 0
```

RAID Controller 1:

```
Type: SAS
Vendor: Cisco Systems Inc
Model: UCSB-MRAID12G
Serial: FLM12345KL6
HW Revision: C0
PCI Addr: 01:00.0
Raid Support: RAID0, RAID1
OOB Interface Supported: Yes
Rebuild Rate: 30
Controller Status: Optimal
```

Local Disk 1:

```
Product Name:
PID:
VID:
Vendor: TOSHIBA
```



Model: PX02SMF080  
Vendor Description:  
Serial: FLM12345KL6  
HW Rev: 0  
Block Size: 512  
Blocks: 1560545280  
Operability: Operable  
Oper Qualifier Reason: N/A  
Presence: Equipped  
Size (MB): 761985  
Drive State: Online  
Power State: Active  
Link Speed: 12 Gbps  
Device Type: SSD

Local Disk 2:

Product Name:  
PID:  
VID:  
Vendor: TOSHIBA  
Model: PX02SMF080  
Vendor Description:  
Serial: FLM12345KL6  
HW Rev: 0  
Block Size: 512  
Blocks: 1560545280  
Operability: Operable  
Oper Qualifier Reason: N/A  
Presence: Equipped  
Size (MB): 761985  
Drive State: Online  
Power State: Active  
Link Speed: 12 Gbps  
Device Type: SSD

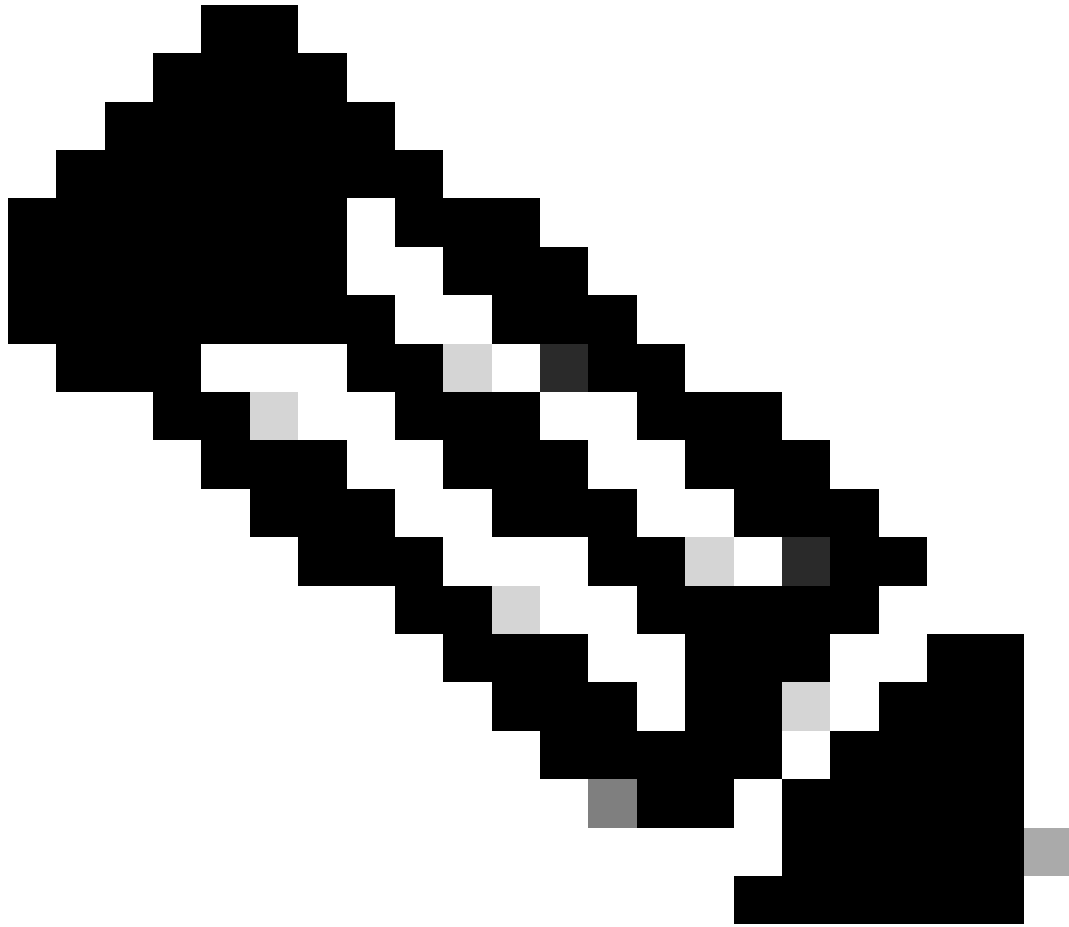
Local Disk Config Definition:

Mode: RAID 1 Mirrored  
Description:  
Protect Configuration: Yes

Virtual Drive 0:

Type: RAID 1 Mirrored  
Block Size: 512  
Blocks: 1560545280  
Operability: Operable  
Presence: Equipped  
Size (MB): 761985  
Lifecycle: Allocated  
Drive State: Optimal  
Strip Size (KB): 64  
Access Policy: Read Write  
Read Policy: Normal  
Configured Write Cache Policy: Write Through  
Actual Write Cache Policy: Write Through  
IO Policy: Direct  
Drive Cache: No Change  
Bootable: True

FP9300-A /chassis/server #













註：在FP41xx平台上，由於未使用RAID，show inventory storage會將「Controller Status」顯示為「Unknown」。它們不是RAID的主要原因是第二個SSD用於FTD邏輯裝置上的MSP（惡意軟體儲存包）等其他功能。

---

## 問題：如何從FXOS GUI和CLI中刪除ASA或FTD映像？

在FCM GUI上：

要從GUI中刪除，請導航到System > Updates並刪除影像：

System					Tools	Help
Configuration					Licensing	Updates
Available Updates						
					Refresh	Upload Image
Filter..						
Image Name	Type	Version	Status	Build Date		
fxos-k9.2.0.1.23.SPA	platform-bundle	2.0(1.23)	Not-Installed	05/18/2016	 	
fxos-k9.2.0.1.37.SPA	platform-bundle	2.0(1.37)	Not-Installed	06/11/2016	 	
fxos-k9.2.0.1.86.SPA	platform-bundle	2.0(1.86)	Installed	10/15/2016		
fxos-k9.2.0.1.4.SPA	platform-bundle	2.0(1.4)	Not-Installed	04/06/2016	 	
cisco-ftd.6.0.1.1213.csp	ftd	6.0.1.1213	Not-Installed	03/19/2016		
cisco-ftd.6.1.0.330.csp	ftd	6.1.0.330	Installed	08/26/2016		
cisco-asa.9.6.1.csp	asa	9.6.1	Not-Installed	03/18/2016		

## 從FXOS CLI

```
<#root>
```

```
FPR4100#
```

```
scope ssa
```

```
FPR4100 /ssa #
```

```
show app
```

```
Application:
```

Name	Version	Description	Author	Deploy Type	CSP Type	Is Default App
asa	9.6.1	N/A	cisco	Native	Application	Yes
ftd	6.0.1.1213	N/A	cisco	Native	Application	No
ftd	6.1.0.330	N/A	cisco	Native	Application	Yes

```
FPR4100 /ssa #
```

```
delete app asa 9.6.1
```

```
FPR4100 /ssa* #
```

```
commit
```

```
FPR4100 /ssa #
```

```
show app
```

```
Application:
```

Name	Version	Description	Author	Deploy Type	CSP Type	Is Default App
ftd	6.0.1.1213	N/A	cisco	Native	Application	No
ftd	6.1.0.330	N/A	cisco	Native	Application	Yes

## 問：如何從CLI檢查FXOS版本？

有幾種方法可以做到這一點。

方式1

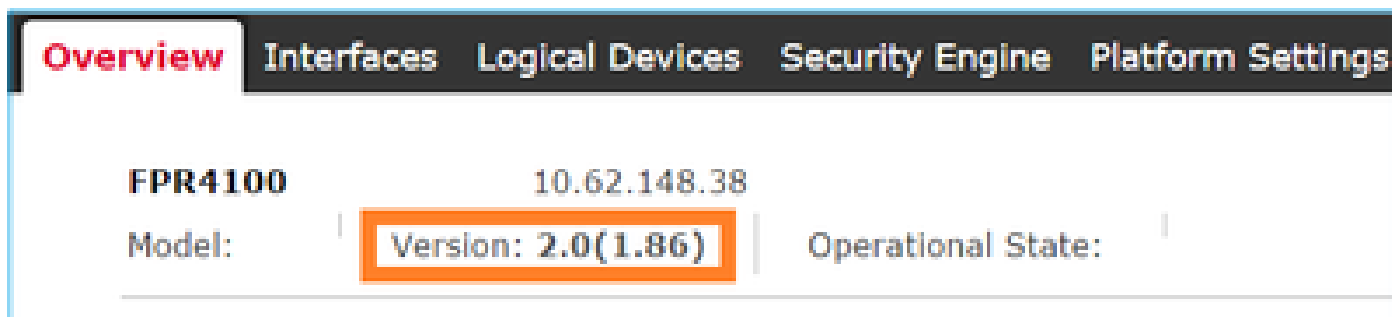
```
<#root>
```

```
FPR4100#
```

```
show fabric-interconnect firmware
```

```
Fabric Interconnect A:  
  Running-Kern-Vers: 5.0(3)N2(4.01.65)  
  Running-Sys-Vers: 5.0(3)N2(4.01.65)  
  Package-Vers: 2.0(1.86)  
  Startup-Kern-Vers: 5.0(3)N2(4.01.65)  
  Startup-Sys-Vers: 5.0(3)N2(4.01.65)  
  Act-Kern-Status: Ready  
  Act-Sys-Status: Ready  
  Bootloader-Vers:
```

這與FCM GUI中顯示的相同：



方式2

```
<#root>
```

```
FP4145-1#
```

```
show version
```

```
Version: 2.6(1.192)  
Startup-Vers: 2.6(1.192)
```

## 問：如何驗證FXOS上的介面MTU？

預設情況下，Firepower 4100/9300機箱支援超巨型幀。您可以使用以下命令檢查介面MTU：

```
<#root>
```

```
FPR9K-1-A#
```

```
connect fxos
```

```
FPR9K-1-A(fxos)# show hardware internal bcm-usd info phy-info all
```

```
+-----+-----+-----+
| port phy info |
+-----+-----+-----+
      front-port : 1          asic-port : 125      sfp installed : yes
        enable : ena          speed : 1G           autoneg : on
      interface : (10)XFI      duplex: half        linkscan : sw
        pause_tx : 0x0        pause_rx : 0x0
```

```
max frame : 9216
```

```
      local_advert : 0x20      remote_advert : 0x420  port_40g_enable : 0
      local_fault : 0x1        remote_fault : 0x0
      xcvr sfp type : (1)PHY_SFP_1G_COPPER
```

```
TSC4 registers:
```

```
      txfir(0xc252):0x0000      txdrv(0xc017):0x0000      lane(0x9003):0x1b1b
```

```
Asic 56846 Registers
```

```
      signal_detect(1.0x81d0):0x0000      link_status(1.0x81d1):0x0000
      rx_link_state(1.0x0):0x0000          pcs_rx_tx_fault(1.0x0008):0x0000
      pcs_block_status_0x20(1.0x20) :0x0000
      pcs_block_status_0x21(1.0x021) : 0x0000
      transmitter_reg(1.0x8000):0x0000      micro_ver(1.0x81f0):0x0000
```

或者，檢查fxos命令shell中的MTU：

```
<#root>
```

```
KSEC-FPR4112-4#
```

```
connect fxos
```

```
<output is skipped>
```

```
KSEC-FPR4112-4(fxos)#
```

```
show interface ethernet 1/1
```

```
Ethernet1/1 is up
```

```
Dedicated Interface
```

```
Hardware: 1000/10000 Ethernet, address: 14a2.a02f.07c0 (bia 14a2.a02f.07c0)
```

```
Description: U: Uplink
```

```
MTU 9216 bytes
```

```
, BW 1000000 Kbit, DLY 10 usec
```

## 問：如何檢查已安裝的應用程式？

從機箱CLI使用命令scope ssa，然後使用show slot expand detail。

可以在機箱show tech bundle內的檔案sam\_techsupportinfo上找到相同資訊。

```
<#root>
```

```
`scope ssa`  
`show slot expand detail`
```

Slot:

Slot ID: 1  
Log Level: Info  
Admin State: Ok  
Operational State: Online  
Disk State: Ok  
Clear Log Data: Available

Application Instance:

Application Name: asa  
Admin State: Enabled  
Operational State: Online  
Running Version: 9.6.2  
Startup Version: 9.6.2  
Hotfixes:  
Externally Upgraded: No  
Cluster Oper State: Not Applicable  
Current Job Type: Start  
Current Job Progress: 100  
Current Job State: Succeeded  
Clear Log Data: Available  
Error Msg:  
Current Task:

App Attribute:

App Attribute Key: mgmt-ip  
Value: 0.0.0.0

App Attribute Key: mgmt-url  
Value: https://0.0.0.0/

Heartbeat:

Last Received Time: 2017-03-15T10:25:02.220  
Heartbeat Interval: 1  
Max Number of Missed heartbeats Permitted: 3

Resource:

Allocated Core NR: 46  
Allocated RAM (KB): 233968896  
Allocated Data Disk (KB): 20971528  
Allocated Binary Disk (KB): 174964  
Allocated Secondary Disk (KB): 0

Heartbeat:

Last Received Time: 2017-03-15T10:25:00.447  
Heartbeat Interval: 5  
Max Number of Missed heartbeats Permitted: 3

Monitor:

OS Version: 9.6(1.150)  
CPU Total Load 1 min Avg: 48.110001  
CPU Total Load 5 min Avg: 48.110001  
CPU Total Load 15 min Avg: 48.110001  
Memory Total (KB): 264377600  
Memory Free (KB): 236835112  
Memory Used (KB): 27542488  
Memory App Total (KB): 233968896  
Disk File System Count: 5  
Blade Uptime: up 1 day, 6:56  
Last Updated Timestamp: 2017-03-15T10:24:10.306

Disk File System:

File System: /dev/sda1  
Mount Point: /mnt/boot  
Disk Total (KB): 7796848  
Disk Free (KB): 7694456  
Disk Used (KB): 102392

File System: /dev/sda2  
Mount Point: /opt/cisco/config  
Disk Total (KB): 1923084  
Disk Free (KB): 1734420  
Disk Used (KB): 90976

File System: /dev/sda3  
Mount Point: /opt/cisco/platform/logs  
Disk Total (KB): 4805760  
Disk Free (KB): 4412604  
Disk Used (KB): 149036

File System: /dev/sda5  
Mount Point: /var/data/cores  
Disk Total (KB): 48061320  
Disk Free (KB): 43713008  
Disk Used (KB): 1906892

File System: /dev/sda6  
Mount Point: /opt/cisco/csp  
Disk Total (KB): 716442836  
Disk Free (KB): 714947696  
Disk Used (KB): 1495140

## 問：如何從FXOS CLI驗證埠通道配置？

埠通道驗證命令

檢查 1

要驗證機箱上當前配置了哪些埠通道，請執行以下操作：

<#root>

FPR9K-1-A#

connect fxos

```
FPR9K-1-A(fxos)# show port-channel summary
Flags: D - Down          P - Up in port-channel (members)
       I - Individual    H - Hot-standby (LACP only)
       s - Suspended     r - Module-removed
       S - Switched      R - Routed
       U - Up (port-channel)
       M - Not in use. Min-links not met
```

```
-----
Group Port-      Type   Protocol  Member Ports
Channel
-----
11   Po11(SU)    Eth     LACP      Eth1/4(P)  Eth1/5(P)
15   Po15(SD)    Eth     LACP      Eth1/6(D)
48   Po48(SU)    Eth     LACP      Eth1/2(P)  Eth1/3(P)
```

## 檢查 2

驗證分配給邏輯裝置的埠通道：

```
<#root>
```

```
FPR9K-1-A#
```

```
scope ssa
```

```
FPR9K-1-A /ssa #
```

```
show configuration
```

```
scope ssa
  enter logical-device ftd_682021968 ftd "1,2,3" clustered
    enter cluster-bootstrap
      set chassis-id 1
      set ipv4 gateway 0.0.0.0
      set ipv4 pool 0.0.0.0 0.0.0.0
      set ipv6 gateway ::
      set ipv6 pool :: ::
      set virtual ipv4 0.0.0.0 mask 0.0.0.0
      set virtual ipv6 :: prefix-length ""
    !
      set key
      set mode spanned-etherchannel
      set name 682021968
      set site-id 0
    exit
  enter external-port-link Ethernet11_ftd Ethernet1/1 ftd
    set decorator ""
    set description ""
    set port-name Ethernet1/1
  exit
  enter external-port-link PC11_ftd Port-channel11 ftd
    set decorator ""
    set description ""
    set port-name Port-channel11
  exit
  enter external-port-link PC48_ftd Port-channel48 ftd
    set decorator ""
```



```
        set description ""
        set port-name Port-channel48
    exit
```

### 檢查 3

檢查每個埠的埠通道流量統計資訊：

<#root>

FPR9K-1-A(fxos)#

```
show port-channel traffic interface port-channel 11
```

ChanId	Port	Rx-Ucst	Tx-Ucst	Rx-Mcst	Tx-Mcst	Rx-Bcst	Tx-Bcst
11	Eth1/4	62.91%	0.0%	58.90%	49.99%	100.00%	0.0%
11	Eth1/5	37.08%	0.0%	41.09%	50.00%	0.0%	0.0%

### 檢查 4

檢查特定Port-Channel的詳細資訊：

<#root>

FPR9K-1-A(fxos)#

```
show port-channel database interface port-channel 11
```

port-channel11

```
Last membership update is successful
2 ports in total, 2 ports up
First operational port is Ethernet1/4
Age of the port-channel is 0d:20h:26m:27s
Time since last bundle is 0d:18h:29m:07s
Last bundled member is Ethernet1/5
Ports:  Ethernet1/4    [active ] [up] *
        Ethernet1/5    [active ] [up]
```

### 檢查 5

檢查本地LACP系統ID：

<#root>

FPR9K-1-A(fxos)#

```
show lacp system-identifier
```

32768,b0-aa-77-2f-81-bb

## 檢查 6

檢查上游裝置的LACP系統ID以及LACP狀態標誌：

```
<#root>
```

```
FPR9K-1-A(fxos)#
```

```
show lacp neighbor
```

```
Flags: S - Device is sending Slow LACPDUs F - Device is sending Fast LACPDUs  
A - Device is in Active mode P - Device is in Passive mode
```

```
port-channel11 neighbors
```

```
Partner's information
```

Port	Partner System ID	Partner Port Number	Age	Partner Flags
Eth1/4	32768,4-62-73-d2-65-0	0x118	66828	FA
	LACP Partner	Partner		Partner
	Port Priority	Oper Key		Port State
	32768	0xb		0x3d

```
Partner's information
```

Port	Partner System ID	Partner Port Number	Age	Partner Flags
Eth1/5	32768,4-62-73-d2-65-0	0x119	66826	FA
	LACP Partner	Partner		Partner
	Port Priority	Oper Key		Port State
	32768	0xb		0x3d

## 檢查 7

檢查埠通道事件歷史記錄：

```
<#root>
```

```
FPR9K-1-A(fxos)#
```

```
show port-channel internal event-history all
```

```
Low Priority Pending queue: len(0), max len(1) [Thu Apr 6 11:07:48 2017]  
High Priority Pending queue: len(0), max len(16) [Thu Apr 6 11:07:48 2017]
```

```
PCM Control Block info:
```

```
pcm_max_channels      : 4096  
pcm_max_channel_in_use : 48  
pc count              : 3  
hif-pc count          : 0  
Max PC Cnt            : 104  
Load-defer timeout    : 120
```

```
=====
```

```
PORT CHANNELS:
```

```
2LvPC PO in system : 0
```

```
port-channel11
```

```
channel      : 11  
bundle       : 65535
```

ifindex : 0x1600000a  
admin mode : active  
oper mode : active  
fop ifindex : 0x1a003000  
nports : 2  
active : 2  
pre cfg : 0  
l1l : 0x0 (0)  
lif : 0x0  
iod : 0x78 (120)  
global id : 3  
flag : 0  
lock count : 0  
num. of SIs: 0  
ac mbrs : 0 0  
l1cp graceful conv disable : 0  
l1cp suspend indiv disable : 1  
pc min-links : 1  
pc max-bundle : 16  
pc max active members : 32  
pc is-suspend-minlinks : 0  
port load defer enable : 0  
l1cp fast-select-hot-standby disable : 0  
ethpm bundle lock count : 0  
bundle res global id : 2

Members:

Ethernet1/4 [bundle\_no = 0]

Ethernet1/5 [bundle\_no = 0]

port-channel external lock:

Lock Info: resource [eth-port-channel 11]

type[0] p\_gwrap[(nil)]

FREE @ 246108 usecs after Wed Apr 5 14:18:10 2017

type[1] p\_gwrap[(nil)]

FREE @ 436471 usecs after Wed Apr 5 16:15:30 2017

type[2] p\_gwrap[(nil)]

FREE @ 436367 usecs after Wed Apr 5 16:15:30 2017

0x1600000a

internal (ethpm bundle) lock:

Lock Info: resource [eth-port-channel 11]

type[0] p\_gwrap[(nil)]

FREE @ 246083 usecs after Wed Apr 5 14:18:10 2017

type[1] p\_gwrap[(nil)]

FREE @ 610546 usecs after Wed Apr 5 16:19:04 2017

type[2] p\_gwrap[(nil)]

FREE @ 610437 usecs after Wed Apr 5 16:19:04 2017

0x1600000a

>>>>FSM: <eth-port-channel 11> has 194 logged transitions<<<<<<

- 1) FSM:<eth-port-channel 11> Transition at 557291 usecs after Wed Apr 5 16:04:27 2017  
Previous state: [PCM\_PC\_ST\_WAIT\_REL\_RESRC]  
Triggered event: [PCM\_PC\_EV\_REL\_RESRC\_DONE]  
Next state: [PCM\_PC\_ST\_INIT]
- 2) FSM:<eth-port-channel 11> Transition at 49036 usecs after Wed Apr 5 16:07:18 2017  
Previous state: [PCM\_PC\_ST\_INIT]  
Triggered event: [PCM\_PC\_EV\_L2\_CREATE]  
Next state: [PCM\_PC\_ST\_WAIT\_CREATE]
- 3) FSM:<eth-port-channel 11> Transition at 49053 usecs after Wed Apr 5 16:07:18 2017  
Previous state: [PCM\_PC\_ST\_WAIT\_CREATE]

Triggered event: [PCM\_PC\_EV\_L2\_CREATED]  
Next state: [PCM\_PC\_ST\_CREATED]

## 檢查 8

Debug lacp all會產生非常大的輸出：

<#root>

FPR9K-1-A(fxos)#

debug lacp all

```
2017 Jul 11 10:42:23.854160 lacp: lacp_pkt_parse_pdu(569): lacp_pkt_parse_pdu: got packet from actor port
2017 Jul 11 10:42:23.854177 lacp: lacp_pkt_compute_port_params(1163): Ethernet1/3(0x1a002000): pa aggre
2017 Jul 11 10:42:23.854190 lacp: lacp_pkt_compute_port_params(1170): p_e1=(8000, 2-0-0-0-0-1, 136, 800
2017 Jul 11 10:42:23.854198 lacp: lacp_pkt_compute_port_params(1172): p_e1_pkt=(8000, 2-0-0-0-0-1, 136,
2017 Jul 11 10:42:23.854207 lacp: lacp_utils_get_obj_type_from_ifidx(390): lacp_utils_get_obj_type_from
2017 Jul 11 10:42:23.854218 lacp: Malloc in fu_fsm_event_new@./utils/fsmutils/fsm.c[5317]-ty[1]0x9bf71
2017 Jul 11 10:42:23.854228 lacp: lacp_utils_cr_fsm_event(572): Called from lacp_utils_create_fsm_event
2017 Jul 11 10:42:23.854237 lacp: Malloc in fu_fsm_event_pair_new@./utils/fsmutils/fsm.c[5327]-ty[2]0x
2017 Jul 11 10:42:23.854248 lacp: fu_fsm_execute_all: match_msg_id(0), log_already_open(0)
2017 Jul 11 10:42:23.854257 lacp: Malloc in fu_fsm_event_new@./utils/fsmutils/fsm.c[5317]-ty[1]0x9bf71
2017 Jul 11 10:42:23.854268 lacp: fu_fsm_execute: (Ethernet1/3)
2017 Jul 11 10:42:23.854275 lacp:     current state [LACP_ST_PORT_MEMBER_COLLECTING_AND_DISTRIBUTING_EN
2017 Jul 11 10:42:23.854283 lacp:     current event [LACP_EV_PARTNER_PDU_IN_SYNC_COLLECT_ENABLED_DISTRI
2017 Jul 11 10:42:23.854291 lacp:     next state      [FSM_ST_NO_CHANGE]
2017 Jul 11 10:42:23.854304 lacp: lacp_proto_get_state(969): IF Ethernet1/3(0x1a002000): end PartnerEnd
2017 Jul 11 10:42:23.854314 lacp: lacp_proto_record_pdu(2266): Recording PDU for LACP pkt on IF Etherne
2017 Jul 11 10:42:23.854325 lacp: lacp_proto_set_state(900): IF Ethernet1/3(0x1a002000): Set end ActorE
2017 Jul 11 10:42:23.854335 lacp: lacp_proto_get_state(969): IF Ethernet1/3(0x1a002000): end PartnerEnd
2017 Jul 11 10:42:23.854344 lacp: lacp_proto_update_ntt(2211): updateNTT called for IF Ethernet1/3(0x1a
2017 Jul 11 10:42:23.854355 lacp: lacp_proto_get_state(969): IF Ethernet1/3(0x1a002000): end ActorEnd(1
2017 Jul 11 10:42:23.854362 lacp: lacp_timer_start_w_chgd_time(681): lacp_timer_start_w_chgd_time: star
2017 Jul 11 10:42:23.854377 lacp: lacp_timer_start(637): Timer Started: Timer_Arg ([rid type IF-Rid: if
2017 Jul 11 10:42:23.854386 lacp: lacp_timer_start(638): Timer period=15 seconds
2017 Jul 11 10:42:23.854396 lacp: Free ptr in fu_fsm_execute@./utils/fsmutils/fsm.c[1091] for addr 0x9
2017 Jul 11 10:42:23.854408 lacp: fu_fsm_execute_all: done processing event LACP_EV_PARTNER_PDU_IN_SYNC
2017 Jul 11 10:42:23.854419 lacp: fu_mts_drop ref 0x9bf7320 opc 90117
2017 Jul 11 10:42:23.854434 lacp: fu_fsm_execute_all: MTS_OPC_NET_L2_RX_DATA_HDR(msg_id 2623696) droppe
2017 Jul 11 10:42:23.854445 lacp: fu_fsm_engine_post_event_processing
2017 Jul 11 10:42:23.854453 lacp: end of while in fu_fsm_engine
2017 Jul 11 10:42:23.854461 lacp: fu_handle_process_hot_plugin_msg: Entered the function line 143
2017 Jul 11 10:42:23.854468 lacp: begin fu_fsm_engine: line[2357]
2017 Jul 11 10:42:24.361501 lacp: lacp_pkt_encode_pdu_helper(770): lacp_pkt_encode_pdu_helper: pkt_len=
2017 Jul 11 10:42:24.361530 lacp: lacp_pkt_encode_pdu_helper(797): lacp_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361542 lacp: lacp_debug_wrapper_tl(1718): Executing [mcecm_api_is_pc_mcec]
2017 Jul 11 10:42:24.361551 lacp: lacp_debug_wrapper_tl(1718): input: if_index = [0x16000000]
2017 Jul 11 10:42:24.361559 lacp: lacp_debug_wrapper_tl(1718): Executing [mcecm_cache_is_pc_mcec]
2017 Jul 11 10:42:24.361568 lacp: lacp_debug_wrapper_tl(1718): output:0
2017 Jul 11 10:42:24.361589 lacp: lacp_pkt_encode_pdu_helper(842): 0x1a002000: Set short_timeout to per
2017 Jul 11 10:42:24.361599 lacp: lacp_pkt_encode_pdu_helper(879): lacp_pkt_encode_pdu_helper: actor-po
2017 Jul 11 10:42:24.361612 lacp: lacp_pkt_encode_pdu_helper(906): lacp_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361624 lacp: lacp_pkt_encode_pdu_helper(910): lacp_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361636 lacp: lacp_net_tx_data(206): lacp_net_tx_data: Sending buffer with length 1
2017 Jul 11 10:42:24.361648 lacp: lacp_net_tx_data(215): 01 01 01 14 ffff
2017 Jul 11 10:42:24.361658 lacp: lacp_net_tx_data(215): ffff
2017 Jul 11 10:42:24.361668 lacp: lacp_net_tx_data(215): 00 00 00 02 14 ffff
```

```

2017 Jul 11 10:42:24.361678 lACP: lACP_net_tx_data(215): ffff
2017 Jul 11 10:42:24.361689 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361700 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361710 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361721 lACP: lACP_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 10:42:24.361753 lACP: lACP_proto_get_state(969): IF Ethernet1/3(0x1a002000): end PartnerEnd
2017 Jul 11 10:42:24.361764 lACP: lACP_proto_restart_tx_timer(1802): lACP_proto_restart_tx_timer: got e
2017 Jul 11 10:42:24.361773 lACP: lACP_proto_restart_tx_timer(1825): lACP_proto_restart_tx_timer: flag
2017 Jul 11 10:42:24.361782 lACP: lACP_timer_start_w_chgd_time(681): lACP_timer_start_w_chgd_time: star
2017 Jul 11 10:42:24.361798 lACP: lACP_timer_start(637): Timer Started: Timer_Arg ([rid type IF-Rid: if
2017 Jul 11 10:42:24.361807 lACP: lACP_timer_start(638): Timer period=1 seconds
2017 Jul 11 10:42:24.361820 lACP: lACP_pkt_encode_pdu_helper(770): lACP_pkt_encode_pdu_helper: pkt_len=
2017 Jul 11 10:42:24.361833 lACP: lACP_pkt_encode_pdu_helper(797): lACP_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361841 lACP: lACP_debug_wrapper_t1(1718): Executing [mcecm_api_is_pc_mcec]
2017 Jul 11 10:42:24.361849 lACP: lACP_debug_wrapper_t1(1718): input: if_index = [0x16000000]
2017 Jul 11 10:42:24.361857 lACP: lACP_debug_wrapper_t1(1718): Executing [mcecm_cache_is_pc_mcec]
2017 Jul 11 10:42:24.361865 lACP: lACP_debug_wrapper_t1(1718): output:0
2017 Jul 11 10:42:24.361879 lACP: lACP_pkt_encode_pdu_helper(842): 0x1a003000: Set short_timeout to per
2017 Jul 11 10:42:24.361888 lACP: lACP_pkt_encode_pdu_helper(879): lACP_pkt_encode_pdu_helper: actor-po
2017 Jul 11 10:42:24.361899 lACP: lACP_pkt_encode_pdu_helper(906): lACP_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361910 lACP: lACP_pkt_encode_pdu_helper(910): lACP_pkt_encode_pdu_helper: if_idx=E
2017 Jul 11 10:42:24.361920 lACP: lACP_net_tx_data(206): lACP_net_tx_data: Sending buffer with length 1
2017 Jul 11 10:42:24.361930 lACP: lACP_net_tx_data(215): 01 01 01 14 ffff
2017 Jul 11 10:42:24.361940 lACP: lACP_net_tx_data(215): ffff
2017 Jul 11 10:42:24.361950 lACP: lACP_net_tx_data(215): 00 00 00 02 14 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361960 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 03 10 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361971 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361981 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.361991 lACP: lACP_net_tx_data(215): 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
2017 Jul 11 10:42:24.362001 lACP: lACP_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 10:42:24.362022 lACP: lACP_proto_get_state(969): IF Ethernet1/4(0x1a003000): end PartnerEnd
2017 Jul 11 10:42:24.362032 lACP: lACP_proto_restart_tx_timer(1802): lACP_proto_restart_tx_timer: got e
2017 Jul 11 10:42:24.362042 lACP: lACP_proto_restart_tx_timer(1825): lACP_proto_restart_tx_timer: flag
2017 Jul 11 10:42:24.362050 lACP: lACP_timer_start_w_chgd_time(681): lACP_timer_start_w_chgd_time: star
2017 Jul 11 10:42:24.362062 lACP: lACP_timer_start(637): Timer Started: Timer_Arg ([rid type IF-Rid: if

```

## 提示

檢查是否從對等體接收LACP資料包。例如，Ethernet1/3介面接收LACP資料包，但Ethernet1/4否：

```

2017 Jul 11 10:42:25.641920 lACP: lACP_net_get_pkt_info(746): Packet received on phy_if_idx Ethernet1/3
2017 Jul 11 10:42:25.641937 lACP: lACP_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU 1

```

## 檢查 9

在此輸出中，介面Ethernet1/4是Port-Channel的成員，但處於個別模式（在交換器端擱置）：

```
<#root>
```

```
ciscofcm01-A(fxos)#
```

```
show lACP internal event-history interface ethernet 1/4
```

>>>>FSM: <Ethernet1/4> has 549 logged transitions<<<<<

- 1) FSM:<Ethernet1/4> Transition at 385779 usecs after Wed Jul 5 13:13:03 2017  
Previous state: [LACP\_ST\_PORT\_IS\_DOWN\_OR\_LACP\_IS\_DISABLED]  
Triggered event: [LACP\_EV\_CLNUP\_PHASE\_II]  
Next state: [LACP\_ST\_PORT\_IS\_DOWN\_OR\_LACP\_IS\_DISABLED]
- 2) FSM:<Ethernet1/4> Transition at 955546 usecs after Wed Jul 5 13:13:03 2017  
Previous state: [LACP\_ST\_PORT\_IS\_DOWN\_OR\_LACP\_IS\_DISABLED]  
Triggered event: [LACP\_EV\_LACP\_ENABLED\_AND\_PORT\_UP]  
Next state: [LACP\_ST\_DETACHED\_LAG\_NOT\_DETERMINED]
- 3) FSM:<Ethernet1/4> Transition at 962224 usecs after Wed Jul 5 13:13:10 2017  
Previous state: [LACP\_ST\_DETACHED\_LAG\_NOT\_DETERMINED]  
Triggered event: [LACP\_EV\_RECEIVE\_PARTNER\_PDU\_TIMED\_OUT]  
Next state: [FSM\_ST\_NO\_CHANGE]
- 4) FSM:<Ethernet1/4> Transition at 963838 usecs after Wed Jul 5 13:13:13 2017  
Previous state: [LACP\_ST\_DETACHED\_LAG\_NOT\_DETERMINED]  
Triggered event: [LACP\_EV\_RECEIVE\_PARTNER\_PDU\_TIMED\_OUT]  
Next state: [FSM\_ST\_NO\_CHANGE]
- 5) FSM:<Ethernet1/4> Transition at 964002 usecs after Wed Jul 5 13:13:13 2017  
Previous state: [LACP\_ST\_DETACHED\_LAG\_NOT\_DETERMINED]  
Triggered event: [LACP\_EV\_RECEIVE\_PARTNER\_PDU\_TIMED\_OUT\_II\_INDIVIDUAL]  
Next state: [LACP\_ST\_INDIVIDUAL\_OR\_DEFAULT]
- 6) FSM:<Ethernet1/4> Transition at 735923 usecs after Wed Jul 5 13:13:36 2017  
Previous state: [LACP\_ST\_INDIVIDUAL\_OR\_DEFAULT]  
Triggered event: [LACP\_EV\_UNGRACEFUL\_DOWN]  
Next state: [LACP\_ST\_PORT\_IS\_DOWN\_OR\_LACP\_IS\_DISABLED]

## 檢查 10

在此輸出中，雖然屬於PortChannel1的成員的Ethernet1/4處於獨立模式，但介面Ethernet1/3仍可正常工作並屬於PortChannel1。請注意，Ethernet1/3傳送(tx)和接收(rx)封包，但Ethernet1/4僅傳送(rx) no tx：

<#root>

```
ciscofcm01-A(fxos)#
```

```
debug lacp pkt
```

```
ciscofcm01-A(fxos)# 2017 Jul 11 11:04:05.278736 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
2017 Jul 11 11:04:05.602855 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:05.983134 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:06.249929 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
2017 Jul 11 11:04:06.602815 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:06.992812 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:07.163780 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
2017 Jul 11 11:04:07.602814 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:08.002817 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:08.102006 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
2017 Jul 11 11:04:08.612810 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:09.002811 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:09.091937 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
```

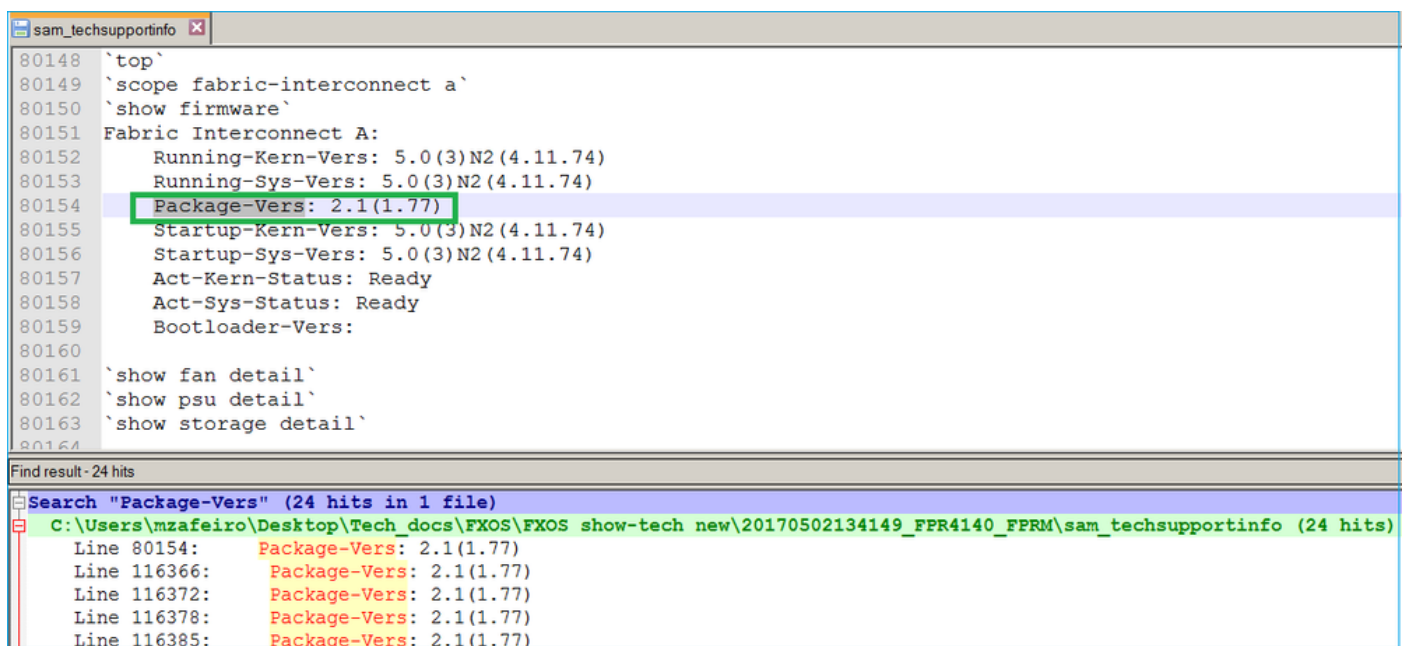
```
2017 Jul 11 11:04:09.622810 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:10.002807 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:10.004411 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU 1
2017 Jul 11 11:04:10.632806 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:10.854094 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU 1
2017 Jul 11 11:04:11.002789 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): Tx LACP PDU len: 110
2017 Jul 11 11:04:11.642807 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:11.714199 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU 1
```

如需其他資訊，請查閱本檔案：

## 問：如何從Show Tech Output中找到FXOS捆綁包版本？

方式1

在FPRM tar檔案中，擷取FPRM\_A\_TechSupport.tar.gz檔案的內容。然後開啟sam\_techsupportinfo檔案並搜尋Package-Vers：



```
80148 `top`
80149 `scope fabric-interconnect a`
80150 `show firmware`
80151 Fabric Interconnect A:
80152   Running-Kern-Vers: 5.0(3)N2(4.11.74)
80153   Running-Sys-Vers: 5.0(3)N2(4.11.74)
80154   Package-Vers: 2.1(1.77)
80155   Startup-Kern-Vers: 5.0(3)N2(4.11.74)
80156   Startup-Sys-Vers: 5.0(3)N2(4.11.74)
80157   Act-Kern-Status: Ready
80158   Act-Sys-Status: Ready
80159   Bootloader-Vers:
80160
80161 `show fan detail`
80162 `show psu detail`
80163 `show storage detail`
80164

Find result - 24 hits
Search "Package-Vers" (24 hits in 1 file)
C:\Users\mzafeiro\Desktop\Tech_docs\FXOS\FXOS show-tech new\20170502134149_FPR4140_FPRM\sam_techsupportinfo (24 hits)
Line 80154:   Package-Vers: 2.1(1.77)
Line 116366:  Package-Vers: 2.1(1.77)
Line 116372:  Package-Vers: 2.1(1.77)
Line 116378:  Package-Vers: 2.1(1.77)
Line 116385:  Package-Vers: 2.1(1.77)
```

<#root>

FPR4140-A#

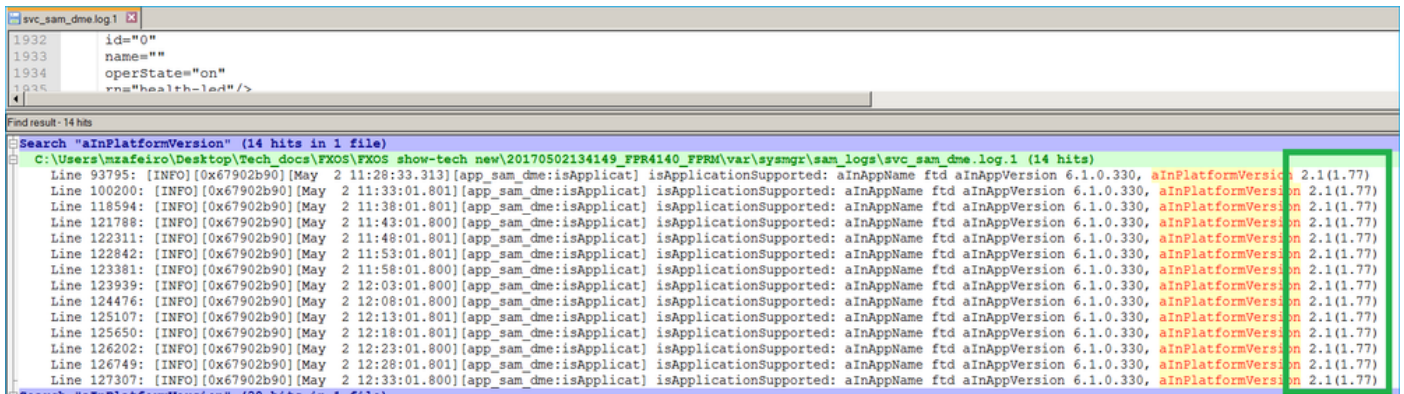
```
show fabric-interconnect firmware
```

```
Fabric Interconnect A:
  Running-Kern-Vers: 5.0(3)N2(4.11.74)
  Running-Sys-Vers: 5.0(3)N2(4.11.74)
  Package-Vers: 2.1(1.77)
  Startup-Kern-Vers: 5.0(3)N2(4.11.74)
  Startup-Sys-Vers: 5.0(3)N2(4.11.74)
  Act-Kern-Status: Ready
  Act-Sys-Status: Ready
```

Bootloader-Vers:

## 方式2

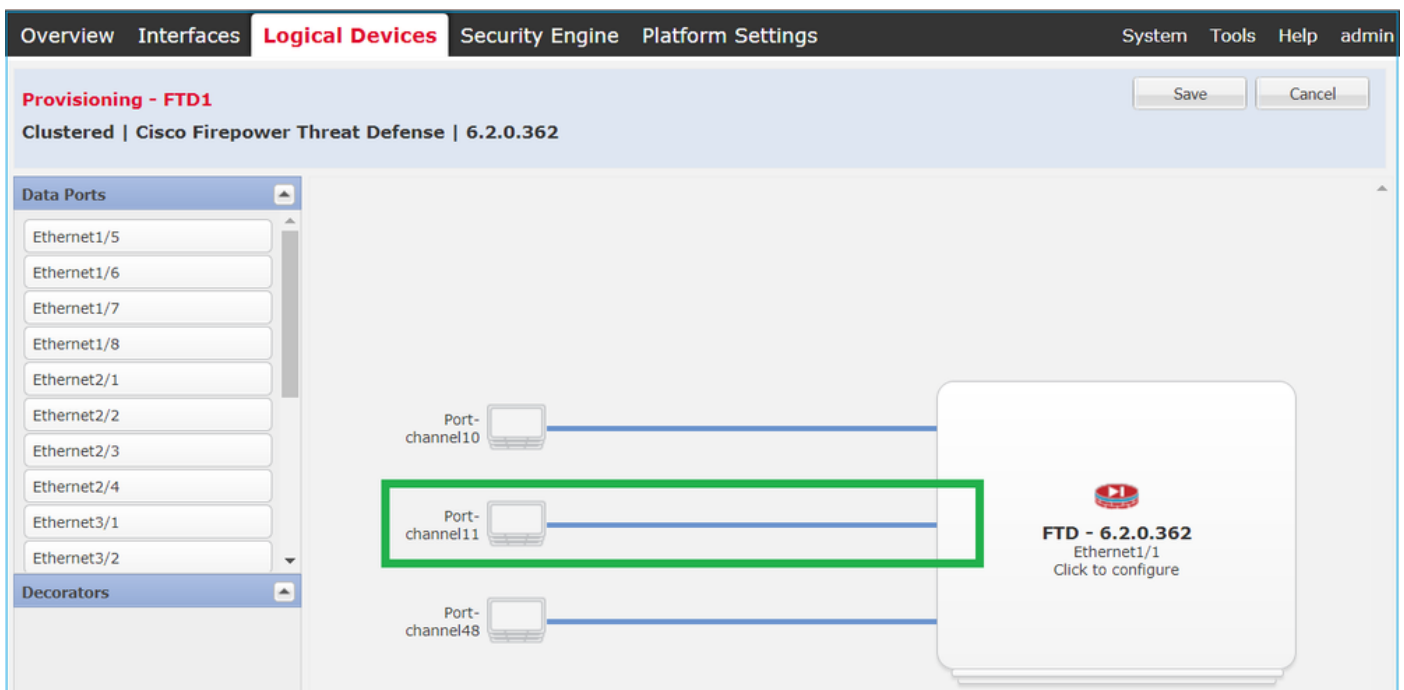
在FRPM tar檔案中，擷取FPRM\_A\_TechSupport.tar.gz檔案的內容。然後開啟 /var/sysmgr/sam\_logs/svc\_sam\_dme.log檔案並搜尋aInPlatformVersion關鍵字：



問：MIO如何將介面資訊（增加/刪除）傳播到刀片應用(FTD、ASA)？

它使用MIO App-Agent元件。

例如，從MIO將新連線埠通道指派給FTD時：



FTD應用程式代理程式偵錯顯示：

<#root>



firepower#

debug app-agent 255

```
appagent : part 0 : ftd_001_JAD19500BAB0Z690F2.interfaceMapping.update
appagent : part 1 : ssp-xml:3
appagent : part 2 : 7
appagent : part 3 : appAG
appagent : part 4 : <interfaceMappingConfigUpdateRequest><interfaceMapping action="insert"><externalPort
<bladeVNIC>22</bladeVNIC></internalPort></interfaceMapping></interfaceMappingConfigUpdateRequest>
appagent : Process the request message
appagent : It is an update request command
appagent : Invoke request msg handler for cmd interfaceMapping.update
appagent : Processing InterfaceMapping Update Message
appagent : Creating Interface Mapping Structure.
appagent : Processing the tag externalPort.
appagent : =====
appagent : PortName=Port-channel11
appagent : ftw capability=0
appagent : no available ftw peers
appagent : cleaning external_port_ftw_peers_t
appagent : Sending Response message for Interface Mapping update Message
appagent : Send response message to appAG
appagent : resp_msg->cmdName =appAG.interfaceMapping.update
appagent : resp_msg->content_version =ssp-xml:3
appagent : resp_msg->msgId =7
appagent : resp_msg->statusCode =100
appagent : resp_msg->data =<interfaceMappingConfigUpdateResponse>
  <response>
    <code>100</code>
    <message>Request success</message>
  </response>
</interfaceMappingConfigUpdateResponse>
appagent : part 0 : ftd_001_JAD19500BAB0Z690F2.interfaceStatus.update
appagent : part 1 : ssp-xml:3
appagent : part 2 : 8
appagent : part 3 : appAG
appagent : part 4 : <interfaceStatusUpdateRequest><interface><interfaceName>Port-channel11</interfaceName
appagent : Process the request message
appagent : It is an update request command
appagent : Invoke request msg handler for cmd interfaceStatus.update
appagent : Processing Interface Status Update Request.
appagent : The Fxos version is 2.1.1 or newer
appagent : Parsing interface status update request message for FXOS > 211
appagent : Parsing Interface Status Req.
appagent : Interface Status Successfully Updated.
appagent : Sending Response for Interface Status Update Request
appagent : Send response message to appAG
appagent : resp_msg->cmdName =appAG.interfaceStatus.update
appagent : resp_msg->content_version =ssp-xml:3
appagent : resp_msg->msgId =8
appagent : resp_msg->statusCode =100
appagent : resp_msg->data =<interfaceStatusUpdateResponse>
  <response>
    <code>100</code>
    <message>Request success</message>
  </response>
</interfaceStatusUpdateResponse>
```

## 問：在Firepower機箱的RMA中，必須使用什麼序列號(SN)？

Firepower機箱具有多個SN。RMA請求所用的命令可從以下輸出中獲取：

```
<#root>
FP4120-5-A#
scope chassis 1
FP4120-5-A /chassis # show inventory
Chassis   PID           Vendor          Serial (SN) HW Revision
-----
          1 FPR-4120-K9   Cisco Systems Inc FLM12345KL6 0
```

或:

```
<#root>
FP4120-5-A#
connect local-mgmt
FP4120-5-A(local-mgmt)#
show license all

Smart Licensing Status
=====

Smart Licensing is ENABLED

Registration:
  Status: UNREGISTERED
  Export-Controlled Functionality: Not Allowed

License Authorization:
  Status: No Licenses in Use

License Usage
=====

No licenses in use

Product Information
=====

UDI: PID:FPR-4120-SUP,SN:JAD19500BAB
```

或:

<#root>

FP4120-5-A#

scope license

FP4120-5-A /license #

show license all

Smart Licensing Status

=====

Smart Licensing is ENABLED

Registration:

Status: UNREGISTERED

Export-Controlled Functionality: Not Allowed

License Authorization:

Status: No Licenses in Use

License Usage

=====

No licenses in use

Product Information

=====

UDI: PID:FPR-4120-SUP,SN:JAD19500BAB

## 問：您能否在2個不同的FXOS機箱之間交換SSD1？

簡短的回答是「否」。SSD1包含應用映像（例如FTD或ASA）。如果您將SSD1從機箱中取出，並將其插入不同的機箱，則模組不會出現，並且會顯示以下錯誤：

F1548 2017-11-08T11:36:40.095 427280刀鋒交換偵測到插槽1

Severity	Description	Cause	Occurrence	Time	Acknowledged
CRITICAL	Blade swap detected on slot 1	blade-swap	1	2017-11-08T11:36:40.095	no

## 安全模組映像不匹配

Overview Interfaces **Logical Devices** Security Engine Platform Settings System Tools Help admin

Logical Device List

Application	Version	Management IP	Gateway	Management Port	Status
FTD	6.2.2.81	10.62.148.194	10.62.148.129	Ethernet1/1	Security module image mismatch ⓘ

Ports:

Data Interfaces: Ethernet3/1 Ethernet3/2  
Port-channel15

Attributes:

Cluster Operational Status: not-applicable  
Firepower Management IP: 10.62.148.194  
Management URL : https://10.62.148.75/  
HA-ROLE : standalone  
UUID : 8b8557b2-ba50-11e7-85f9-958a43b079fe

## 伺服器1/1上缺少本地磁碟1

MAJOR	Local disk 1 missing on server 1/1	equipment-missing	2	2017-11-08T10:40:43.122	no
-------	------------------------------------	-------------------	---	-------------------------	----

## 問：如何檢查機箱功耗？

從FXOS 2.2.1版本開始，您可以使用命令show environment summary：

```
<#root>
```

```
FPR4100-1 /chassis #
```

```
show environment summary
```

Chassis INFO：

```
Total Power Consumption: 440.000000  
Inlet Temperature (C): 21.000000  
CPU Temperature (C): 39.000000  
Last updated Time: 2018-07-01T09:39:55.157
```

PSU 1:

```
Type: AC  
Input Feed Status: Ok  
12v Output Status: Ok  
Overall Status: Operable
```

PSU 2:

```
Type: AC  
Input Feed Status: N/A  
12v Output Status: N/A  
Overall Status: Removed
```

FAN 1

```
Fan Speed RPM (RPM): 12110  
Speed Status: Ok  
Overall Status: Operable
```

FAN 2

```
Fan Speed RPM (RPM): 12110  
Speed Status: Ok  
Overall Status: Operable
```

FAN 3

```
Fan Speed RPM (RPM): 12100  
Speed Status: Ok  
Overall Status: Operable
```

有關其他資訊，請檢視：

[監控機箱運行狀況](#)

## 問：如何檢查開機載入器版本？

```
<#root>
```

```
FPR-4110-7-A#
```

```
scope chassis 1
```

```
FPR-4110-7-A /chassis #
```

```
scope server 1
```

```
FPR-4110-7-A /chassis/server #
```

```
scope adapter 1
```

```
FPR-4110-7-A /chassis/server/adapter #
```

```
show version detail
```

```
Adapter 1:
```

```
Running-Vers: 5.3(1.91)
```

```
Package-Vers: 2.3(1.88)
```

```
Update-Status: Ready
```

```
Activate-Status: Ready
```

```
Bootloader-Update-Status: Ready
```

```
Startup-Vers: 5.3(1.91)
```

```
Backup-Vers: 5.3(1.48)
```

```
Bootloader-Vers: MF-111-234949
```

## 問：如何升級引導載入程式？

安裝FXOS 2.3.1.58或更新版本後，系統可能會顯示您的安全裝置上發生嚴重故障，指示需要升級介面卡韌體：

```
Critical F1715 2017-05-11T11:43:33.121 339561 Adapter 1 on Security Module 1 requires a critical firmwa
```

開機載入程式升級的程式在此連結中說明：

[https://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/fxos231/release/notes/fxos231\\_rn.html#pgf173826](https://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/fxos231/release/notes/fxos231_rn.html#pgf173826)

如果在引導載入程式升級期間遇到以下錯誤，可以嘗試使用「force」選項。

```
<#root>
```

```
FPR-4110-7-A#
```

```
scope chassis 1
```

```
FPR-4110-7-A /chassis #
```

```
scope server 1
```

```
FPR-4110-7-A /chassis/server #
```

```
scope adapter 1/1/1
```

```
FPR-4110-7-A /chassis/server/adapter #
```

```
show image
```

```
Name Type Version
```

```
-----  
fxos-m83-8p40-cruzboot.4.0.1.62.bin Adapter Boot 4.0(1.62)
```

```
fxos-m83-8p40-vic.4.0.1.51.bin Adapter 4.0(1.51)
```

```
fxos-m83-8p40-vic.5.3.1.2.bin Adapter 5.3(1.2)
```

```
fxos-m83-8p40-vic.5.3.1.48.bin Adapter 5.3(1.48)
```

```
fxos-m83-8p40-vic.5.3.1.91.bin Adapter 5.3(1.91)
```

```
FPR-4110-7-A /chassis/server/adapter #
```

```
update boot-loader 4.0(1.62)
```

Warning: Please DO NOT reboot blade or chassis during upgade, otherwise, it may cause adapter UNUSABLE

After upgrade completed, blade must be power cycled automatically

```
FPR-4110-7-A /chassis/server/adapter* #
```

```
commit-buffer
```

```
Error: Update failed: [This adaptor is not applicable for boot-loader upgrade.]
```

## 問：如何停用絕對SSH超時？

這在實驗室測試和故障排除過程中非常有用。請注意，此絕對超時是一種安全最佳實踐，對於非零值，如果要在使用者環境中暫時完成，請注意這一點。

```
<#root>
```

```
FPR-4115-A#
```

```
scope security
```

```
FPR-4115-A /security #
```

```
scope default-auth
```

```
FPR-4115-A /security/default-auth #
```

```
show detail
```

```
Default authentication:
```

```
Admin Realm: Local
```

```
Operational Realm: Local
```

```
Web session refresh period(in secs): 600
```

```
Idle Session timeout(in secs) for web, ssh, telnet sessions: 3600
```

```
Absolute Session timeout(in secs) for web, ssh, telnet sessions: 3600
```

```
Serial Console Idle Session timeout(in secs): 3600  
Serial Console Absolute Session timeout(in secs): 3600  
Admin Authentication server group:  
Operational Authentication server group:  
Use of 2nd factor: No
```

```
FPR-4115-A /security/default-auth #
```

```
set absolute-session-timeout 0
```

```
FPR-4115-A /security/default-auth* #
```

```
commit-buffer
```

```
FPR-4115-A /security/default-auth #
```

```
show detail
```

```
Default authentication:  
Admin Realm: Local  
Operational Realm: Local  
Web session refresh period(in secs): 600  
Idle Session timeout(in secs) for web, ssh, telnet sessions: 3600  
Absolute Session timeout(in secs) for web, ssh, telnet sessions: 0
```

```
Serial Console Idle Session timeout(in secs): 3600  
Serial Console Absolute Session timeout(in secs): 3600  
Admin Authentication server group:  
Operational Authentication server group:  
Use of 2nd factor: No
```

## 問：如何捕獲發往機箱管理引擎（控制平面）的LACP資料包？

發往Firepower 4100/9300機箱管理引擎（控制平面）的LACP資料包封裝在特定資料包的資料部分內，並可使用ethalyzer命令在內部入站-高介面上捕獲。從值為01 80 C2 00 00 02（IEEE 802.3 Slow\_Protocols\_Multicast地址）的位元組開始嵌入LACP PDU位元組，直至資料部分結束：

```
<#root>
```

```
firepower#
```

```
connect fxos
```

```
...
```

```
firepower(fxos)#
```

```
ethalyzer local interface inbound-hi limit-captured-frames 10000 limit-frame-size 9000 detail
```

```
Capturing on 'eth4'
```

Frame 1: 188 bytes on wire (1504 bits), 188 bytes captured (1504 bits) on interface 0

Interface id: 0 (eth4)

Interface name: eth4

Encapsulation type: Ethernet (1)

Arrival Time: Dec 5, 2023 09:16:06.736180828 UTC

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1701767766.736180828 seconds

[Time delta from previous captured frame: 0.000000000 seconds]

[Time delta from previous displayed frame: 0.000000000 seconds]

[Time since reference or first frame: 0.000000000 seconds]

Frame Number: 1

Frame Length: 188 bytes (1504 bits)

Capture Length: 188 bytes (1504 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:vlan:ethertype:data]

Ethernet II, Src: 02:10:18:a3:4f:f5 (02:10:18:a3:4f:f5), Dst: 58:97:bd:b9:36:4e (58:97:bd:b9:36:4e)

Destination: 58:97:bd:b9:36:4e (58:97:bd:b9:36:4e)

Address: 58:97:bd:b9:36:4e (58:97:bd:b9:36:4e)

.... ..0. .... = LG bit: Globally unique address (factory default)

.... ..0 .... = IG bit: Individual address (unicast)

Source: 02:10:18:a3:4f:f5 (02:10:18:a3:4f:f5)

Address: 02:10:18:a3:4f:f5 (02:10:18:a3:4f:f5)

.... ..1. .... = LG bit: Locally administered address (this is NOT the factory default)

.... ..0 .... = IG bit: Individual address (unicast)

Type: 802.1Q Virtual LAN (0x8100)

802.1Q Virtual LAN, PRI: 0, DEI: 0, ID: 4048

000. .... = Priority: Best Effort (default) (0)

.... ..0 .... = DEI: Ineligible

.... 1111 1101 0000 = ID: 4048

Type: Unknown (0xde08)

Data (170 bytes)

0000 b8 50 20 04 00 00 00 00 00 00 00 00 00 81 00 .P .....

0010 00 00 00 00 00 04 09 04 cd 00 00 00 00 00 00 .....

0020 00 00 00 00 00 00 00 00 00 00 00 00 00 00

01 80 .....

0030

c2 00 00 02 58 97 bd b9 36 51 88 09 01 01 01 14 ....X...6Q.....

0040

80 00 58 97 bd b9 36 4d 00 28 80 00 00 44 3f 00 ..X...6M.(...D?.

0050

00 00 02 14 80 00 00 17 df d6 ec 00 00 33 80 00 .....3..

0060

02 2c 3d 00 00 00 03 10 00 00 00 00 00 00 00 ..,=.....

0070

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....



```
0080
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....

0090
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....

00a0
00 00 00 00 00 00 00 00 00 00

.....
Data: b85020040000000000000000000000081000000000000040904...
```

使用聯機工具可將十六進位制轉儲轉換為PCAP。

## 問：如何查詢SSD資訊？

以下是[FN72077](#)中步驟1的解決辦法/解決方案部分提到的所有FXOS版本，都提供了機箱管理引擎內部SSD資訊：

```
<#root>
KSEC-FPR4112-4 #
scope chassis 1

KSEC-FPR4112-4 /chassis #
show sup version detail

SUP FIRMWARE:
ROMMON:
  Running-Vers: 1.0.15
  Package-Vers: 1.0.18
  Activate-Status: Ready
  Upgrade Status: SUCCESS
FPGA:
  Running-Vers: 2.00
  Package-Vers: 1.0.18
  Activate-Status: Ready
SSD:

  Running-Vers: MU03

Model: Micron_M500IT_MTFDDAT128MBD
```

安全引擎 ( 刀鋒 ) SSD：

<#root>

KSEC-FPR4112-4#

show server storage detail

Server 1/1:

<output skipped>

RAID Controller 1:

Type: SATA

Vendor: Cisco Systems Inc

Model: FPR4K-PT-01

Serial: JAD260508TZ

HW Revision:

PCI Addr: 00:31.2

Raid Support:

OOB Interface Supported: No

Rebuild Rate: N/A

Controller Status: Unknown

Local Disk 1:

Vendor: INTEL

Model: SSDSC2KG48

Serial: PHYG109603PA480BGN

HW Rev: 0

Operability: Operable

Presence: Equipped

Size (MB): 400000

Drive State: Online

Power State: Active

Link Speed: 6 Gbps

Device Type: SSD

Local Disk 2:

Vendor: INTEL

Model: SSDSC2KG96

Serial: PHYG143301JG960CGN

HW Rev: 0

Operability: Operable

Presence: Equipped

Size (MB): 800000

Drive State: Online

Power State: Active

Link Speed: 6 Gbps

Device Type: SSD

Local Disk Config Definition:

Mode: No RAID

Description:

Protect Configuration: No

## 問：如何設定內部交換器(FXOS)擷取？

請參閱文章[配置和驗證安全防火牆和Firepower內部交換機捕獲](#)。

## 參考資料

- [Cisco Firepower 4100/9300 FXOS安全防火牆機箱管理器配置指南，2.14\(1\)](#)

- [Cisco Secure FXOS for Firepower 4100/9300 CLI配置指南, 2.14\(1\)](#)
- [Cisco Firepower 4100/9300 FXOS命令參考](#)
- [配置並驗證安全防火牆和Firepower內部交換機捕獲](#)

## 關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。