

Antwoord Firepower eXtensible Operating System (FXOS) Veelgestelde vragen

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Inleiding

Dit document beschrijft de veelgestelde vragen met betrekking tot FXOS-platforms.

Achtergrondinformatie

Het Firepower eXtensible Operating System (FXOS) is het onderliggende besturingssysteem op Firepower- of Secure Firewall-platforms. Afhankelijk van de platforms wordt FXOS gebruikt om functies te configureren, de status van het chassis te bewaken en toegang te krijgen tot geavanceerde functies voor probleemoplossing.

FXOS op Firepower 4100/9300 en Firepower 2100 met de Adaptive Secure Appliance software in platformmodus staan wijzigingen in de configuratie toe, terwijl in andere platforms met uitzondering van specifieke functies het alleen wordt gelezen.

V. Hoe toon Tech uit het FXOS-systeem te genereren?

Vanaf versie 2.8.x wordt het frm afgekeurd. Zo ondersteunt FXOS 2.8.x alleen chassis- en

bladeshows-techs.

```
<#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.
```

- chassis: bevat logbestanden voor het chassis, de blade, de adapter, de Baseboard Management Controller (BMC) en Cisco Integrated Management Controller (CIMC)
- Module: Bevat logbestanden voor de blade/module waar zich de logische apparaat adaptieve security applicatie (ASA) of FirePOWER Threat Defence (FTD) bevindt. Dit omvat logboeken voor componenten zoals appAgent)

In pre-2.8.x versies, verstrekt FXOS drie verschillende output van de showtechnologie. De FPRM-bundel bevat logbestanden voor Management Input/Output (MIO) - de supervisor-engine - en de Service Manager)

Normaal gesproken genereert u alle 3 bundels. Gebruik de details van de show tech-support <optie> om de 3 verschillende logbundels voor TAC-analyse te genereren:

```
<#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
```

- Als u de detailoptie niet specificeert, krijgt u de uitvoer op het scherm
- Met de detailoptie wordt een tar-bestand gemaakt

Zo controleert u de gegenereerde bestandsnamen:

```
<#root>
```

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

```
dir techsupport/
```

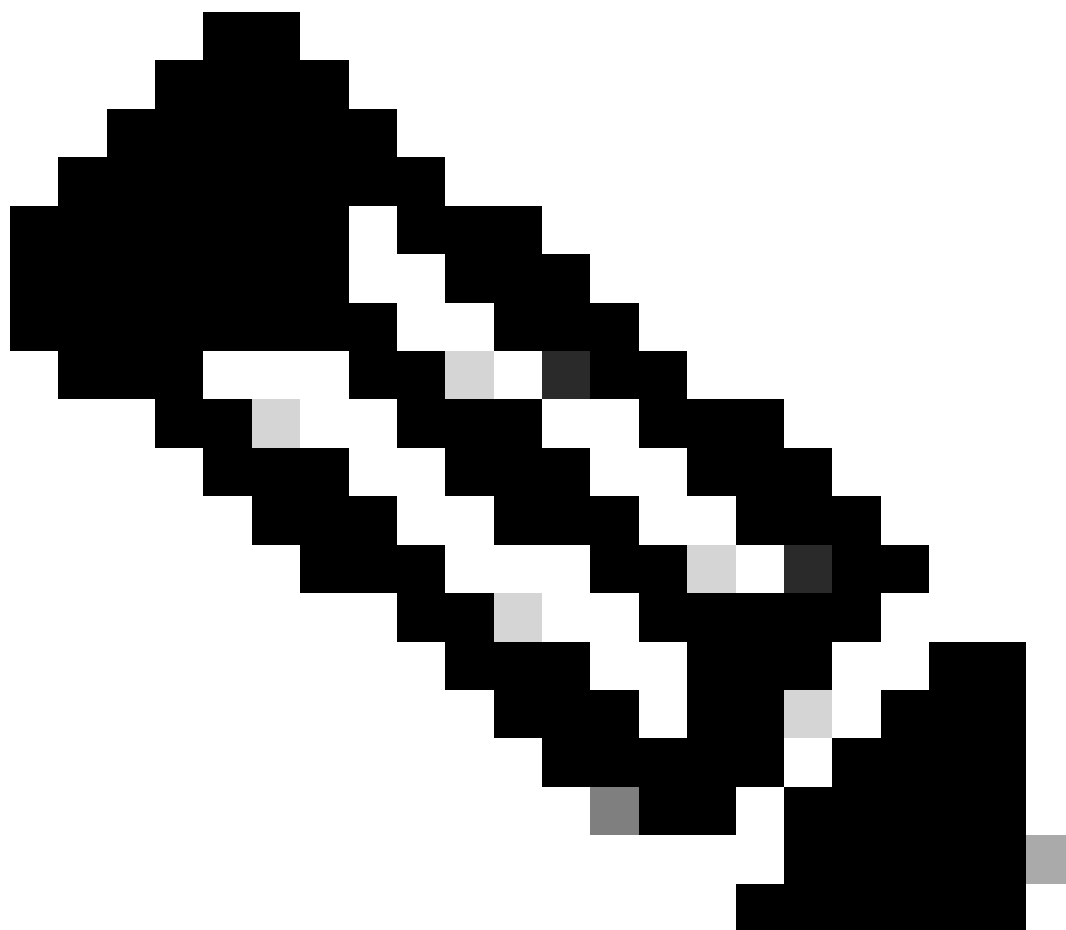
```
1 15595520 Apr 09 17:29:10 2017 20170409172722_FPR4140_FPRM.tar
1 962560 Apr 09 17:32:20 2017 20170409172916_FPR4140_BC1_all.tar
1 7014400 Apr 09 18:06:25 2017 Firepower-Module1_04_09_2017_18_05_59.tar
```

Om een bundel van CLI te exporteren:

```
<#root>
```

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

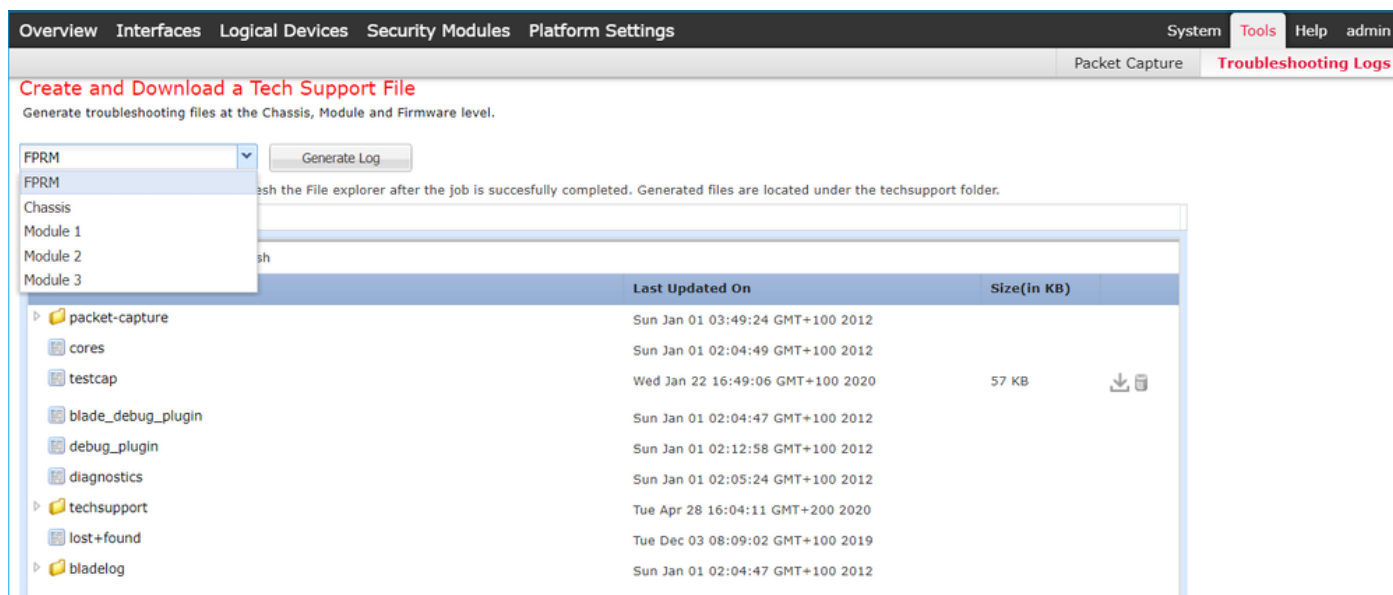
```
copy workspace:///techsupport/20170409172722_FPR4140_FPRM.tar ftp|tftp|scp|sftp://username@192.168.0.1/
```



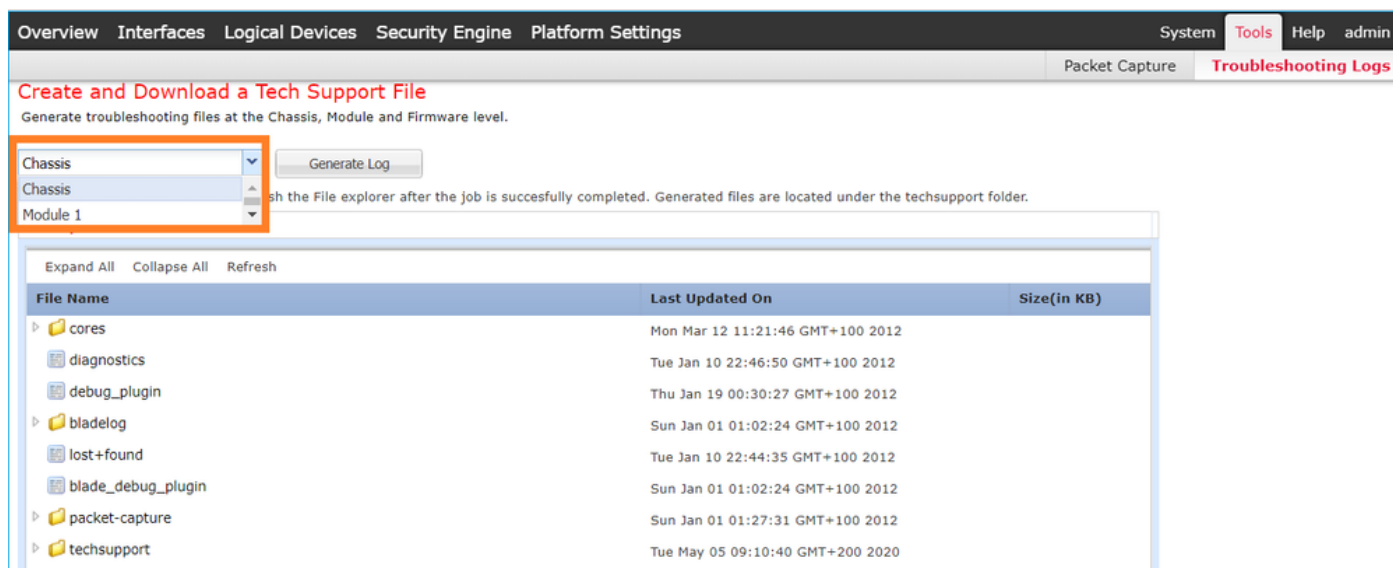
Opmerking: naast de FXOS show technologie outputs hebben de logische apparaten zoals ASA en/of FTD hun eigen aparte show technologie mogelijkheid. In het geval van Multi-Instance (MI) heeft elke instantie ook zijn eigen aparte show-tech bundel. Ten slotte worden MI-show-techs niet ondersteund op FCM

Vanaf FXOS 2.6 wordt de technische ondersteuning van FXOS generatie en download beschikbaar gesteld via Firepower Chassis Manager (FCM) UI onder Gereedschappen > Logbestanden voor probleemoplossing

In FP9300:



In FP41xx:



V. Hoe het IP-adres, het netmasker en de gateway voor chassisbeheer te verifiëren en te wijzigen?

Er zijn een paar manieren om de beheerinterfaceconfiguratie te verifiëren:

<#root>

FPR4115-2-1#

show fabric-interconnect

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

of

<#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:

Zo wijzigt u de IP-instellingen:

```
<#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
```

Over de commit:

```
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
```

Zie voor meer informatie:

[Cisco Firepower 4100/9300 FXOS opdrachtreferentie](#)

V. Hoe voert u een FXOS Ping Test uit?

Navigeer naar het CLI-bereik voor lokaal beheer en gebruik de opdracht ping:

```
<#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
```

V. Hoe het Mac-adres van de out-of-band beheerinterface te verifiëren?

Navigeer naar het CLI-bereik voor lokaal beheer en gebruik deze opdracht:

```
<#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)
```

V. Hoe controleert u of de out-of-band beheerinterface actief is?

Naast Operable onder scope fabric-interconnect a > show, kunt u deze opdracht gebruiken:

```
<#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)
```

U kunt deze opdracht ook gebruiken. Het gedeelte Scope toont Link UP. Merk op dat UP in de

volgende lijn wordt getoond:

```
<#root>
```

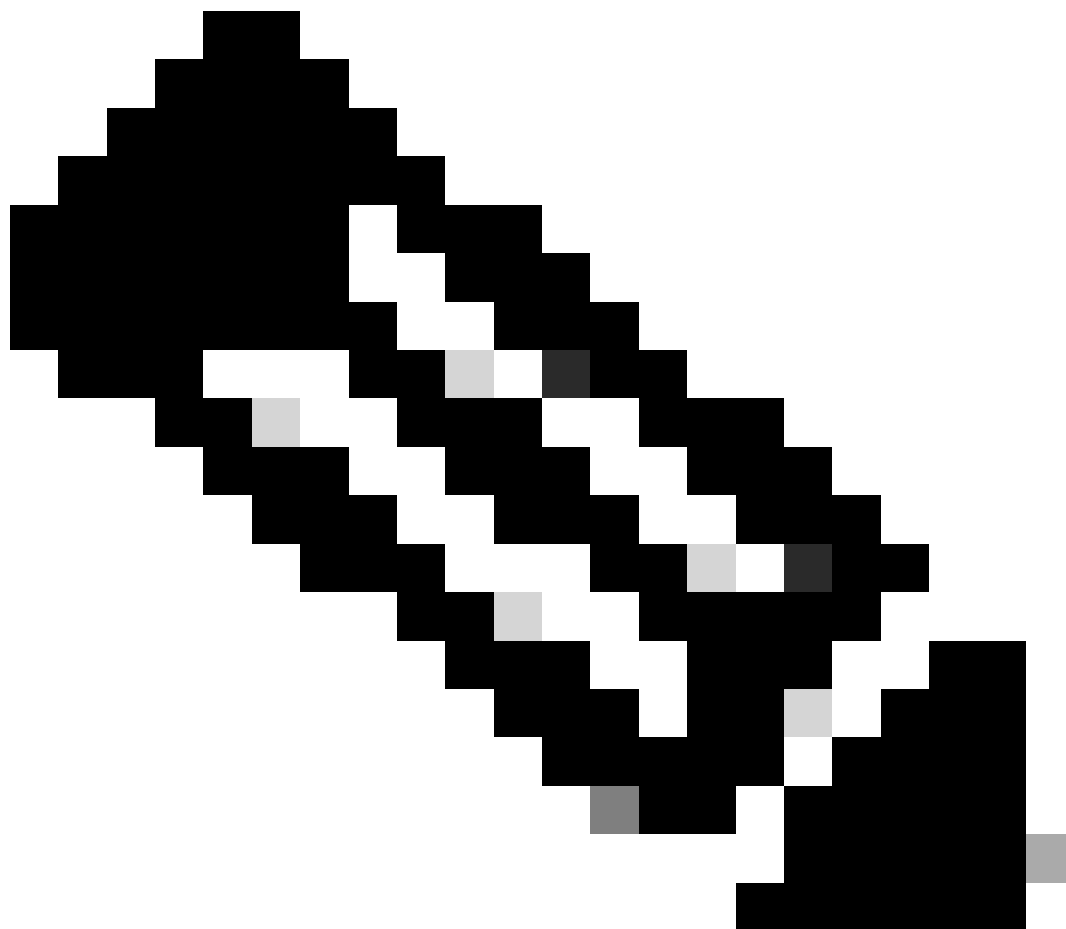
```
FPR4115-2-1#
```

```
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)
```



Opmerking: de status UP is de beheerdersstatus van de interface. De status blijft UP zelfs als u de fysieke kabel of SFP-module loskoppelt. Een ander belangrijk punt is de STATUS RUN, wat betekent dat de link operationeel is (lijnprotocol staat op).

U kunt de logische status van de interface als volgt definiëren:

```
<#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)
```

Om het nog eens ter sprake te brengen:

```
<#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)
```



Opmerking: Er is een show interface samenvatting en toon interface mgmt 0 onder fxos mode die de mgmt0 interface zoals beneden en Admin beneden respectievelijk. Gebruik dit niet als een verwijzing naar beneden.

```
<#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
```

Als u een show run interface mgmt0 onder fxos-modus, sluit kracht uit onder die interface. Nogmaals, gebruik dit niet als verwijzing dat het neer is:

```
<#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
```

V. Hoe de FXOS Routing Table te controleren?

Het out-of-band beheer is alleen afhankelijk van de standaardgateway. Zorg er daarom voor dat de gekozen standaardgateway verbinding met clients mogelijk maakt waarvoor toegang tot het systeem vereist is. Er is een show ip route vrf all commando onder connect fxos, maar dit wordt niet gebruikt voor out-of-band beheer.

V. Hoe de FXOS ARP-tabel te controleren?

De ARP-tabel is niet zichtbaar vanuit de FXOS CLI. U kunt pakketopname ook gebruiken onder

fxos-modus (ethalyzer) om ARP op te nemen en/of verkeer aan/van het beheer te controleren.

Dit is een voorbeeld om ARP pakketten op te nemen. U kunt het opnamefilter in om het even wat veranderen. Dat filter lijkt op tcpdump-filter:

```
<#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)#
```

Daarnaast kunt u de opname in een bestand opslaan en vervolgens naar een externe server exporteren:

```
<#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
```

V. Hoe FXOS-foutgebeurtenissen te controleren?

Gebruik het bevel van de showfout:

```
<#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

U kunt de fouten ook filteren op basis van de ernst:

```
<#root>
```

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

```
show fault ?
```

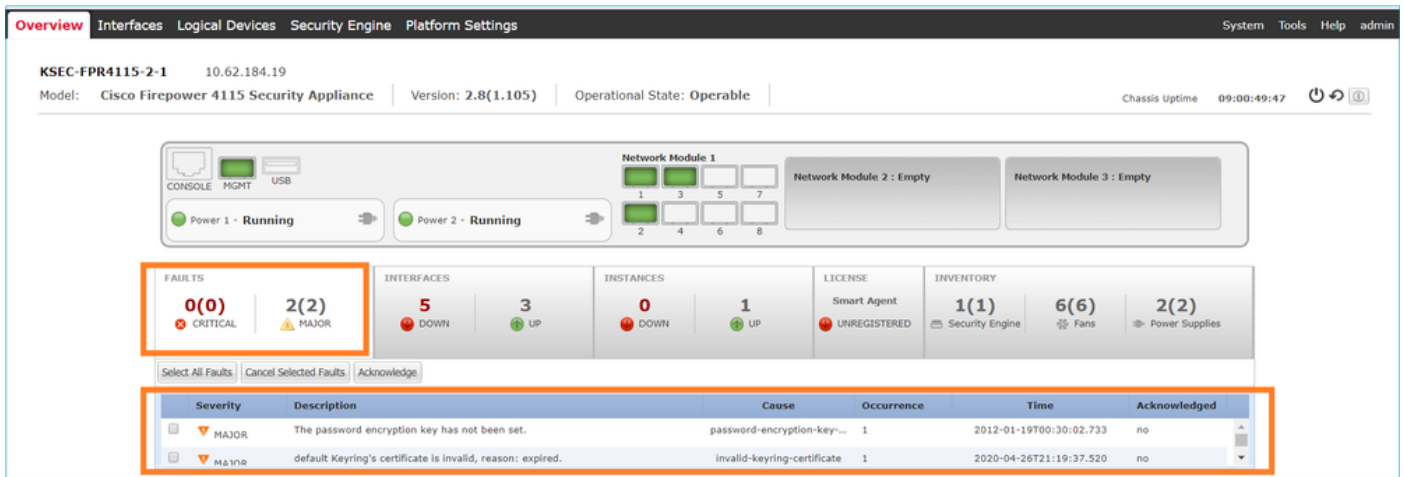
```
0-18446744073709551615 ID
<CR>
> Redirect it to a file
>> Redirect it to a file in append mode
cause Cause
detail Detail
severity Severity
suppressed Fault Suppressed
| Pipe command output to filter
```

```
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.

De zelfde fouten zijn ook zichtbaar van het FXOS UI- Overzicht > FAULTS dashboard:



V. Hoe wijzigt u de hostnaam van het systeem?

U gebruikt de opdracht set name onder de systemscope:

```
<#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#
```

V. Wat is de "computing mismatch" onder de status output van de showserver?

Een nieuw geïnstalleerde beveiligingsmodule moet worden bevestigd en opnieuw geïnitieerd voordat deze kan worden gebruikt. Dit is ook het geval als u een eenheid via RMA vervangt.

```
<#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#

```

De computing mismatch kan deze foutgebeurtenis veroorzaken:

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

De show service-profielstatus toont Niet gekoppeld alsof de module er niet is.

Stappen om vanaf de CLI te bevestigen:

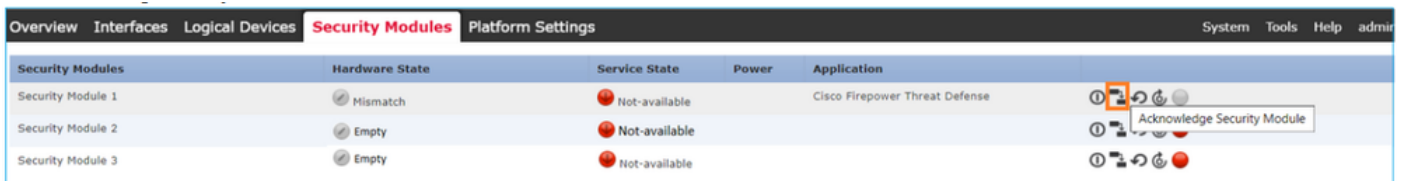
```
<#root>
```

```
scope chassis 1
```

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

```
commit-buffer
```

U kunt ook de Chassis Manager UI gebruiken om de module te bevestigen:



Q. Wat is de Betekenis van "Token Mismatch" in toon slot Output?

Dit geeft aan dat de veiligheidsmodule nog niet is hergeïnitieerd na te zijn bevestigd:

```
<#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 #
```

Stappen om via CLI te reinitialiseren:

```
<#root>
```

```
scope ssa  
scope slot <#>  
reinitialize  
commit-buffer
```

Op Firepower 41xx kan dit ook betekenen dat de SSD ontbreekt of dat deze defect is. Controleer of de SSD nog bestaat via show inventaris opslag onder scope server 1/1:

```
<#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

V. Hoe stelt u tijdzone, NTP en DNS in via CLI?

Dit wordt geconfigureerd onder de FXOS Platform Instellingen. Pas de instructies van dit document toe: [FXOS Platform Instellingen](#).

Zo controleert u de tijdsinstellingen van het chassis:

```
<#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
```

Om de module/bladetijd van de module Boot CLI te waarmaken, gebruikt u deze 3 opdrachten:

```
<#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>
```

Controleer dit document voor meer informatie over NTP-verificatie en probleemoplossing:
[Instellingen voor Network Time Protocol \(NTP\) op Firepower FXOS-applicaties configureren, controleren en problemen oplossen](#)

V. Hoe stelt u slimme licenties en HTTP-proxy in?

Smart Licensing is nodig op FXOS-chassis in het geval van een ASA-logisch apparaat. Raadpleeg dit document voor meer informatie: [Licentiebeheer voor de ASA](#)

Hier volgt een voorbeeld van een licentiestatus:

```
<#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

Of:

<#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

V. Hoe Syslog via CLI te configureren?

Controleer deze documenten:

- [Syslog op FirePOWER FXOS-applicaties configureren](#)
- [FXOS Config Guide: Platform-instellingen Syslog](#)

V. Hoe kan ik SNMP configureren op FirePOWER-applicaties?

Controleer dit document: [SNMP configureren op FirePOWER NGFW-applicaties](#)

V. Hoe installeert/vervangt u een SSL-certificaat dat door de Chassis Manager wordt gebruikt?

Dit document kan helpen: [Installeer een betrouwbaar certificaat voor FXOS Chassis Manager](#)

V. Hoe kunt u problemen oplossen met verkeersstromen via het FPR9300-chassis?

Controleer deze documenten:

- [Firepower Data Path Problemen oplossen fase 1: Packet Ingress](#)
- [Probleemoplossing voor Firepower Data Path: Overzicht](#)
- [Vastleggingen van de Firepower-firewall analyseren om netwerkproblemen effectief te troubleshooten](#)

V. Hoe de Chassis Mac-adrestabel te bekijken?

Voor FP41xx- en FP93xx-platforms gebruikt u een van deze opdrachten:

```
<#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

V. Hoe de MAC-adressen van de Chassis-interface te bekijken?

Gebruik deze opdracht:

```
<#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

V. Hoe doet u wachtwoordherstel op FXOS Supervisor (MIO)?

Voor wachtwoordherstelprocedures op FP41xx en FP9300 gebruik dit document: [Password Recovery Procedure for Firepower 9300/4100 Series applicaties](#)

V. Hoe doet u wachtwoordherstel op ASA of FTD Logical Device?

Om het logische apparaatwachtwoord opnieuw in te stellen, moet u het apparaat opnieuw opstarten. Met het Bootstrap Disaster Recovery-proces kunt u een van deze items wijzigen:

- ASA/FTD beheer IP - IP, netmasker, gateway, IPv6, prefixlengte
- ASA-wachtwoord
- FTD registratiesleutel, wachtwoord, FMC IP, zoekdomeinen, firewallmodus, DNS-servers, FQDN
- ASA cluster IP pool, netmasker, gateway, prefixlengte, virtuele IP.



Opmerking: Het bootstrap-herstelproces moet worden uitgevoerd in een onderhoudsvenster (MW), omdat het een logische toestel herladen vereist

Voorbeeld 1

U kunt de FXOS UI gebruiken om de bootstrap-instellingen van een logisch apparaat te bewerken. Navigeer naar het tabblad Logische apparaten en bewerk een apparaat

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

Stel het wachtwoord in:

Cisco Firepower Threat Defense - Bootstrap Configuration

General Information **Settings** Agreement

Management type of application instance:	<input type="text" value="FMC"/>	Set: Yes
Search domains:	<input type="text"/>	
Firewall Mode:	<input type="text" value="Routed"/>	Set: Yes
DNS Servers:	<input type="text"/>	
Fully Qualified Hostname:	<input type="text"/>	
Password:	<input type="password" value="....."/>	Set: Yes
Confirm Password:	<input type="password" value="....."/>	
Registration Key:	<input type="text"/>	Set: Yes
Confirm Registration Key:	<input type="text"/>	
Firepower Management Center IP:	<input type="text"/>	
Firepower Management Center NAT ID:	<input type="text"/>	
Eventing Interface:	<input type="text"/>	

Zodra u dit bericht opslaat verschijnt:

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

Voorbeeld 2

Dit is een voorbeeld van ASA die wachtwoordwijziging/herstel mogelijk maakt:

```
<#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
```

Controleer of de ASA online is voordat u er verbinding mee maakt en gebruik het nieuwe wachtwoord inschakelen.

```
<#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 #
```

V. Hoe het huidige wachtwoord van een FXOS-gebruiker (bijvoorbeeld beheerder) te wijzigen?

Gebruik deze procedure:

```
<#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 #
```

V. Hoe FXOS te downgraden?

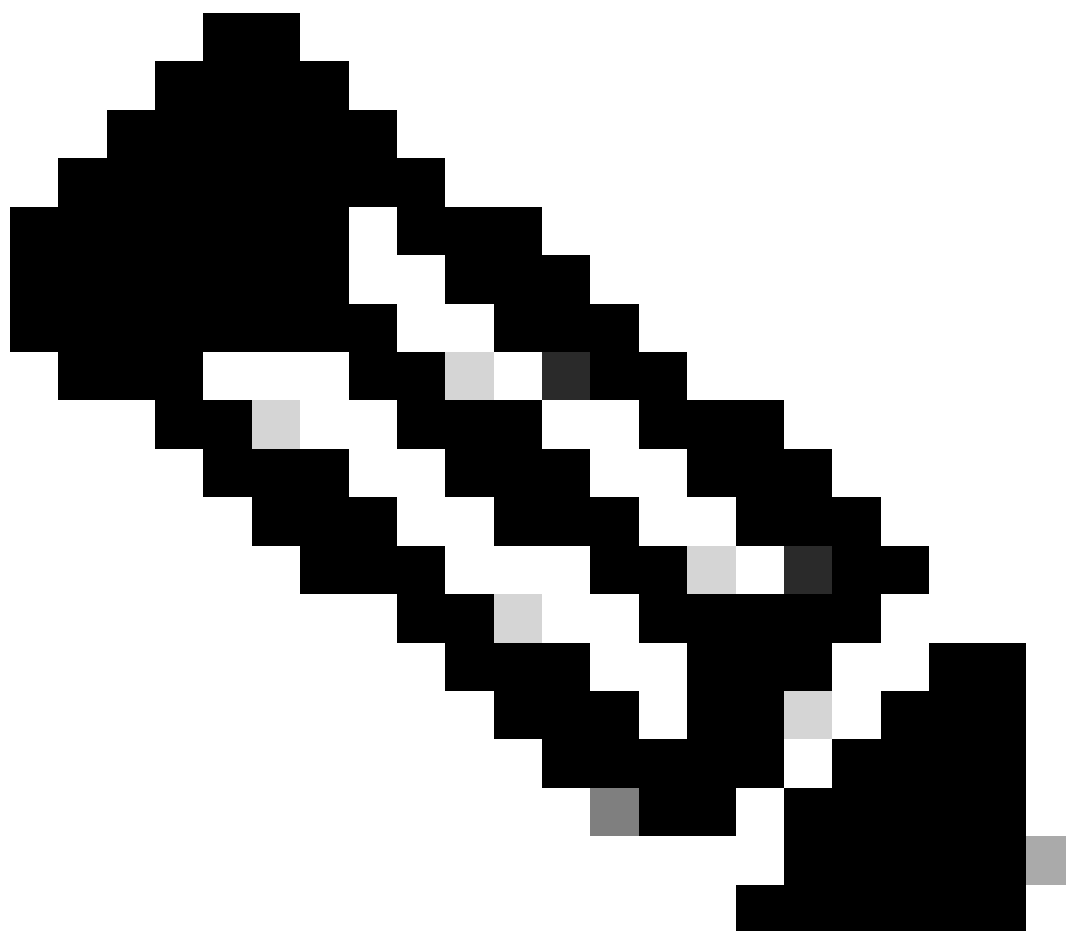
De downgrade van FXOS-afbeeldingen wordt niet officieel ondersteund. De enige door Cisco ondersteunde methode voor het downgraden van een beeldversie van FXOS is om een volledig

nieuw image van het apparaat uit te voeren. Dit wordt gedocumenteerd in [Firepower 4100/9300 upgrade-pad](#)

V. Hoe een ASA logisch apparaat te downgraden/upgraden?

ASA-versie downgraden/upgraden via Chassis Manager: [de beeldversie bijwerken voor een logisch apparaat](#)

Als u via CLI wilt wijzigen, gebruikt u de sectie Config Guide: [De versie van de afbeelding bijwerken voor een logisch apparaat](#)



Opmerking: zodra je een committing-buffer op CLI hebt, wordt de module opnieuw gestart. Op dezelfde manier voor chassismanager, zodra je ok, het herstart de module. Het is niet nodig om het handmatig opnieuw te starten.

V. Hoe de FXOS-upgradestatus via CLI te controleren?

De upgrade is voltooid zodra alle onderdelen de status Klaar hebben bereikt:

```
<#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
```

Andere nuttige opdrachten

```
<#root>
```

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

```
show fsm status
```

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

```
show fsm status expand
```

V. Hoe kan ik het logische apparaat opnieuw laden vanuit FXOS CLI?

De voorkeur gaat uit naar het gebruik van de FCM UI. Als om welke reden dan ook de UI niet toegankelijk is, gebruik dan deze opdrachten:

```
<#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
```

V. Hoe de uptime van het FXOS-chassis en de laatste reden voor herladen te controleren?

FXOS uptime controle is handig als er een FXOS traceback is. U kunt de FXOS zien vanuit de UI (FCM) of vanuit de CLI:

```
<#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
```

Gebruik bovendien deze opdracht om de laatste herladingsreden te bepalen:

```
<#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)
```

Voor de uptime van FPR2100 doet u het volgende:

1. Ontvang de bundel 'show tech-support fprm detail'
2. Extraheer de inhoud van de bundel
3. Controleer het bestand tmp/inventory_manager.xml

Er is een ingang die uptime in seconden toont:

```
<#root>
```

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

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

V. Hoe de beschikbare schijfruimte op FXOS te controleren?

Ook wel 'werkruimte' genoemd:

```
<#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

```

Om de vrije ruimte van de laarsflits te controleren. Let op dat deze output ook de grootte en het gebruik van de werkruimte laat zien:

<#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

```

V. Hoe kan de configuratie van FXOS worden hersteld naar fabriekswaarden?

Gebruik deze opdracht:

```
<#root>
```

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

```
connect local-mgmt
```

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

```
erase configuration
```



Opmerking: hiermee wordt het systeem opnieuw opgestart en wordt de gehele configuratie gewist, inclusief het IP-adres van het beheerprogramma. Zorg er daarom voor dat er een console is aangesloten. Nadat het systeem opnieuw is opgestart, wordt de setup-toepassing uitgevoerd en kunt u de informatie over de beheerconfiguratie opnieuw invoeren.

Voorbeeld

```
<#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):

```

V. Hoe de Bootstrap Configuration (toegewezen interfaces, versie, etc.) van een logisch apparaat te controleren via de FXOS CLI?

```

<#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

```

Dit komt overeen met:

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

Als u alle FXOS-configuratie wilt zien, voegt u het trefwoord 'all' toe (de uitvoer is meerdere pagina's lang):

```
<#root>
```

```
FPR4100-3-A /ssa #  
show configuration all
```

V. Hoe de status (poorttype, status) van de FXOS-interfaces te controleren?

```
<#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 #
```

Dit komt overeen met:

The screenshot shows a network management interface with a top navigation bar (Overview, Interfaces, Logical Devices, Security Engine, Platform Settings) and a right-hand menu (System, Tools, Help, admin). Below the navigation is a hardware bypass diagram showing Network Module 1 with ports 1-8, and Network Modules 2 and 3 which are empty. The main area displays a table of interfaces under the 'All Interfaces' tab.

Interface	Type	Admin Speed	Operational Speed	Application	Operation State	Admin State
MGMT	Management					Enabled
Port-channel48	cluster	10gbps	indeterminate		admin-down	Disabled
Ethernet1/1	data	10gbps	10gbps		admin-down	Disabled
Ethernet1/2	data	10gbps	10gbps		admin-down	Disabled
Ethernet1/3	data	10gbps	10gbps		admin-down	Disabled
Ethernet1/4	data	10gbps	10gbps		sfp-not-present	Disabled
Ethernet1/5	data	1gbps	1gbps		admin-down	Disabled
Ethernet1/6	data	1gbps	1gbps	FTD	up	Enabled
Ethernet1/7	mgmt	1gbps	1gbps	FTD	up	Enabled
Ethernet1/8	data	1gbps	1gbps	FTD	up	Enabled

V. Hoe het CPU- en geheugengebruik op het chassis te controleren?

```
<#root>
```

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

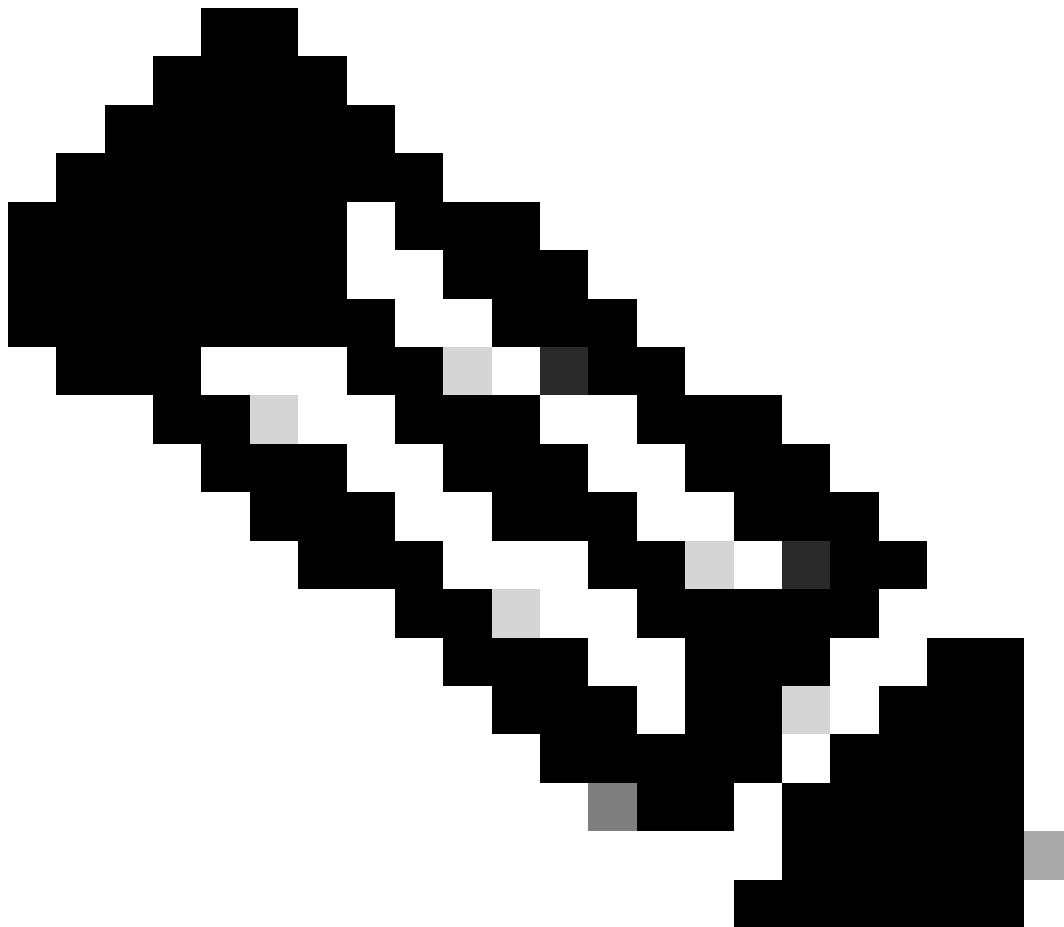
```
connect fxos
```

```
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



Opmerking: het totaal dat in de uitvoer wordt getoond, kan verschillen, zelfs voor 2 apparaten die tot hetzelfde model behoren. Het totaal is meer bepaald afkomstig van de gratis opdrachtoutput die op zijn beurt weer afkomstig is van de /proc/meminfo.

U controleert het geheugen als volgt:

```
<#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:

Controleer het geheugengebruik per proces (RES = fysiek geheugen):

<#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
...											

Tip:

1. Verzamel de uitvoer van het showprocesgeheugen
2. Plakt de uitvoer naar een bestand op een Linux-computer (cat > top.log)
3. Sorteert het bestand op de kolom RES

Hier zie je de GBytes, de MBytes, enzovoort.

```
<#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
```

V. Hoe het type Chassis-interfacetransceiver te controleren?

Gebruik in Firepower 4100/9300 deze opdracht:

```
<#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)#
```

In het geval van vezels is de output:

```
<#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
```

Gebruik in Firepower 1000/2100 deze opdracht:

```
<#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:

V. Hoe de module/bladeserver/server/netmod-informatie (HW-type/PID/SN/geheugen/kernen enz.) te controleren?

Deze opdracht toont de Product-ID (PID) en het serienummer (SN) van chassis en modules (netmods)

```
<#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 heeft 2 sleuven voor netwerkmodules (2 en 3) en het apparaat in het voorbeeld heeft een FTW-netmod geïnstalleerd in sleuf 3.

```
<#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

Server1/1 = module/blade 1

Server1/2 = module/blade 2

Server1/3 = module/blade 3

FPR41xx-model PID's:

- 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

U kunt ook andere informatie krijgen onder scope server <chassis-id/blade-id>:

<#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:

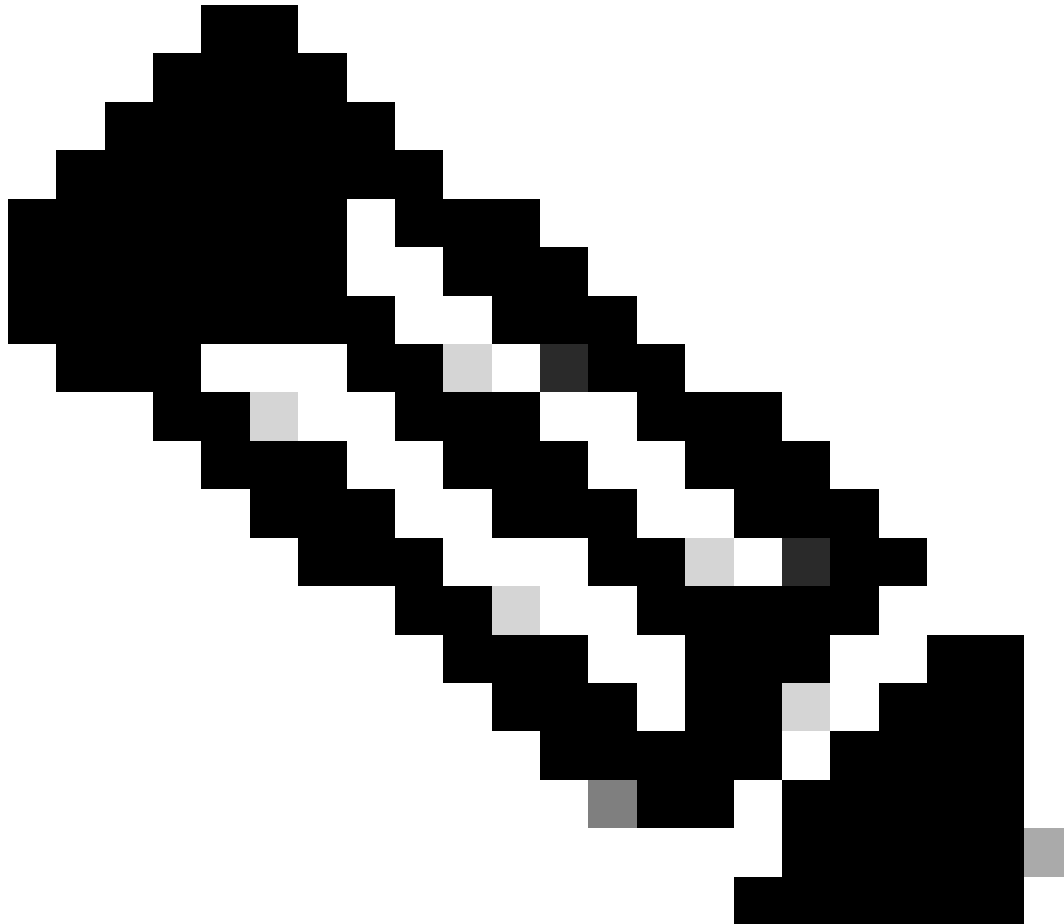
Mode: RAID 1 Mirrored
Description:
Protect Configuration: Yes

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 #



Opmerking: op FP41xx-platforms, omdat ze geen RAID gebruiken, geeft de display-inventarisopslag de controllerstatus als onbekend weer. De belangrijkste reden waarom ze niet RAID zijn is dat de tweede SSD wordt gebruikt voor andere functies zoals MSP (Malware Storage Pack) op een logische FTD-apparaat.

V. Hoe een ASA- of FTD-afbeelding te verwijderen uit FXOS GUI en CLI?

Van FCM GUI:

U kunt als volgt verwijderen uit de GUI door naar **Systeem > Updates** te navigeren en de afbeelding te verwijderen:

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

Van 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

V. Hoe de FXOS-versie van de CLI te controleren?

Er zijn een paar manieren om dit te doen.

Weg 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)
```

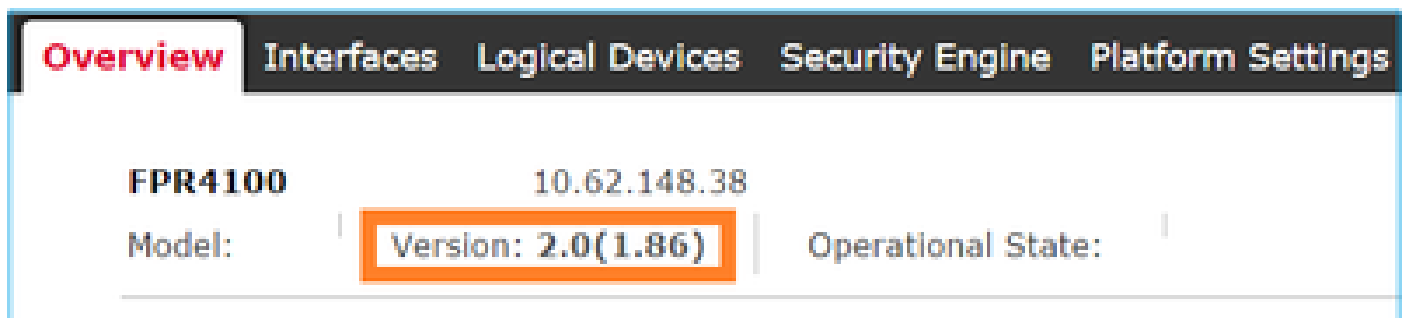
```
Startup-Sys-Vers: 5.0(3)N2(4.01.65)
```

```
Act-Kern-Status: Ready
```

```
Act-Sys-Status: Ready
```

```
Bootloader-Vers:
```

Dit is hetzelfde als dat u kunt zien vanuit de FCM GUI:



Weg 2

```
<#root>
```

```
FP4145-1#
```

```
show version
```

```
Version: 2.6(1.192)
```

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

Q. Hoe te om Interfaces MTU op FXOS te verifiëren?

Het Firepower 4100/9300 chassis ondersteunt jumboframes die standaard ingeschakeld zijn. U kunt interface MTU met deze opdracht controleren:

```
<#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
```

U kunt ook MTU controleren in de fxos-opdrachtshell:

```
<#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

V. Hoe controleert u de geïnstalleerde toepassingen?

Vanuit het chassis gebruikt CLI de opdrachtscope ssa en toont vervolgens de slot uitvouwen detail.

Dezelfde informatie vindt u op bestand sam_techsupportinfo binnen het chassis show tech bundel.

```
<#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

V. Hoe de poortkanaalconfiguratie via FXOS CLI te verifiëren?

Poortkanaal-verificatieopdrachten

Controle 1

U kunt als volgt controleren welke poortkanalen momenteel op het chassis zijn geconfigureerd:

```
<#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-Channel	Type	Protocol	Member Ports
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)

```
-----
```

Controle 2

Zo verifieert u de poortkanalen die zijn toegewezen aan een logisch apparaat:

```
<#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

```

Controle 3

U kunt als volgt de verkeersstatistieken van Port-Channel per poort controleren:

<#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%

Controle 4

U kunt als volgt de details van een specifiek poortkanaal controleren:

<#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]

```

Controle 5

Zo controleert u de lokale LACP-systeemid:

<#root>

FPR9K-1-A(fxos)#

show lacp system-identifier

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

Controle 6

Om de LACP-systeem-ID van de stroomopwaartse apparatuur samen met de LACP-statusvlaggen te controleren:

<#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 Port Priority	Partner Oper Key		Partner 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 Port Priority	Partner Oper Key		Partner Port State
	32768	0xb		0x3d

Controle 7

Zo controleert u de historie van de poortkanaals-gebeurtenissen:

<#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
ltl : 0x0 (0)
lif : 0x0
iod : 0x78 (120)
global id : 3
flag : 0
lock count : 0
num. of SIs: 0
ac mbrs : 0 0
lACP graceful conv disable : 0
lACP 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
lACP 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]

Controle 8

Debug lacp alles produceert een zeer grote output:

```
<#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 actorpor
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_tl(1718): Executing [mcecm_api_is_pc_mcec]
2017 Jul 11 10:42:24.361849 lACP: lACP_debug_wrapper_tl(1718): input: if_index = [0x16000000]
2017 Jul 11 10:42:24.361857 lACP: lACP_debug_wrapper_tl(1718): Executing [mcecm_cache_is_pc_mcec]
2017 Jul 11 10:42:24.361865 lACP: lACP_debug_wrapper_tl(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
```

tip

Controleer of u LACP-pakketten van de peer ontvangt. De Ethernet1/3-interface ontvangt bijvoorbeeld LACP-pakketten, maar Ethernet1/4-nee:

```
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
```

Controle 9

In deze uitvoer is de interface Ethernet1/4 een lid van Port-Channel, maar in Individuele modus (opgeschort aan de kant van de switch):

```
<#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]

Controle 10

In deze uitvoer is de interface Ethernet1/3 operationeel en lid van PortChannel1 terwijl Ethernet1/4 hoewel lid is van PortChannel1 zich in Individuele modus bevindt. Let op dat Ethernet1/3 pakketten verstuurt (tx) en ontvangt (rx), maar Ethernet1/4 verstuurt alleen (rx) geen tx:

```
<#root>
```

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

```
debug lacp pkt
```

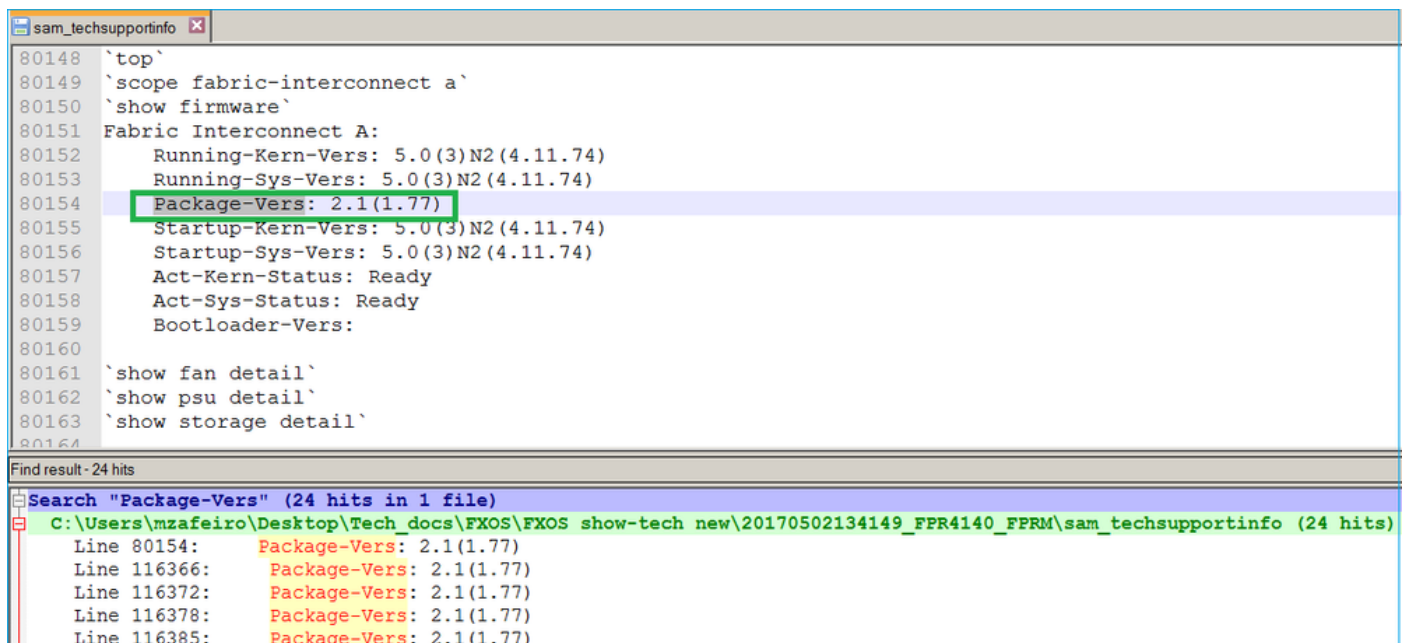
```
ciscofcm01-A(fxos)# 2017 Jul 11 11:04:05.278736 lacp: lacp_net_process_rx_data(480): Ethernet1/3(0x1a002000): Rx LACP PDU len: 110
2017 Jul 11 11:04:05.602855 lacp: lacp_net_tx_data(247): Ethernet1/3(0x1a002000): Tx LACP PDU len: 110
2017 Jul 11 11:04:05.983134 lacp: lacp_net_tx_data(247): Ethernet1/4(0x1a003000): 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 len: 110
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 len: 110
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 len: 110
```

Voor meer informatie kunt u dit document raadplegen:

Q. Hoe de FXOS-bundelversie te vinden in de Show Tech Output?

Weg 1

In het FPRM tar-bestand kunt u de inhoud van het FPRM_A_TechSupport.tar.gz-bestand uitnemen. Open vervolgens het bestand sam_techsupportinfo en zoek naar Package-Verse:



```
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#

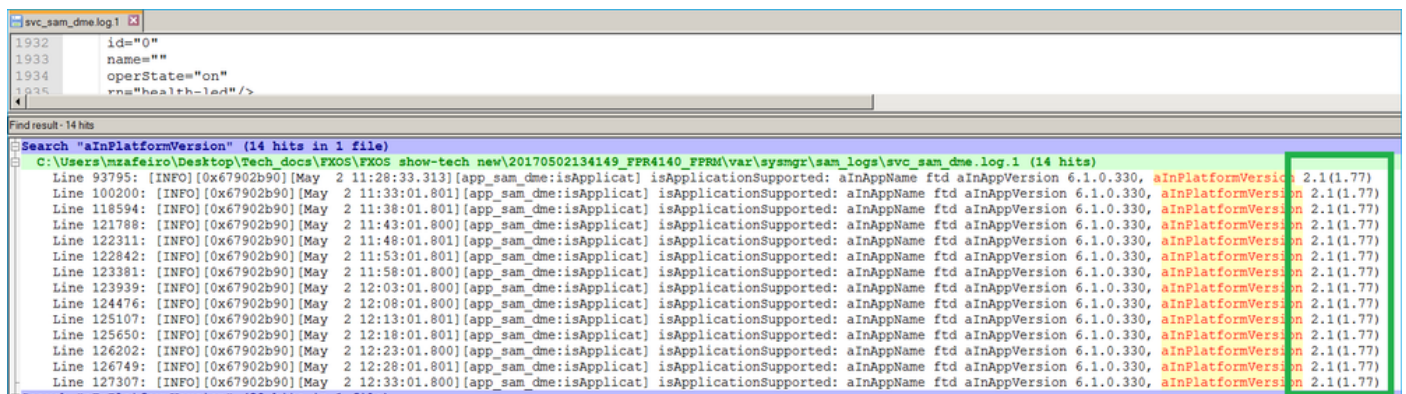
show fabric-interconnect firmware

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:

Weg 2

In het FRPM tar-bestand kunt u de inhoud van het FPRM_A_TechSupport.tar.gz-bestand uitnemen. Open vervolgens het bestand /var/sysmgr/sam_logs/svc_sam_dme.log en zoek naar het trefwoord aInPlatformVersion:



The screenshot shows a Windows file explorer window titled 'svc_sam_dme.log'. Below the file list, a search results window is open, displaying 14 hits for the search term 'aInPlatformVersion'. The search results are listed in a table format with columns for line number, log level, timestamp, and log message. The 'aInPlatformVersion' field in each log entry is highlighted in green.

Line	Level	Timestamp	Message
93795	[INFO]	[0x67902b90] [May 2 11:28:33.313]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
100200	[INFO]	[0x67902b90] [May 2 11:33:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
118594	[INFO]	[0x67902b90] [May 2 11:38:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
121788	[INFO]	[0x67902b90] [May 2 11:43:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
122311	[INFO]	[0x67902b90] [May 2 11:48:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
122842	[INFO]	[0x67902b90] [May 2 11:53:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
123381	[INFO]	[0x67902b90] [May 2 11:58:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
123939	[INFO]	[0x67902b90] [May 2 12:03:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
124476	[INFO]	[0x67902b90] [May 2 12:08:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
125107	[INFO]	[0x67902b90] [May 2 12:13:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
125650	[INFO]	[0x67902b90] [May 2 12:18:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
126202	[INFO]	[0x67902b90] [May 2 12:23:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
126749	[INFO]	[0x67902b90] [May 2 12:28:01.801]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)
127307	[INFO]	[0x67902b90] [May 2 12:33:01.800]	[app_sam_dme:isApplicat] isApplicationSupported: aInAppName ftd aInAppVersion 6.1.0.330, aInPlatformVersion 2.1(1.77)

V. Hoe de MIO-interfaceinformatie (toevoeging/verwijdering) doorgeeft aan de bladetoepassing (FTD, ASA)?

Het gebruikt de MIO app-agent component.

Bijvoorbeeld, wanneer een nieuw Port-Channel wordt toegewezen aan de FTD van MIO:



FTD app-agent debug shows:

```
<#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>

```

V. Welk serienummer (SN) moet worden gebruikt in het geval van RMA's van het FirePOWER-chassis?

Het chassis van de vuurkracht heeft meerdere SN's. Het product dat wordt gebruikt voor een RMA-verzoek kan uit deze uitgangen worden genomen:

```
<#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

```

OF:

```
<#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

OF:

<#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

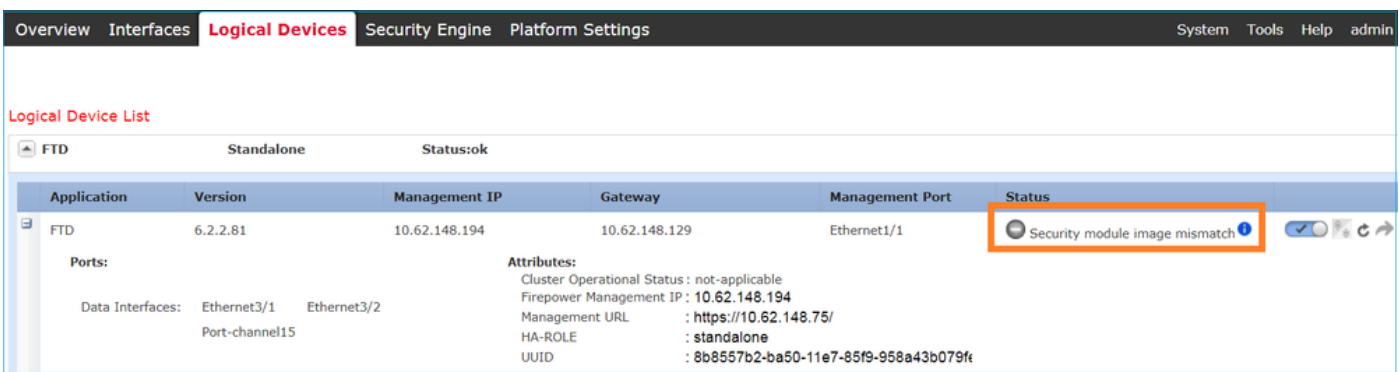
Q. kunt u SSD1 tussen 2 verschillende FXOS Chassis ruilen?

Het korte antwoord is neen. SSD1 bevat het Toepassingsbeeld (bijvoorbeeld FTD of ASA). Als u de SSD1 uit het chassis haalt en in een ander chassis steekt, komt de module niet omhoog en verschijnen deze fouten:

Kritieke F1548 2017-11-08T11:36:40.095 427280 bladeswitch gedetecteerd op sleuf 1

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

Onjuist beeld van security module



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-ba50-11e7-85f9-958a43b079ft

Lokale schijf 1 ontbreekt op server 1/1

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

V. Hoe controleert u het stroomverbruik van het chassis?

Vanaf FXOS 2.2.1-versie kunt u de opdracht toon omgevingsamenvatting gebruiken:

```
<#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

Voor extra info check:

[Chassis voor bewaking en status](#)

V. Hoe de Bootloader-versie controleren?

```
<#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

V. Hoe upgrade je Bootloader?

Na de installatie van de FXOS 2.3.1.58 of later, kan het systeem een kritieke fout op uw security applicatie tonen, wat aangeeft dat de firmware-upgrade van de adapter vereist is:

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

De procedure voor de Bootloader-upgrade wordt op deze link beschreven:

https://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/231/release/notes/231_rn.html#pgf173826

Als u tijdens bootloader upgrade met deze onderstaande fout te maken krijgt, kunt u proberen 'force' optie te gebruiken.

```
<#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 upgrade, 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.]
```

Q. Hoe de Absolute Time-out van SSH uit te schakelen?

Dit is nuttig tijdens laboratorium het testen en het oplossen van problemen. Merk op dat deze absolute timeout een security best practice is om non-zero te zijn en daarom aandachtig te zijn als dit tijdelijk gebeurt in de gebruikersomgeving.

```
<#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

V. Hoe LACS-pakketten op te nemen die zijn bestemd voor de Chassis Supervisor (Control-Plane)?

LACP-pakketten die bestemd zijn voor de Firepower 4100/9300 chassissupervisor (control-plane) zijn ingekapseld in de gegevenssectie van specifieke pakketten en kunnen op de interne inbound-hi interface worden opgenomen met behulp van de opdracht ethalyzer. De LACP PDU-bytes worden ingesloten vanaf bytes met de waarden 01 80 C2 00 00 02 (IEEE 802.3 Slow_Protocols_Multicast-adres) tot het einde van het gegevensgedeelte:

```
<#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 d
      .... ..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 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 .....

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: b8502004000000000000000000000000081000000000000040904...

```

De hex dump kan worden geconverteerd naar PCAP met behulp van online tools.

V. Hoe SSD-informatie te vinden?

De interne SSD-informatie van de chassissupervisor is beschikbaar in alle FXOS-versie die in stap

1, paragraaf Workaround/Solution in [FN72077](#) wordt genoemd:

```
<#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
```

Security engine (blade) 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

V. Hoe wordt de opname van Internal Switch (FXOS) geconfigureerd?

Raadpleeg het artikel [Interne Switch-opnamen van beveiligde firewall en firewall configureren en controleren](#).

Referenties

- [Configuratiehandleiding voor Cisco Firepower 4100/9300 FXOS Secure Firewall Chassis Manager, 2.14\(1\)](#)
- [Cisco Secure FXOS voor FirePOWER 4100/9300 CLI-configuratiehandleiding, 2.14\(1\)](#)
- [Cisco Firepower 4100/9300 FXOS opdrachtreferentie](#)
- [Interne Switch-opnamen van beveiligde firewall en firewall configureren en controleren](#)

Over deze vertaling

Cisco heeft dit document vertaald via een combinatie van machine- en menselijke technologie om onze gebruikers wereldwijd ondersteuningscontent te bieden in hun eigen taal. Houd er rekening mee dat zelfs de beste machinevertaling niet net zo nauwkeurig is als die van een professionele vertaler. Cisco Systems, Inc. is niet aansprakelijk voor de nauwkeurigheid van deze vertalingen en raadt aan altijd het oorspronkelijke Engelstalige document ([link](#)) te raadplegen.