FMC 문제 해결 - HA

목차

소개

이 문서에서는 FMC(Firepower 관리 센터)에 대해 설정된 HA(고가용성)에서 일반적인 동기화 문제를 해결하는 방법에 대해 설명합니다.

사전 요구 사항

요구 사항

Cisco에서는 다음 항목에 대해 알고 있는 것이 좋습니다.

- FMC - HA 컨피그레이션 요건
- Linux 셸에 대한 기본 지식

사용되는 구성 요소

- 버전 7.2.8의 VMware용 FMCv

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우 모든 명령의 잠재적인 영향을 미리 숙지하시기 바랍니다.

배경 정보

이 문서에 사용된 실험실의 초기 설정은 기본 FMC-HA 초기 구성에 대한 요구 사항을 따릅니다.

- 용량 또는 하드웨어 버전이 동일한 FMC 2개
- 동일한 소프트웨어 버전, 침입 규칙 업데이트, 취약성 데이터베이스 및 경량 보안 패키지를 실행하는 두 개의 FMC.
- 해당 라이센스가 있는 FMC 2개.

시작하기 전에

- 관리자가 두 FMC에 모두 액세스할 수 있는지 확인합니다.
- 관리자가 FMC에서 관리하는 FTD 디바이스에 액세스할 수 있는지 확인합니다.

명령 문제 해결

FMC 문제 해결 명령.

FMC 디바이스 간의 연결을 검증하기 위해 사용자는 이 명령을 실행할 수 있습니다.

<#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
```

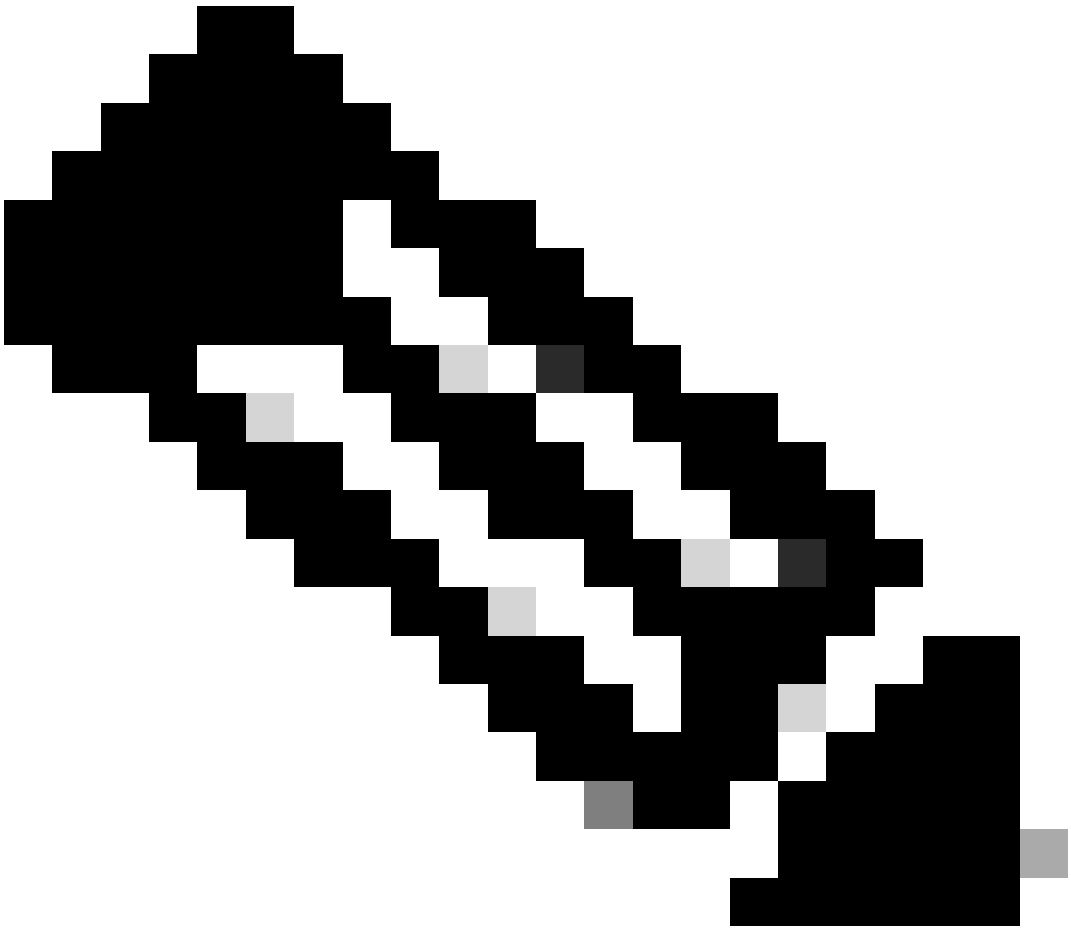
root@firepower:/Volume/home/admin#

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> 이 명령을 사용하여 두 디바이스 간의 연결성을 확인할 수 있습니다.

netstat -an | grep 8305 이 명령은 포트 8305에 연결된 디바이스를 표시합니다.



참고: 포트 8305는 FMC와의 통신 채널을 설정하기 위해 Firepower 디바이스에 구성된 기본 포트입니다.

FMC-HA 설정 컨피그레이션을 검증하기 위해 사용자는 troubleshoot_HADC.pl 스크립트를 실행할 수도 있습니다. 이는 다음 시나리오에서 특히 유용합니다.

- FMC-HA 통합 상태가 저하되면
- 디바이스 중 하나의 FMC GUI(Graphic User Interface)에 대한 액세스가 누락되었지만 FMC-CLI 액세스가 여전히 작동하며 액세스 가능한 경우

<#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 문제 해결 명령

FTD에서 FMC-HA로의 연결을 트러블슈팅하면 두 FMC에 모두 등록해야 하거나 HA의 성능이 저하된 경우 디바이스의 연결을 확인할 수 있으며 "Degraded - Synchronization incomplete(Degraded - Synchronization incomplete)(This Management Center에 등록된 디바이스 수 감소)"라는 경고가 표시됩니다.

FTD 클라이언트 레벨에서 사용자는 이러한 명령을 실행하여 FMC와의 통신을 검증할 수 있습니다 .

```
<#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> ICMP를 생성하려면 FTD 관리 인터페이스에서 를 따릅니다.

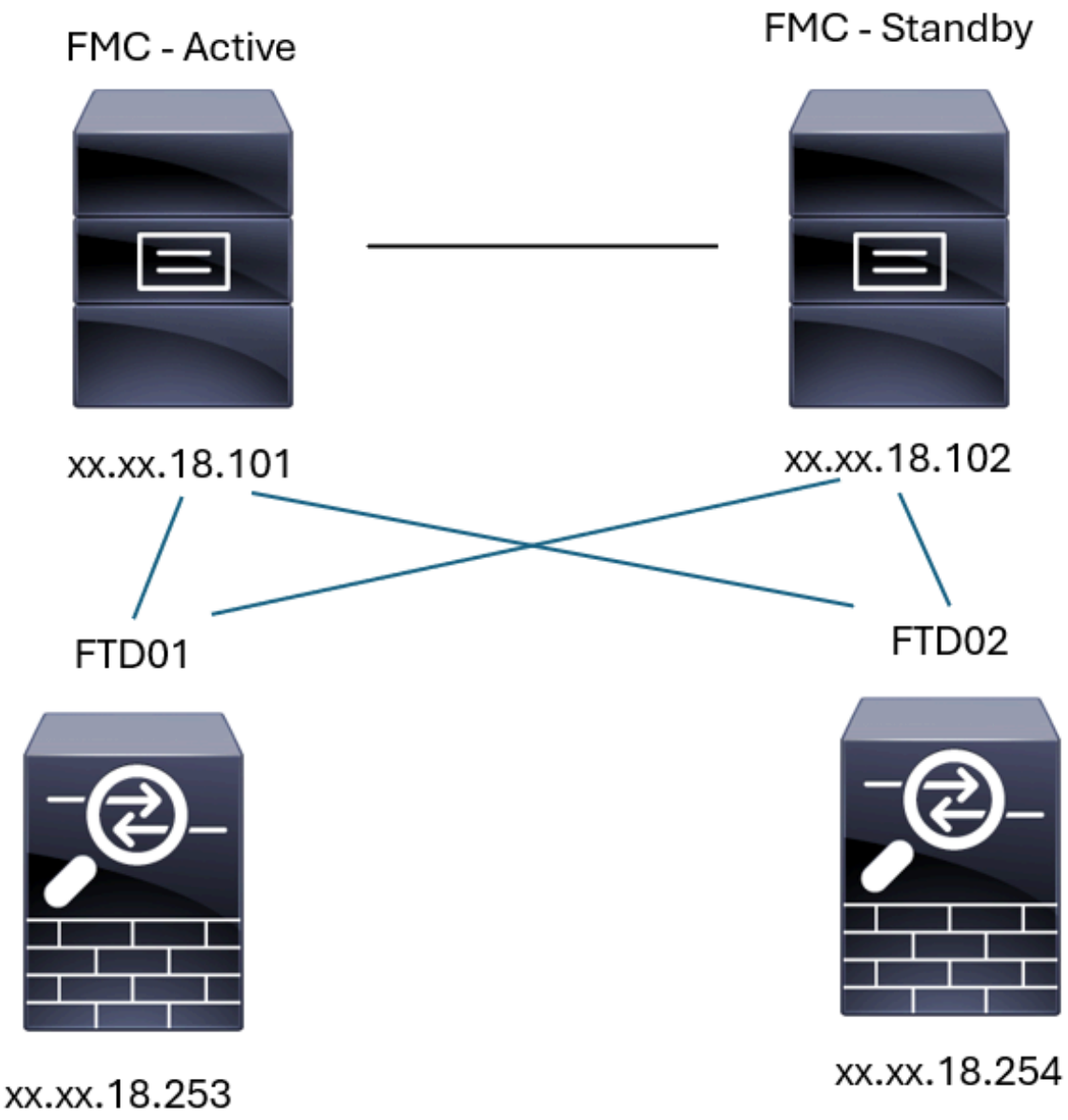
show managers 이 명령은 디바이스가 등록된 관리자의 정보를 나열합니다.

sftunnel-status 이 명령은 디바이스 간에 설정된 통신 채널을 검증합니다. 이 채널은 sftunnel의 이름을 수신합니다.

FTD의 루트 레벨에서 연결을 확인하는 명령은 FMC와 동일합니다. FTD의 경우 FMC와의 통신 검증을 가능하게 하는 스크립트는 포함되어 있지 않으나, 등록 과정에서 생성된 정보를 /ngfw/var/log/action.log페이지에서 확인할 수 있다.

확인

다음 토폴로지에서는 앞서 설명한 명령을 사용하여 FMC-HA 피어와 FTD01 간의 통신을 검증할 수 있습니다.



FMC-HA 토폴로지

FMC - HA 검증

이 검증을 위해 show version 명령을 사용하여 FMC-HA를 설정하기 위한 기본 지침을 검증할 수도 있습니다.

<#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
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 4   Check Peer Connectivity
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 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
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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
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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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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
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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
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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
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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
```

FTD에서 FMC-HA 검증으로의 통신

<#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

>
```

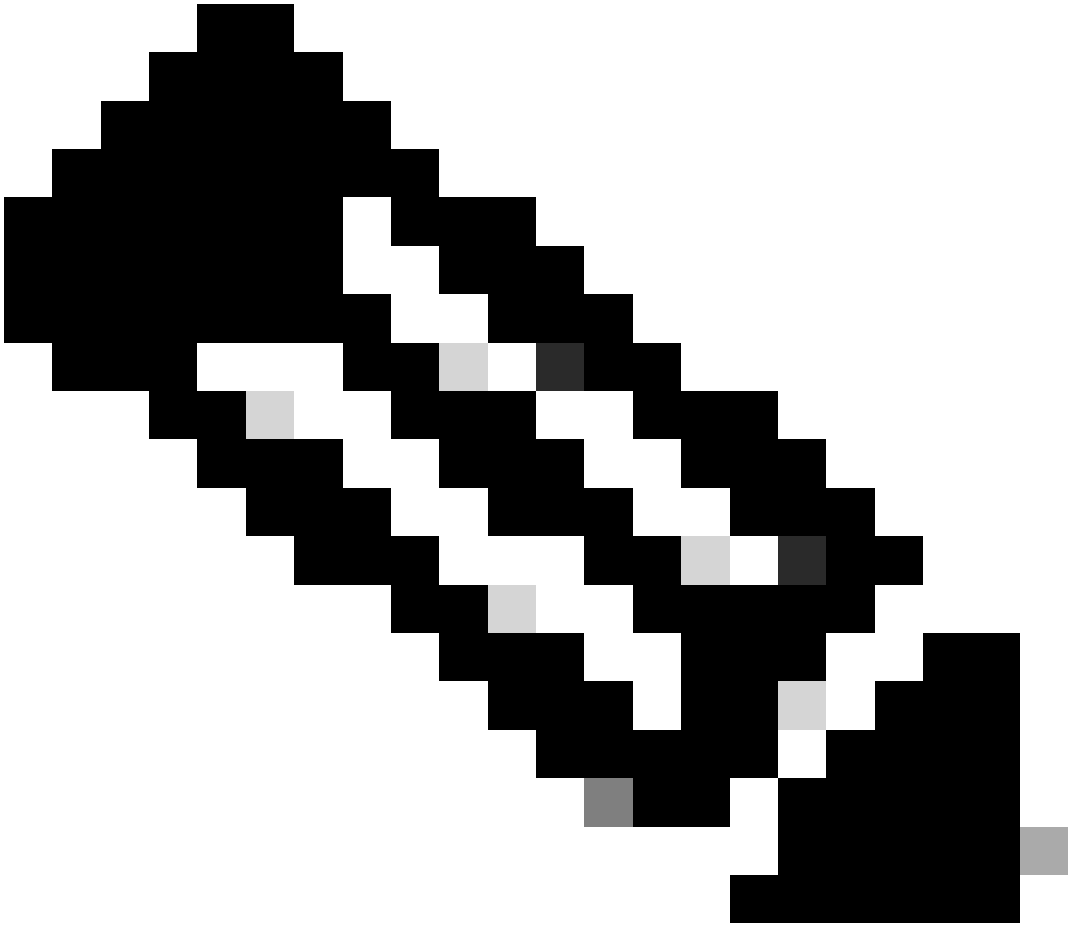
show managers

```
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
```



참고: FMC 중 하나의 sftunnel 정보가 없는 경우 관리자와의 통신이 손상되었음을 나타낼 수 있습니다

<#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
```

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