Replace Secure Firewall Management Center in HA Pair

Contents

Introduction

This document describes how to replace a faulty Secure Firewall Management Center in a High Availability (HA) pair.

Prerequisites

Requirements

Cisco recommends you know this topic:

- Cisco Secure Firewall Management Center (FMC)

Components Used

The information in this document is based on these software and hardware versions:

- Cisco Secure Firewall Management Center (FMC) running version 7.2.5 (1) in HA mode

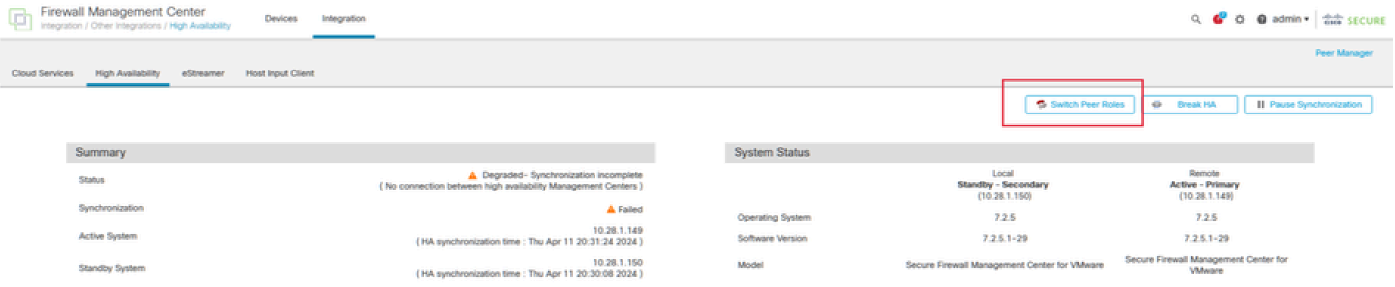
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Configure

Solution 1

Process for Replacing a Faulty Unit with Backup

Step 1: Assign the operational unit as active. For further details, refer to Switching Peers in the Management Center High Availability Pair.

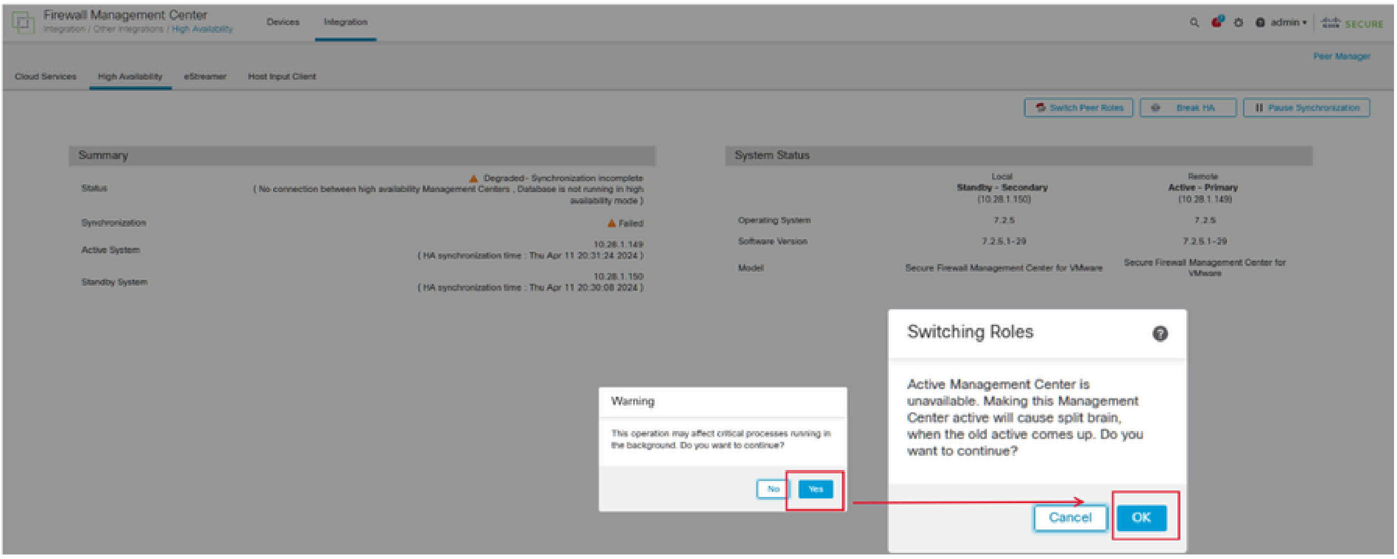


Summary

Status	Degraded- Synchronization incomplete (No connection between high availability Management Centers)
Synchronization	Failed
Active System	10.28.1.149 (HA synchronization time : Thu Apr 11 20:31:24 2024)
Standby System	10.28.1.150 (HA synchronization time : Thu Apr 11 20:30:08 2024)

System Status

	Local **Standby - Secondary** (10.28.1.150)	Remote **Active - Primary** (10.28.1.149)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware



Summary

Status	Degraded- Synchronization incomplete (No connection between high availability Management Centers , Database is not running in high availability mode)
Synchronization	Failed
Active System	10.28.1.149 (HA synchronization time : Thu Apr 11 20:31:24 2024)
Standby System	10.28.1.150 (HA synchronization time : Thu Apr 11 20:30:08 2024)

System Status

	Local **Standby - Secondary** (10.28.1.150)	Remote **Active - Primary** (10.28.1.149)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware

Warning

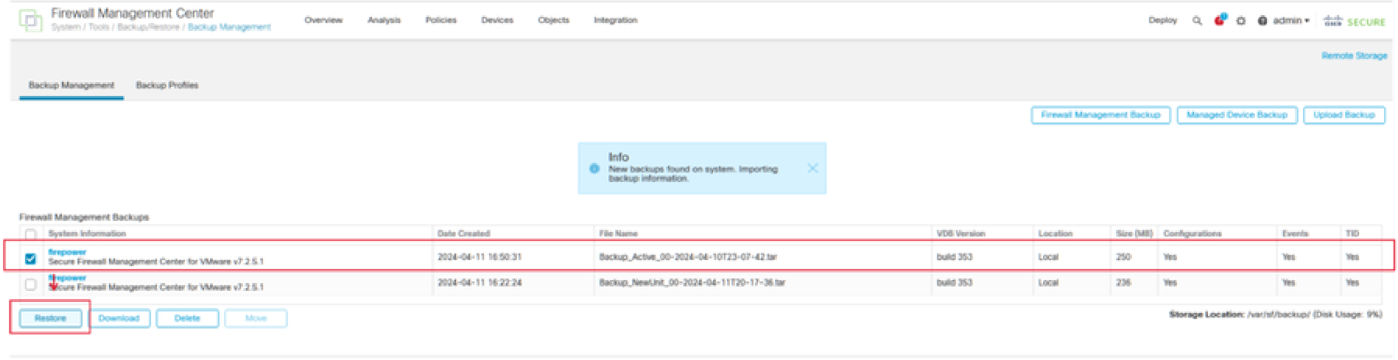
This operation may affect critical processes running in the background. Do you want to continue?

Switching Roles

Active Management Center is unavailable. Making this Management Center active will cause split brain, when the old active comes up. Do you want to continue?

Step 2: Reimage the new unit to match the software version of the active unit. Refer to Reimage a Hardware Model of a Cisco Secure Firewall Management Center for more information.

Step 3: Restore the data backup from the failed unit to the new management center. Navigate to **System** > **Backup/Restore**, upload the backup file, and restore it to the new unit.

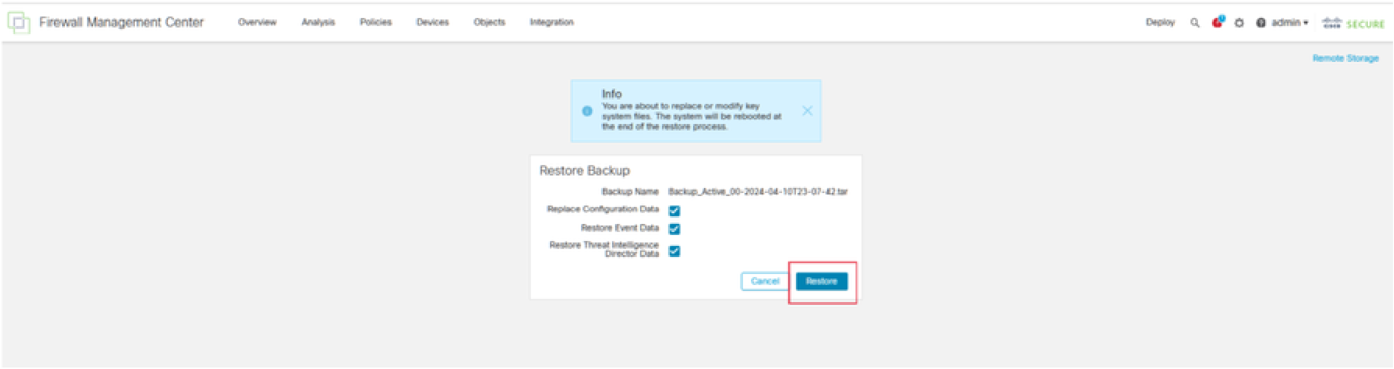


Info
New backups found on system. Importing backup information.

Firewall Management Backups

	System Information	Date Created	File Name	VDB Version	Location	Size (MB)	Configurations	Events	TID
☑	firepower Secure Firewall Management Center for VMware v7.2.5.1	2024-04-11 16:50:31	Backup_Active_00-2024-04-10T23-07-42.tar	build 353	Local	250	Yes	Yes	Yes
□	firepower Secure Firewall Management Center for VMware v7.2.5.1	2024-04-11 16:22:24	Backup_NewUnit_00-2024-04-11T20-17-36.tar	build 353	Local	236	Yes	Yes	Yes

Storage Location: /var/sf/backup/ (Disk Usage: 9%)



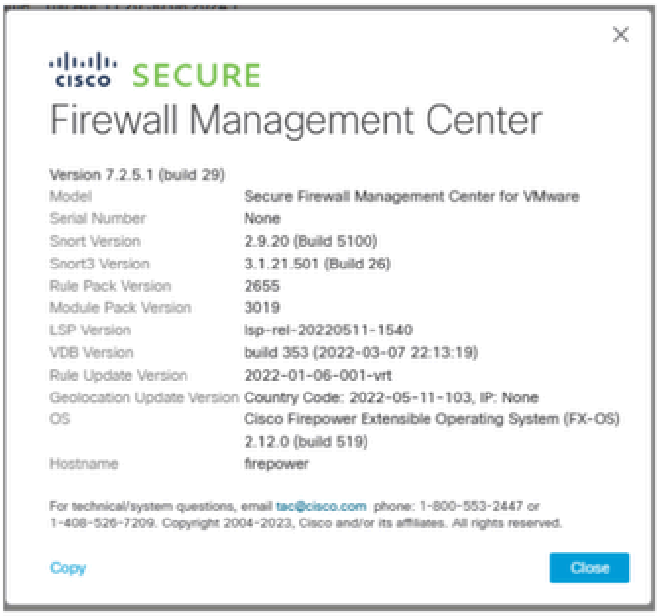
Info
You are about to replace or modify key system files. The system will be rebooted at the end of the restore process.

Restore Backup

Backup Name Backup_Active_00-2024-04-10T23-07-42.tar
Replace Configuration Data ☑
Restore Event Data ☑
Restore Threat Intelligence Director Data ☑

Step 4: If necessary, update the same version of geolocation database (GeoDB) updates, vulnerability database (VDB) updates, and system software updates as the active unit to ensure consistency.

Active Unit



Firewall Management Center

Version 7.2.5.1 (build 29)

Model	Secure Firewall Management Center for VMware
Serial Number	None
Snort Version	2.9.20 (Build 5100)
Snort3 Version	3.1.21.501 (Build 26)
Rule Pack Version	2655
Module Pack Version	3019
LSP Version	lsp-rel-20220511-1540
VDB Version	build 353 (2022-03-07 22:13:19)
Rule Update Version	2022-01-06-001-vrt
Geolocation Update Version	Country Code: 2022-05-11-103, IP: None
OS	Cisco Firepower Extensible Operating System (FX-OS) 2.12.0 (build 519)
Hostname	firepower

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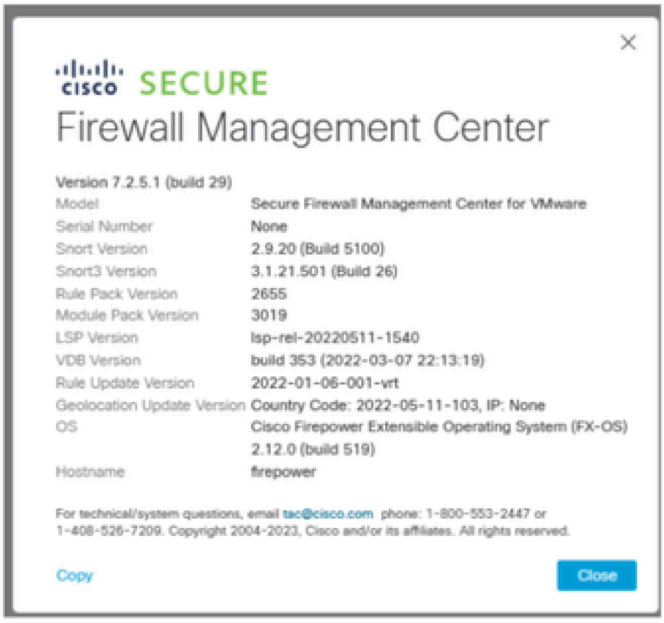
New Unit



Firewall Management Center

Version 7.2.5.1 (build 29)

Model	Secure Firewall Management Center for VMware
Serial Number	None
Snort Version	2.9.20 (Build 5100)
Snort3 Version	3.1.21.501 (Build 26)
Rule Pack Version	2655
Module Pack Version	3019
LSP Version	lsp-rel-20220511-1540
VDB Version	build 353 (2022-03-07 22:13:19)
Rule Update Version	2022-01-06-001-vrt
Geolocation Update Version	Country Code: 2022-05-11-103, IP: None
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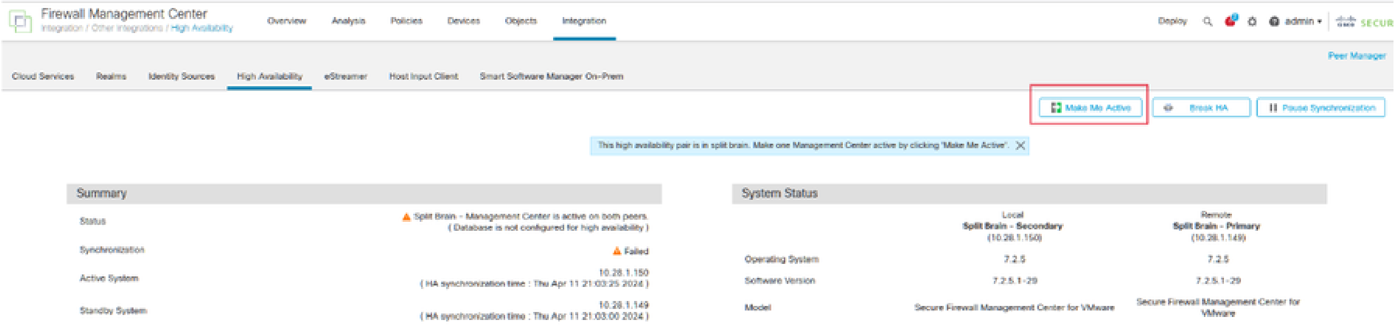
Step 5: Once updates are complete, both units can display an active status, which can lead to an HA split-brain condition.

Step 6: Proceed to manually set the unit that has been continuously operational as active. This enables it to sync the latest configuration to the replacement unit.



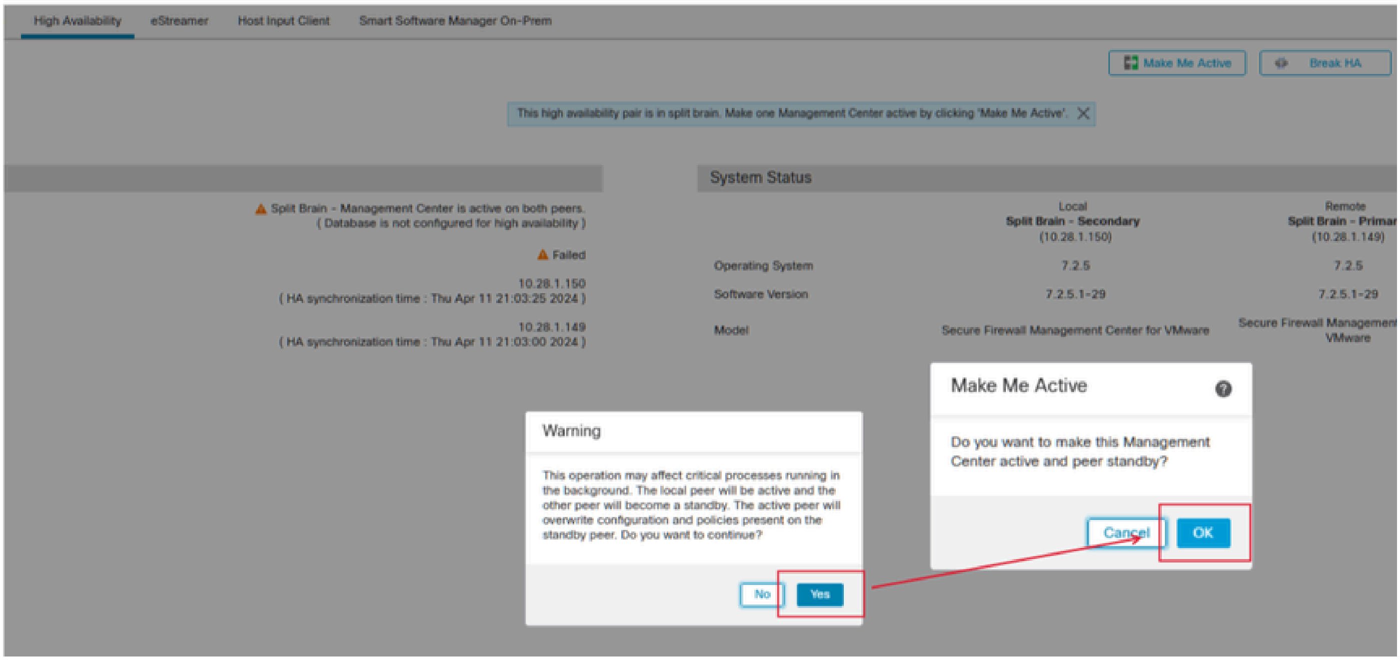
This high availability pair is in split brain. Make one Management Center active by clicking 'Make Me Active'.

Summary

Status	Split Brain - Management Center is active on both peers. (Database is not configured for high availability)
Synchronization	Failed
Active System	10.28.1.150 (HA synchronization time : Thu Apr 11 21:03:25 2024)
Standby System	10.28.1.149 (HA synchronization time : Thu Apr 11 21:03:00 2024)

System Status

	Local Split Brain - Secondary (10.28.1.150)	Remote Split Brain - Primary (10.28.1.149)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware



This high availability pair is in split brain. Make one Management Center active by clicking 'Make Me Active'.

⚠ Split Brain - Management Center is active on both peers.
(Database is not configured for high availability)

⚠ Failed

10.28.1.150
(HA synchronization time : Thu Apr 11 21:03:25 2024)

10.28.1.149
(HA synchronization time : Thu Apr 11 21:03:00 2024)

System Status

	Local Split Brain - Secondary (10.28.1.150)	Remote Split Brain - Primar (10.28.1.149)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Managemen VMware

Warning

This operation may affect critical processes running in the background. The local peer will be active and the other peer will become a standby. The active peer will overwrite configuration and policies present on the standby peer. Do you want to continue?

Make Me Active

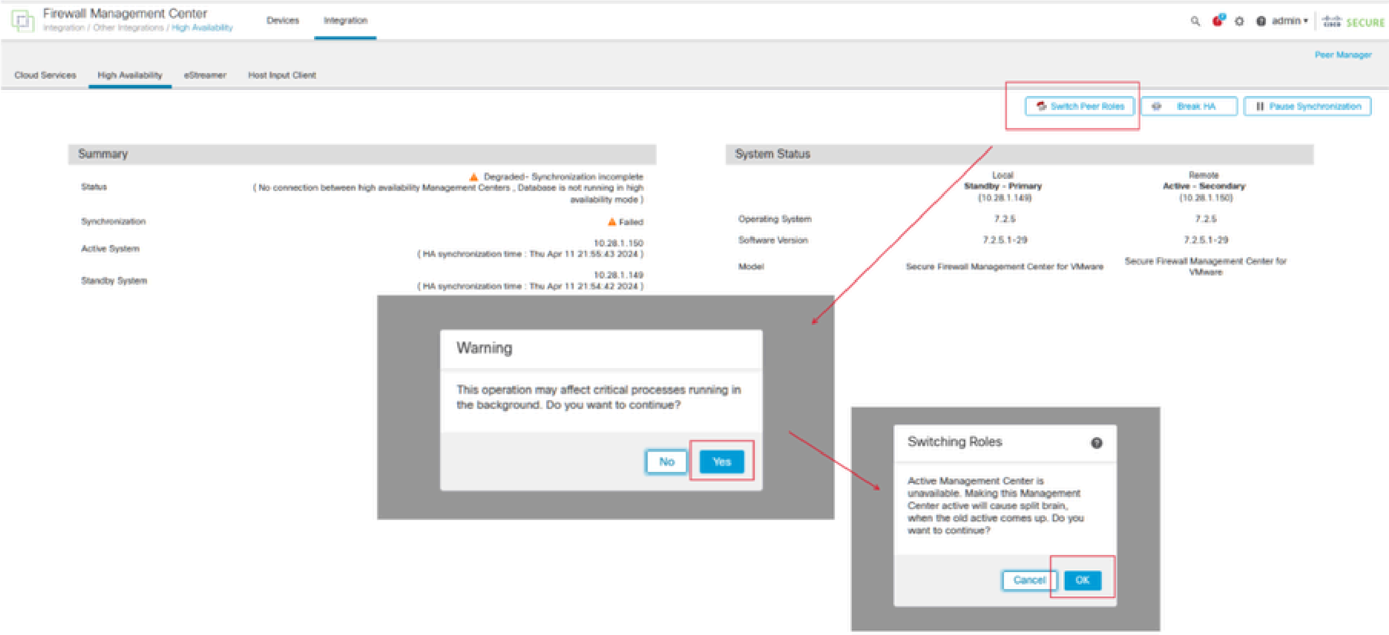
Do you want to make this Management Center active and peer standby?

Step 7: Upon successful synchronization, which can take some time, navigate to the web interface of the active unit. Then alter roles, positioning the new unit as the active appliance.

Solution 2

Process for Replacing a Faulty Unit Without Backup

Step 1: Assign the operational unit as active. For further details, refer to Switching Peers in the Management Center High Availability Pair.



Summary

Status	⚠ Degraded- Synchronization incomplete (No connection between high availability Management Centers , Database is not running in high availability mode)
Synchronization	⚠ Failed
Active System	10.28.1.150 (HA synchronization time : Thu Apr 11 21:55:43 2024)
Standby System	10.28.1.149 (HA synchronization time : Thu Apr 11 21:54:42 2024)

System Status

	Local Standby - Primary (10.28.1.149)	Remote Active - Secondary (10.28.1.150)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware

Warning

This operation may affect critical processes running in the background. Do you want to continue?

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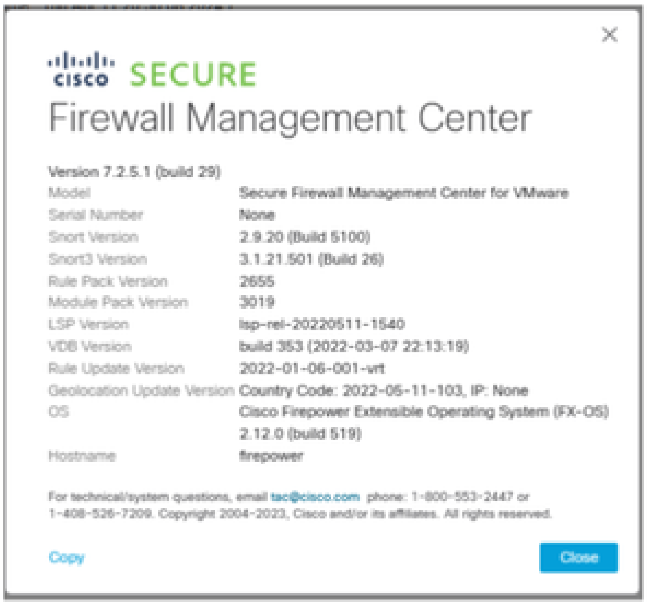
Step 3: If necessary, update the same version of geolocation database (GeoDB) updates, vulnerability database (VDB) updates, and system software updates as the active unit to ensure consistency.

Operational Unit



cisco SECURE

Firewall Management Center

Version 7.2.5.1 (build 29)

Model	Secure Firewall Management Center for VMware
Serial Number	None
Snort Version	2.9.20 (Build 5100)
Snort3 Version	3.1.21.501 (Build 26)
Rule Pack Version	2655
Module Pack Version	3019
LSP Version	lsp-rel-20220511-1540
VDB Version	build 353 (2022-03-07 22:13:19)
Rule Update Version	2022-01-06-001-vrt
Geolocation Update Version	Country Code: 2022-05-11-103, IP: None
OS	Cisco Firepower Extensible Operating System (FX-OS) 2.12.0 (build 519)
Hostname	firepower

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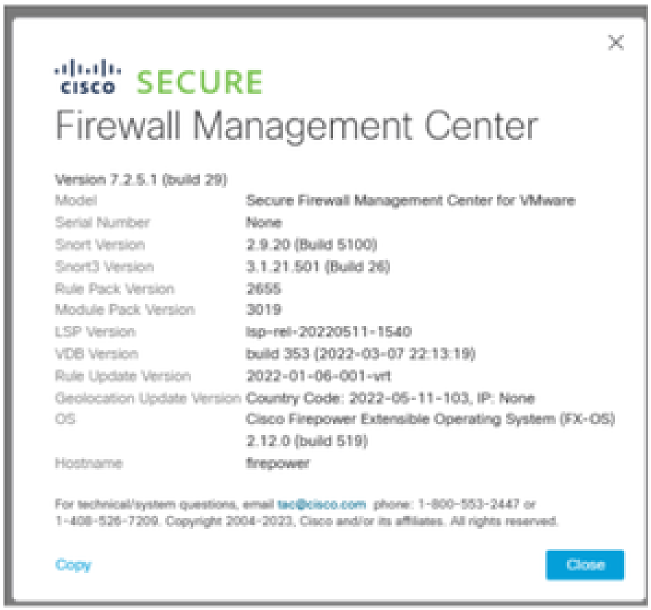
Replacement



cisco SECURE

Firewall Management Center

Version 7.2.5.1 (build 29)

Model	Secure Firewall Management Center for VMware
Serial Number	None
Snort Version	2.9.20 (Build 5100)
Snort3 Version	3.1.21.501 (Build 26)
Rule Pack Version	2655
Module Pack Version	3019
LSP Version	lsp-rel-20220511-1540
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OS	Cisco Firepower Extensible Operating System (FX-OS) 2.12.0 (build 519)
Hostname	firepower

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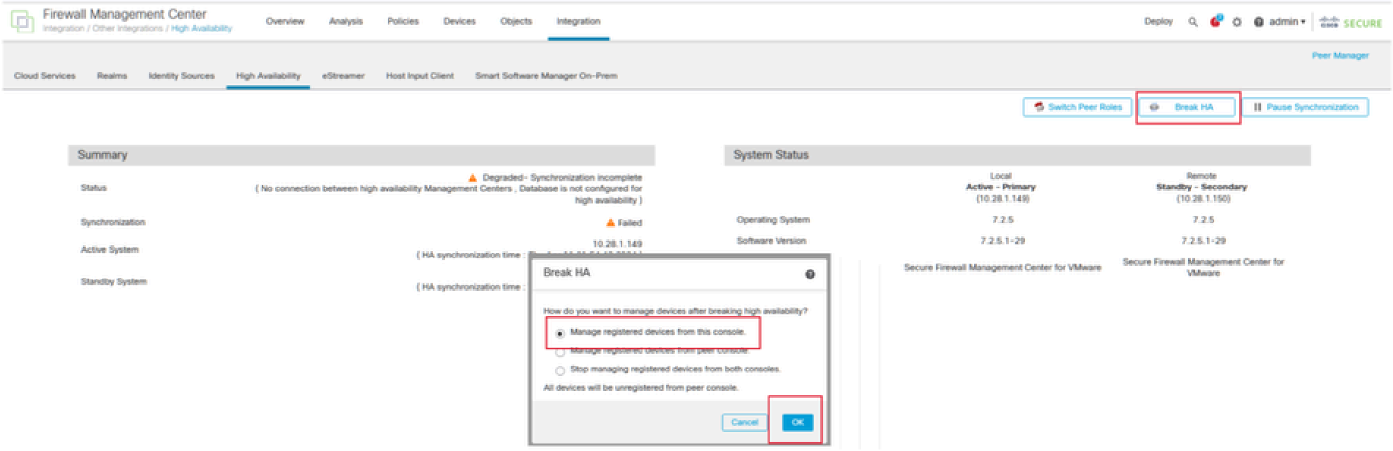
Step 4: Use the web interface of the active management center to break HA. When prompted, select the option to **Manage registered devices from this console**.



Summary

Status	Degraded- Synchronization incomplete (No connection between high availability Management Centers , Database is not configured for high availability)
Synchronization	Failed
Active System	10.28.1.149 (HA synchronization time :
Standby System	(HA synchronization time :

System Status

	Local **Active - Primary** (10.28.1.149)	Remote **Standby - Secondary** (10.28.1.150)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware

Break HA

How do you want to manage devices after breaking high availability?

● Manage registered devices from this console.

○ Manage registered devices from peer console.

○ Stop managing registered devices from both consoles.

All devices will be unregistered from peer console.

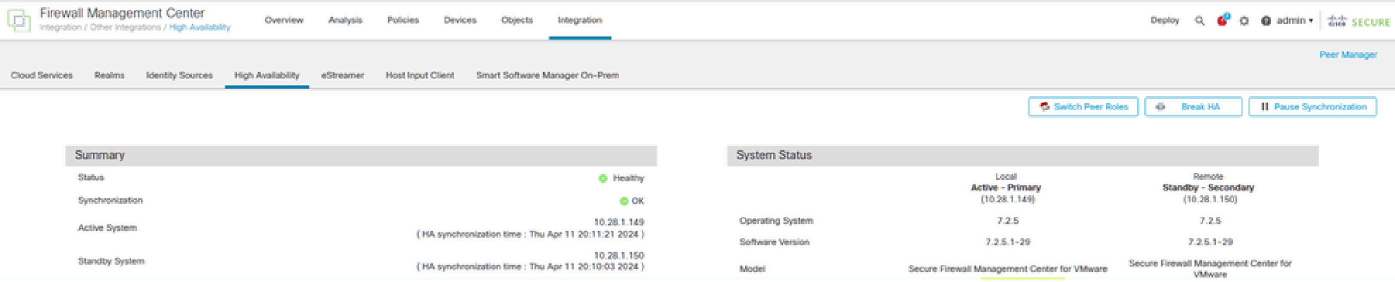
Step 5: Reconfigure the management center HA by configuring the operational management center as the primary and the replacement unit as the secondary. For detailed instructions, see Establishing Management Center High Availability.

Note: When HA is re-established, the latest configuration from the primary management center synchronizes with the secondary management center. Both Classic and Smart Licenses are designed to integrate smoothly.

Verification

Use this section in order to confirm that your configuration works properly.

Once the synchronization is completed, the expected output is Status **Healthy** and Synchronization **OK**.



Summary

Status	Healthy
Synchronization	OK
Active System	10.28.1.149 (HA synchronization time : Thu Apr 11 20:11:21 2024)
Standby System	10.28.1.150 (HA synchronization time : Thu Apr 11 20:10:03 2024)

System Status

	Local **Active - Primary** (10.28.1.149)	Remote **Standby - Secondary** (10.28.1.150)
Operating System	7.2.5	7.2.5
Software Version	7.2.5.1-29	7.2.5.1-29
Model	Secure Firewall Management Center for VMware	Secure Firewall Management Center for VMware

Because this process can take sometime, the Primary and Secondary units are still synchronizing. During this period, make sure to check that your devices are correctly listed on both the Primary and Secondary units.

Additionally, verification via the CLI can be performed. This is achieved by connecting to the CLI, switching to expert mode, elevating privileges, and running these scripts:

<#root>

```
fmc1:/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   Help
 0   Exit

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

<#root>

```
fmc1:/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 Help
0 Exit
**************************************************************
```

For more detailed information, please see [Verify Firepower Mode, Instance, High Availability, and Scalability Configuration.]

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- Cisco Secure Firewall Management Center Administration Guide, 7.4. High Availability
- Cisco Technical Support & Downloads