FMC故障排除- HA

目錄

簡介

本文檔介紹如何對Firepower管理中心(FMC)的高可用性(HA)集中常見的同步問題進行故障排除。

必要條件

需求

思科建議您瞭解以下主題：

- FMC - HA配置要求
- Linux shell基礎知識。

採用元件

- 7.2.8版上的FMCv for VMware。

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

背景資訊

本文檔所用實驗室的初始設定遵循基本FMC-HA初始配置的要求。

- 兩個容量或硬體版本相同的FMC。
- 兩個運行相同軟體版本的FMC，入侵規則更新、漏洞資料庫和輕量安全包。

- 兩個具有相應許可證的FMC。

開始之前

- 確保管理員有權訪問兩個FMC。
- 確保管理員有權訪問FMC管理的FTD裝置。

疑難排解指令

FMC故障排除命令。

要驗證FMC裝置之間的連線，使用者可以運行以下命令。

<#root>

> expert

admin@firepower:~$

sudo su

root@firepower:/Volume/home/admin#

ping xx.xx.18.102

```
PING xx.xx.18.102 (xx.xx.18.102) 56(84) bytes of data.
64 bytes from xx.xx.18.102: icmp_seq=1 ttl=64 time=0.533 ms
64 bytes from xx.xx.18.102: icmp_seq=2 ttl=64 time=0.563 ms
64 bytes from xx.xx.18.102: icmp_seq=3 ttl=64 time=0.431 ms
^C
--- xx.xx.18.102 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 59ms
rtt min/avg/max/mdev = 0.431/0.509/0.563/0.056 ms
```

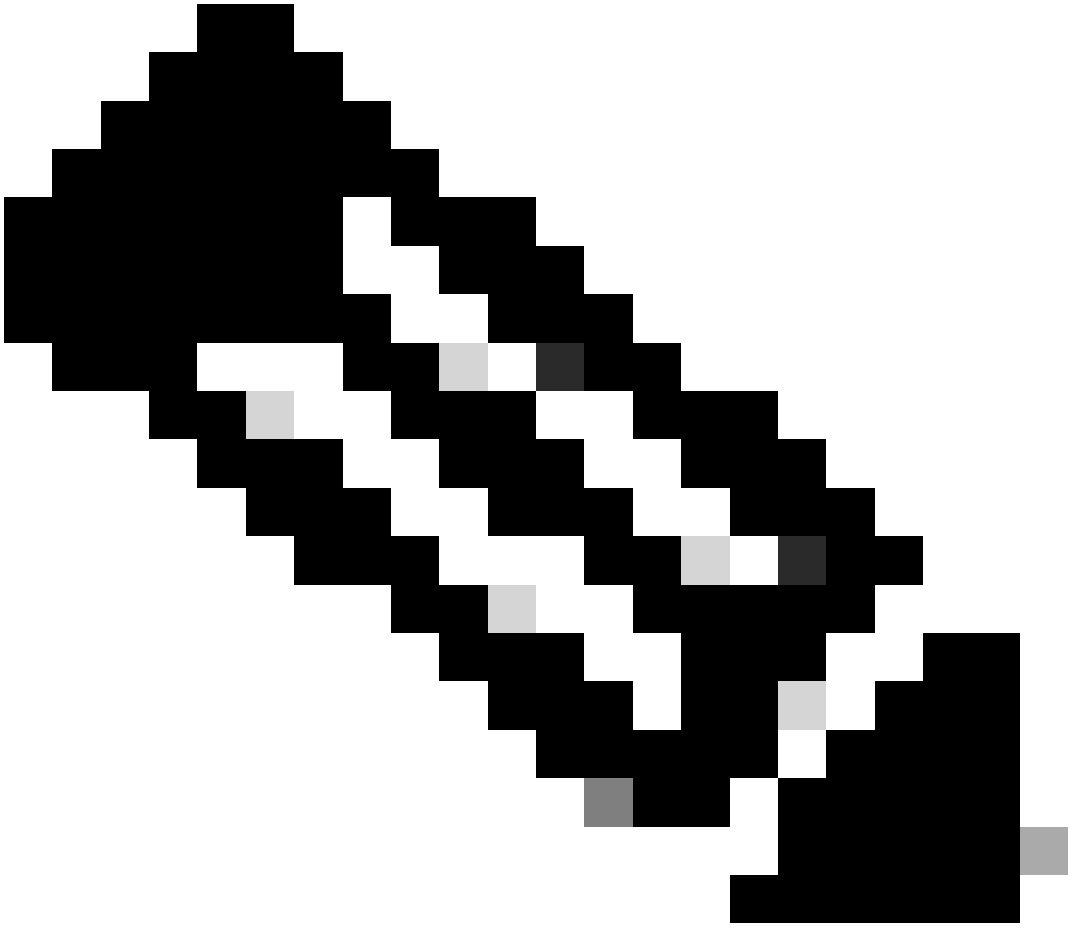
root@firepower:/Volume/home/admin#

netstat -an | grep 8305

```
tcp 0 0 xx.xx.18.101:8305 0.0.0.0:* LISTEN
tcp 0 0 xx.xx.18.101:8305 xx.xx.18.253:48759 ESTABLISHED
tcp 0 0 xx.xx.18.101:8305 xx.xx.18.254:53875 ESTABLISHED
tcp 0 0 xx.xx.18.101:8305 xx.xx.18.254:49205 ESTABLISHED
tcp 0 0 xx.xx.18.101:60871 xx.xx.18.253:8305 ESTABLISHE
```

ping <peer-ip-address>此命令可用於檢查兩台裝置之間的可接通性。

netstat -an | grep 8305此命令顯示連線到埠8305的裝置。



註：埠8305是Firepower裝置上配置的預設埠，用於建立與FMC的通訊通道。

要驗證FMC-HA設定配置，使用者還可以運行指令碼troubleshoot_HADC.pl。 這在以下情況下特別有用：

- 當FMC-HA整合運行狀況降級時。
- 如果其中一個裝置的FMC圖形使用者介面(GUI)存取已遺失，但FMC-CLI存取仍在運作中且可存取。

<#root>

> expert

admin@firepower:~$

sudo su

root@firepower:/Volume/home/admin#

troubleshoot_HADC.pl

```
*************** Troubleshooting Utility **************

1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit

************************************************************
Enter choice:
```

FTD疑難排解指令

疑難排解從FTD到FMC-HA的連線能力，讓使用者驗證需要在兩個FMC上註冊或在HA降級時的裝置連線，並顯示警告「Degraded - Synchronization incomplete (This Management Center has less devices registered)」。

從FTD使用者級別，使用者可以運行這些命令來驗證與FMC的通訊。

<#root>

```
>
```

ping system xx.xx.18.102

```
PING xx.xx.18.102 (xx.xx.18.102) 56(84) bytes of data.
64 bytes from xx.xx.18.102: icmp_seq=1 ttl=64 time=0.595 ms
64 bytes from xx.xx.18.102: icmp_seq=2 ttl=64 time=0.683 ms
64 bytes from xx.xx.18.102: icmp_seq=3 ttl=64 time=0.642 ms
64 bytes from xx.xx.18.102: icmp_seq=4 ttl=64 time=24.4 ms
64 bytes from xx.xx.18.102: icmp_seq=5 ttl=64 time=11.4 ms
^C
--- xx.xx.18.102 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 128ms
rtt min/avg/max/mdev = 0.595/7.545/24.373/9.395 ms
```

> show managers

```
Type : Manager
Host : xx.xx..18.101
Display name : xx.xx..18.101
Version : 7.2.8 (Build 25)
```

```
Identifier : fc3e3572-xxxx-xxxx-xxxx-39e0098c166c
Registration : Completed
Management type : Configuration and analytics

Type : Manager
Host : xx.xx..18.102
Display name : xx.xx..18.102
Version : 7.2.8 (Build 25)
Identifier : bb333216-xxxx-xxxx-xxxx-c68c0c388b44
Registration : Completed
Management type : Configuration and analytics
```

> sftunnel-status

```
SFTUNNEL Start Time: Mon Oct 14 21:29:16 2024

Both IPv4 and IPv6 connectivity is supported
Broadcast count = 5
Reserved SSL connections: 0
Management Interfaces: 2
eth0 (control events) xx.xx..18.254,
tap_nlp (control events) 169.254.1.2,fd00:0:0:1::2

************************

**RUN STATUS****xx.xx..18.102*************
Key File = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/sftunnel-key.pem
Cert File = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/sftunnel-cert.pem
CA Cert = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/cacert.pem
Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
ChannelA Connected: Yes, Interface eth0
Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
ChannelB Connected: Yes, Interface eth0
Registration: Completed.
IPv4 Connection to peer 'xx.xx..18.102' Start Time: Tue Oct 15 00:38:43 2024 UTC
IPv4 Last outbound connection to peer 'xx.xx..18.102' via Primary ip/host 'xx.xx..18.102'

PEER INFO:
sw_version 7.2.8
sw_build 25
Using light registration
Management Interfaces: 1
eth0 (control events) xx.xx..18.102,
Peer channel Channel-A is valid type (CONTROL), using 'eth0', connected to 'xx.xx..18.102' via 'xx.xx..
Peer channel Channel-B is valid type (EVENT), using 'eth0', connected to 'xx.xx..18.102' via 'xx.xx..18

************************

**RUN STATUS****xx.xx..18.101*************
Key File = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/sftunnel-key.pem
Cert File = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/sftunnel-cert.pem
CA Cert = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/cacert.pem
Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
ChannelA Connected: Yes, Interface eth0
Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
ChannelB Connected: Yes, Interface eth0
Registration: Completed.
IPv4 Connection to peer 'xx.xx..18.101' Start Time: Mon Oct 14 21:29:15 2024 UTC
IPv4 Last outbound connection to peer 'xx.xx..18.101' via Primary ip/host 'xx.xx..18.101'
```

```
PEER INFO:

sw_version 7.2.8
sw_build 25
Using light registration
Management Interfaces: 1
eth0 (control events) xx.xx..18.101,
Peer channel Channel-A is valid type (CONTROL), using 'eth0', connected to 'xx.xx..18.101' via 'xx.xx..
Peer channel Channel-B is valid type (EVENT), using 'eth0', connected to 'xx.xx..18.101' via 'xx.xx..18

**********************
**RPC STATUS****xx.xx..18.102*************
'uuid' => 'bb333216-xxxx-xxxx-xxxx-c68c0c388b44',
'uuid_gw' => '',
'last_changed' => 'Wed Oct 9 07:00:11 2024',
'active' => 1,
'name' => 'xx.xx..18.102',
'ip' => 'xx.xx..18.102',
'ipv6' => 'IPv6 is not configured for management'

**RPC STATUS****xx.xx..18.101*************
'uuid_gw' => '',
'uuid' => 'fc3e3572-xxxx-xxxx-xxxx-39e0098c166c',
'last_changed' => 'Mon Jun 10 18:59:54 2024',
'active' => 1,
'ip' => 'xx.xx..18.101',
'ipv6' => 'IPv6 is not configured for management',
'name' => 'xx.xx..18.101'

Check routes:
No peers to check
```

ping system <fmc-IP>要生成ICMP，請從FTD管理介面進行操作。

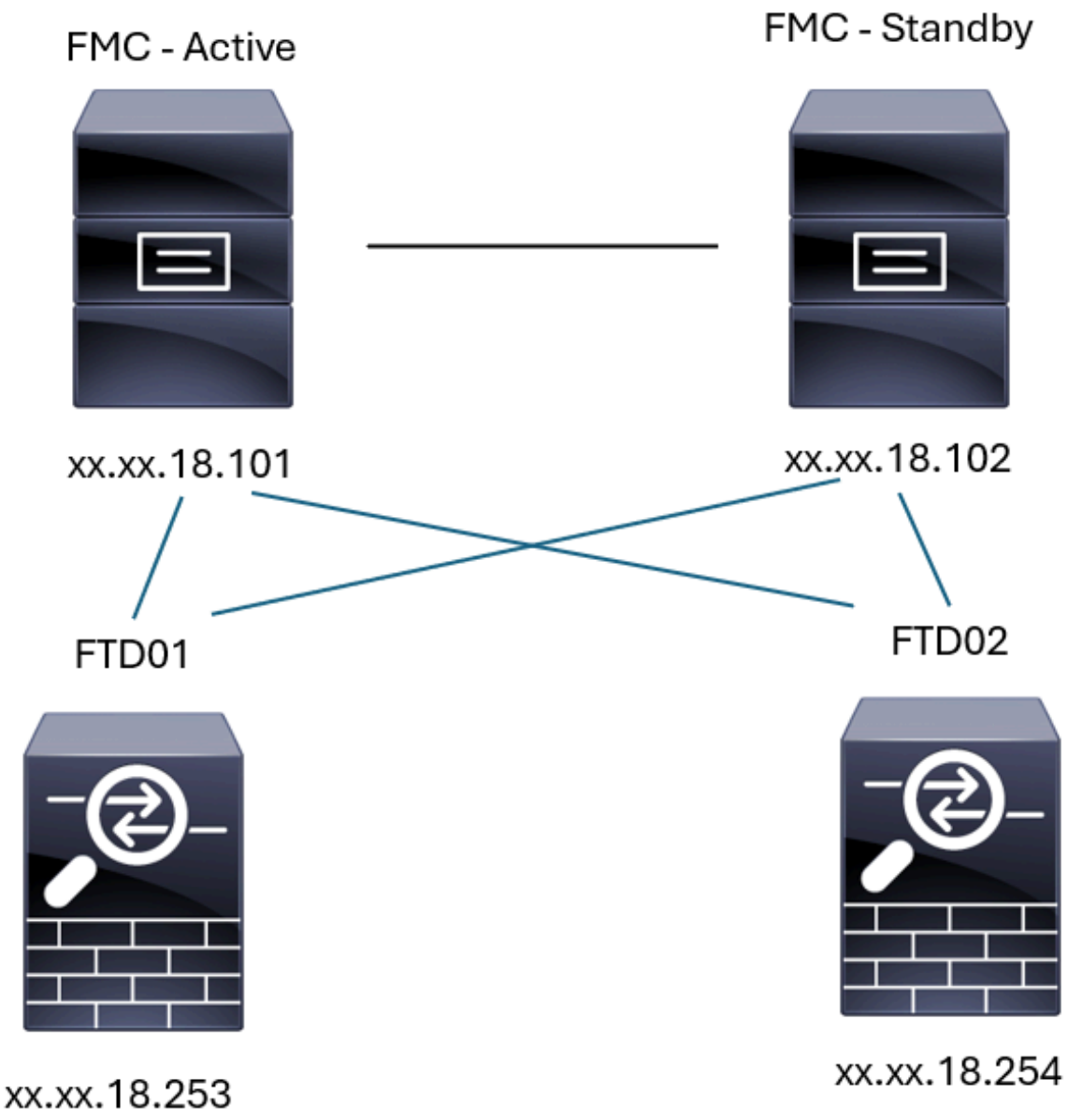
show managers 此命令列出裝置註冊所在的管理器的資訊。

sftunnel-status 此命令驗證在裝置之間建立的通訊通道。此通道接收名稱sftunnel。

檢查FTD根層級連線的指令與FMC相同。就FTD而言，它不包括允許驗證與FMC通訊的指令碼，但可以在/ngfw/var/log/action.log中檢查註冊過程中生成的資訊。

驗證

對於下一個拓撲，可以使用前面介紹的命令驗證FMC-HA對等體和FTD01之間的通訊。



FMC-HA拓撲

FMC - HA驗證

對於此驗證，設定FMC-HA的基本指南也可使用show version命令進行驗證。

<#root>

FMC Active

>

show version

```
------------------[ firepower ]--------------------
Model                     : Secure Firewall Management Center for VMware (66) Version 7.2.8 (Build 25)
```

```
UUID                        : fc3e3572-xxxx-xxxx-xxxx-39e0098c166c
Rules update version        : 2023-11-29-001-vrt
LSP version                 : lsp-rel-20231129-1200
VDB version                 : 395
----------------------------------------------------

> expert


admin@firepower:~$

sudo su



root@firepower:/Volume/home/admin#

ping xx.xx.18.102


PING xx.xx.18.102 (xx.xx.18.102) 56(84) bytes of data.
64 bytes from xx.xx.18.102: icmp_seq=1 ttl=64 time=0.385 ms
64 bytes from xx.xx.18.102: icmp_seq=2 ttl=64 time=0.433 ms
64 bytes from xx.xx.18.102: icmp_seq=3 ttl=64 time=0.606 ms
64 bytes from xx.xx.18.102: icmp_seq=4 ttl=64 time=0.480 ms
64 bytes from xx.xx.18.102: icmp_seq=5 ttl=64 time=0.524 ms
^C
--- xx.xx.18.102 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 84ms
rtt min/avg/max/mdev = 0.385/0.485/0.606/0.079 ms

root@firepower:/Volume/home/admin#

netstat -an | grep 8305


tcp        0      0 xx.xx.18.101:8305       xx.xx.18.254:53875      ESTABLISHED
tcp        0      0 xx.xx.18.101:8305       xx.xx.18.102:38239      ESTABLISHED ------ communication es
tcp        0      0 xx.xx.18.101:8305       xx.xx.18.254:49205      ESTABLISHED
tcp        0      0 xx.xx.18.101:8305       xx.xx.18.253:34865      ESTABLISHED
tcp        0      0 xx.xx.18.101:60871      xx.xx.18.253:8305       ESTABLISHED
tcp        0      0 xx.xx.18.101:8305       xx.xx.18.102:42253      ESTABLISHED ------ communication es

root@firepower:/Volume/home/admin#

troubleshoot_HADC.pl


****************  Troubleshooting Utility  **************
 1   Show HA Info Of FMC
 2   Execute Sybase DBPing
 3   Show Arbiter Status
 4   Check Peer Connectivity
 5   Print Messages of AQ Task
 6   Show FMC HA Operations History (ASC order)
 7   Dump To File: FMC HA Operations History (ASC order)
 8   Last Successful Periodic Sync Time (When it completed)
 9   Print HA Status Messages
 10  Compare active and standby device list
 11  Check manager status of standby missing devices
 12  Check critical PM processes details
 13  Get Remote Stale Sync AQ Info
 14  Help
 0   Exit
************************************************************
```

```
Enter choice: 1

HA Enabled: Yes
This FMC Role In HA: Active - Primary
Status out put: vmsDbEngine (system,gui) - Running 5093
In vmsDbEngineStatus(): vmsDbEngine process is running at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize/
Sybase Process: Running (vmsDbEngine, theSybase PM Process is Running)
Sybase Database Connectivity: Accepting DB Connections.
Sybase Database Name: csm_primary
Sybase Role: Active

****************  Troubleshooting Utility  **************
 1   Show HA Info Of FMC
 2   Execute Sybase DBPing
 3   Show Arbiter Status
 4   Check Peer Connectivity
 5   Print Messages of AQ Task
 6   Show FMC HA Operations History (ASC order)
 7   Dump To File: FMC HA Operations History (ASC order)
 8   Last Successful Periodic Sync Time (When it completed)
 9   Print HA Status Messages
 10  Compare active and standby device list
 11  Check manager status of standby missing devices
 12  Check critical PM processes details
 13  Get Remote Stale Sync AQ Info
 14  Help
 0   Exit
***************************************************************
Enter choice: 4
Peer UUID [Enter 'Return' For HA Peer(no UUID required)]:

Peer Is Connected
$VAR1 = {
          'vip' => '',
          'model_id' => 'E',
          'ip' => 'xx.xx.18.102',
          'persistent' => 0,
          'sw_version' => '7.2.8',
          'last_changed' => 1728457211,
          'active' => 1,
          'uuid' => 'bb333216-xxxx-xxxx-xxxx-c68c0c388b44',
          'upgrade_version' => '',
          'reg_state' => 0,
          'model_number' => '66',
          'primary_mgr' => 0,
          'name' => 'xx.xx.18.102',
          'uuid_gw' => '',
          'ipv6' => undef,
          'vip_local' => '',
          'priority' => 0,
          'reg_key' => '',
          'vnet' => undef,
          'role' => 0,
          'mgmt_mac_address' => '00:50:56:B3:D1:07'
        };

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
```

```
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
****************************************************************
Enter choice: 8

---------------------------- Last periodic sync time details ----------------------------------

Last successful sync completed at: Wed Oct 16 16:44:23 2024 UTC
Current time: Wed Oct 16 16:46:34 2024 UTC
Last successful sync completed '2 minutes 11 seconds' ago.

---------------------------- Last periodic sync time details end ------------------------------

*************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
****************************************************************
Enter choice: 9

SYNC_ACTIVE: 1 at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 494, <STDIN> line 5.
Sybase state :  at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 701.
Sybase state :  at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 801.
Sync status : at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 802.
---------------------------- FMC HA status messages start ----------------------------------

Status: Healthy

---------------------------- FMC HA status messages end ------------------------------------
*************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
```

```
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
****************************************************************
Enter choice: 10

Fetching standby missing device information...
Devices are in sync.

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
****************************************************************
Enter choice: 0
Thank you
```

<#root>

FMC Standby

>

show version

```
-------------------[ firepower ]--------------------
Model                     : Secure Firewall Management Center for VMware (66) Version 7.2.8 (Build 25)
UUID                      : bb333216-xxxx-xxxx-xxxx-c68c0c388b44
Rules update version      : 2023-11-29-001-vrt
LSP version               : lsp-rel-20231129-1200
VDB version               : 395
----------------------------------------------------
```

> expert

```
admin@firepower:~$
```

sudo su

```
root@firepower:/Volume/home/admin#
```

ping xx.xx.18.101

```
PING xx.xx.18.101 (xx.xx.18.101) 56(84) bytes of data.
```

```
64 bytes from xx.xx.18.101: icmp_seq=1 ttl=64 time=0.402 ms
64 bytes from xx.xx.18.101: icmp_seq=2 ttl=64 time=0.482 ms
64 bytes from xx.xx.18.101: icmp_seq=3 ttl=64 time=0.452 ms
64 bytes from xx.xx.18.101: icmp_seq=4 ttl=64 time=0.490 ms
64 bytes from xx.xx.18.101: icmp_seq=5 ttl=64 time=0.519 ms
^C
--- xx.xx.18.101 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 123ms
rtt min/avg/max/mdev = 0.402/0.469/0.519/0.039 ms

root@firepower:/Volume/home/admin#
```

netstat -an | grep 8305

```
tcp        0      0 xx.xx.18.102:8305       xx.xx.18.254:50373      ESTABLISHED
tcp        0      0 xx.xx.18.102:8305       xx.xx.18.253:42083      ESTABLISHED
tcp        0      0 xx.xx.18.102:59439      xx.xx.18.254:8305       ESTABLISHED
tcp        0      0 xx.xx.18.102:36751      xx.xx.18.253:8305       ESTABLISHED
tcp        0      0 xx.xx.18.102:38239      xx.xx.18.101:8305       ESTABLISHED ------ communication es
tcp        0      0 xx.xx.18.102:42253      xx.xx.18.101:8305       ESTABLISHED ------ communication es

root@firepower:/Volume/home/admin#

root@firepower:/Volume/home/admin#
```

troubleshoot_HADC.pl

```
**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
************************************************************
Enter choice: 1

HA Enabled: Yes
This FMC Role In HA: Standby - Secondary
Status out put: vmsDbEngine (system,gui) - Running 29652
In vmsDbEngineStatus(): vmsDbEngine process is running at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize/
Sybase Process: Running (vmsDbEngine, theSybase PM Process is Running)
Sybase Database Connectivity: Accepting DB Connections.
Sybase Database Name: csm_secondary
Sybase Role: Standby

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
```

```
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
************************************************************
Enter choice: 4
Peer UUID [Enter 'Return' For HA Peer(no UUID required)]:

Peer Is Connected
$VAR1 = {
          'vnet' => undef,
          'upgrade_version' => '',
          'uuid_gw' => '',
          'name' => 'xx.xx.18.101',
          'primary_mgr' => 1,
          'sw_version' => '7.2.8',
          'persistent' => 0,
          'model_number' => '66',
          'last_changed' => 1718045994,
          'reg_key' => '',
          'active' => 1,
          'reg_state' => 0,
          'model_id' => 'E',
          'vip' => '',
          'mgmt_mac_address' => '00:50:56:B3:E1:57',
          'vip_local' => '',
          'ip' => 'xx.xx.18.101',
          'priority' => 0,
          'uuid' => 'fc3e3572-xxxx-xxxx-xxxx-39e0098c166c',
          'role' => 0,
          'ipv6' => undef
        };

*************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
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6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
************************************************************
Enter choice: 8

---------------------------- Last periodic sync time details ----------------------------------

Last successful sync completed at: Wed Oct 16 16:46:06 2024 UTC
Current time: Wed Oct 16 16:47:35 2024 UTC
```

```
Last successful sync completed '1 minute 29 seconds' ago.

---------------------------- Last periodic sync time details end ----------------------------------

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
*************************************************************
Enter choice: 9

SYNC_ACTIVE: 1 at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 494, <STDIN> line 5.
Found running Synchronization task: Initializing at /usr/local/sf/lib/perl/5.24.4/SF/Transaction/HADC.pm
Sybase state :  at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 701.
Sybase state :  at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line 801.
Sync status :Synchronization Task In-progress  at /usr/local/sf/lib/perl/5.24.4/SF/Synchronize.pm line
Found running Synchronization task: Initializing at /usr/local/sf/lib/perl/5.24.4/SF/Transaction/HADC.pm

---------------------------- FMC HA status messages start ----------------------------------

Status: Synchronization Task In-progress

---------------------------- FMC HA status messages end ----------------------------------

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
*************************************************************
Enter choice: 10

Fetching standby missing device information...
Devices are in sync.

**************** Troubleshooting Utility **************
1 Show HA Info Of FMC
2 Execute Sybase DBPing
3 Show Arbiter Status
```

```
4 Check Peer Connectivity
5 Print Messages of AQ Task
6 Show FMC HA Operations History (ASC order)
7 Dump To File: FMC HA Operations History (ASC order)
8 Last Successful Periodic Sync Time (When it completed)
9 Print HA Status Messages
10 Compare active and standby device list
11 Check manager status of standby missing devices
12 Check critical PM processes details
13 Get Remote Stale Sync AQ Info
14 Help
0 Exit
************************************************************
Enter choice: 0
Thank you
```

從FTD到FMC-HA驗證的通訊

<#root>

>

show version

```
-------------------[ firepower ]---------------------
Model                     : Cisco Firepower Threat Defense for VMware (75) Version 7.2.4 (Build 165)
UUID                      : 7064913a-xxxx-xxxx-xxxx-803aefd05d2c
LSP version               : lsp-rel-20231129-1200
VDB version               : 395
-----------------------------------------------------
```

>

ping system xx.xx.18.101

```
------ ping to FMC-Active
PING xx.xx.18.101 (xx.xx.18.101) 56(84) bytes of data.
64 bytes from xx.xx.18.101: icmp_seq=1 ttl=64 time=14.1 ms
64 bytes from xx.xx.18.101: icmp_seq=2 ttl=64 time=27.8 ms
64 bytes from xx.xx.18.101: icmp_seq=3 ttl=64 time=26.1 ms
64 bytes from xx.xx.18.101: icmp_seq=6 ttl=64 time=55.7 ms
64 bytes from xx.xx.18.101: icmp_seq=7 ttl=64 time=39.9 ms
64 bytes from xx.xx.18.101: icmp_seq=8 ttl=64 time=38.9 ms
^C
--- xx.xx.18.101 ping statistics ---
8 packets transmitted, 6 received, 25% packet loss, time 76ms
rtt min/avg/max/mdev = 14.081/33.733/55.658/13.069 ms
```

>

ping system xx.xx.18.102

```
------ ping to FMC-Active
PING xx.xx.18.102 (xx.xx.18.102) 56(84) bytes of data.
64 bytes from xx.xx.18.102: icmp_seq=1 ttl=64 time=23.9 ms
64 bytes from xx.xx.18.102: icmp_seq=2 ttl=64 time=23.10 ms
64 bytes from xx.xx.18.102: icmp_seq=3 ttl=64 time=0.425 ms
```

```
64 bytes from xx.xx.18.102: icmp_seq=4 ttl=64 time=6.88 ms
64 bytes from xx.xx.18.102: icmp_seq=5 ttl=64 time=10.5 ms
^C
--- xx.xx.18.102 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 70ms
rtt min/avg/max/mdev = 0.425/13.131/23.969/9.380 ms

>
```

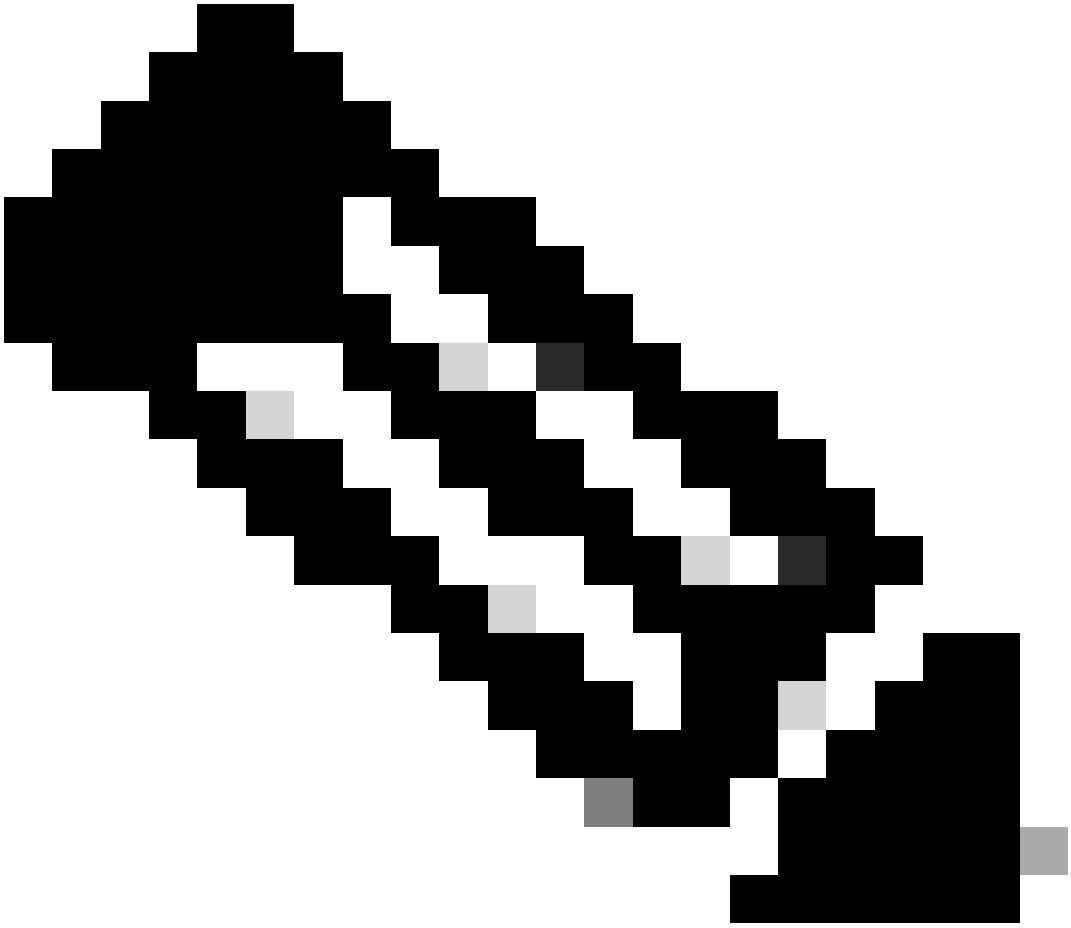
show managers

```
Type                      : Manager
Host                      : xx.xx.18.101
Display name              : xx.xx.18.101
Version                   : 7.2.8 (Build 25)
Identifier                : fc3e3572-xxxx-xxxx-xxxx-39e0098c166c
Registration              : Completed
Management type           : Configuration and analytics

Type                      : Manager
Host                      : xx.xx.18.102
Display name              : xx.xx.18.102
Version                   : 7.2.8 (Build 25)
Identifier                : bb333216-xxxx-xxxx-xxxx-c68c0c388b44
Registration              : Completed
Management type           : Configuration and analytics

>
```

sftunnel-status

```
SFTUNNEL Start Time: Mon Oct 14 21:29:16 2024
        Both IPv4 and IPv6 connectivity is supported
        Broadcast count = 17
        Reserved SSL connections: 0
        Management Interfaces: 2
        eth0 (control events) xx.xx.18.254,
        tap_nlp (control events) 169.254.1.2,fd00:0:0:1::2
************************

**RUN STATUS****xx.xx.18.102************* ------------------------------------- sftunnel information
        Key File    = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/sftunnel-key.pem
        Cert File   = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/sftunnel-cert.pem
        CA Cert     = /var/sf/peers/bb333216-xxxx-xxxx-xxxx-c68c0c388b44/cacert.pem
        Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
        ChannelA Connected: Yes, Interface eth0
        Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
        ChannelB Connected: Yes, Interface eth0
        Registration: Completed.
        IPv4 Connection to peer 'xx.xx.18.102' Start Time: Wed Oct 16 15:06:23 2024 UTC

        IPv4 Last outbound connection to peer 'xx.xx.18.102' via Primary ip/host 'xx.xx.18.102'

PEER INFO:
        sw_version 7.2.8
        sw_build 25
        Using light registration
        Management Interfaces: 1
        eth0 (control events) xx.xx.18.102,
        Peer channel Channel-A is valid  type (CONTROL), using 'eth0', connected to 'xx.xx.18.102' via
        Peer channel Channel-B is valid  type (EVENT), using 'eth0', connected to 'xx.xx.18.102' via 'x
```

```
**********

**RUN STATUS****xx.xx.18.101************ ------------------------------------ sftunnel information o
        Key File    = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/sftunnel-key.pem
        Cert File   = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/sftunnel-cert.pem
        CA Cert     = /var/sf/peers/fc3e3572-xxxx-xxxx-xxxx-39e0098c166c/cacert.pem
        Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
        ChannelA Connected: Yes, Interface eth0
        Cipher used = TLS_AES_256_GCM_SHA384 (strength:256 bits)
        ChannelB Connected: Yes, Interface eth0
        Registration: Completed.
        IPv4 Connection to peer 'xx.xx.18.101' Start Time: Mon Oct 14 21:29:15 2024 UTC

PEER INFO:
        sw_version 7.2.8
        sw_build 25
        Using light registration
        Management Interfaces: 1
        eth0 (control events) xx.xx.18.101,
        Peer channel Channel-A is valid  type (CONTROL), using 'eth0', connected to 'xx.xx.18.101' via
        Peer channel Channel-B is valid  type (EVENT), using 'eth0', connected to 'xx.xx.18.101' via 'x

**********

**RPC STATUS****xx.xx.18.101************
  'name' => 'xx.xx.18.101',
  'last_changed' => 'Mon Jun 10 18:59:54 2024',
  'uuid_gw' => '',
  'ip' => 'xx.xx.18.101',
  'ipv6' => 'IPv6 is not configured for management',
  'active' => 1,
  'uuid' => 'fc3e3572-xxxx-xxxx-xxxx-39e0098c166c'

**RPC STATUS****xx.xx.18.102************
  'name' => 'xx.xx.18.102',
  'last_changed' => 'Wed Oct  9 07:00:11 2024',
  'uuid_gw' => '',
  'ip' => 'xx.xx.18.102',
  'ipv6' => 'IPv6 is not configured for management',
  'active' => 1,
  'uuid' => 'bb333216-xxxx-xxxx-xxxx-c68c0c388b44'

Check routes:
No peers to check
```



註：如果某個FMC的sftunnel資訊丟失，這可能表明與管理器的通訊受損

<#root>

FTD root level troubleshoot

> expert

admin@firepower:~$

sudo su

root@firepower:/home/admin#

netstat -an | grep 8305

```
tcp        0      0 xx.xx.18.254:8305       xx.xx.18.102:59439      ESTABLISHED ------ communication es
tcp        0      0 xx.xx.18.254:49205      xx.xx.18.101:8305       ESTABLISHED ------ communication es
tcp        0      0 xx.xx.18.254:50373      xx.xx.18.102:8305       ESTABLISHED ------ communication es
tcp        0      0 xx.xx.18.254:53875      xx.xx.18.101:8305       ESTABLISHED ------ communication es

root@firepower:/home/admin#
```

cat /ngfw/var/log/action_queue.log | less

```
Oct 16 15:06:50 firepower ActionQueueScrape.pl[4166]: Waiting for light registration to complete on dev
erl/5.24.4/SF/PeerManager/RegistrationCL.pm line 1805.
Oct 16 15:06:50 firepower ActionQueueScrape.pl[4166]: Found Registered peer with name xx.xx.18.102 (bb3
Oct 16 15:06:50 firepower ActionQueueScrape.pl[4166]: Found peer with name xx.xx.18.102 - update DB at
Oct 16 15:06:50 firepower ActionQueueScrape.pl[4166]: Found Registered peer with name xx.xx.18.101 (fc3
```

關於此翻譯

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