Upgrade UCS Manager

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Introduction

This document describes how to upgrade Cisco UCS Manager.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

• Basic understanding of Cisco UCS.

Components Used

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

- Software version 4.2(2e)
- Software version 4.3(3a)
- Fabric Interconnects 6454 (UCS-FI-6454)

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.

Background Information

The example in this guide demonstraates a pair of Cisco Fabric Interconnects **6454** and performs an upgrade from version **4.2(2e)** to **4.3(3a)** using the Cisco UCS infrastructure software A bundle.

This bundle includes firmware images that are required to update these components:

- Cisco UCS Manager software
- Kernel and system firmware for the fabric interconnects
- I/O module firmware

Read the Cisco official documentation for your specific model and firmware version of fabric interconnects before proceeding with this exercise.

Configure

Validate the upgrade path for your current software version on the <u>Cisco UCS Manager</u> <u>Upgrade/Downgrade Support Matrix</u> website.

CISCO Cisco UCS Manager Upgrade/Downgrade Support Matrix

This page provides Cisco UCS Manager software upgrade and downgrade information based on your current release. The provided upgrade paths have been tested and validated by Cisco. Use this tool as a reference for supported software.

To get a complete overview of all the possible upgrade paths in Cisco UCS Manager, see the Cisco UCS Manager Upgrade and Downgrade <u>matrix</u>.

For Release Notes and other documentation, see the Cisco UCS Manager documents landing page.

To download Cisco UCS Manager Software bundles, see the Software Download landing page.

To provide feedback on this tool, send your comments to <u>ucs-docfeedback@external.cisco.com</u>.

Upgrade ~	Choose upgrade or downgrade info
4.2(2)	Current release of Cisco UCS Manager
4.3(3) ~	Target release of Cisco UCS Manager
Current release: 4.2(2)	
Target release: 4.3(3) [之]	
Recommended path: Direct path from Current Rele	ase. [Show All]
Procedure:	
 Upgrade the Infrastructure A bundle. After the Infrastructure A bundle is upgraded su servers. 	uccessfully, upgrade the B and C bundles for all
Recommended software for target release:	
 Cisco IMC version: 4.3(3)-All M7, All M6, All M5 	i.

Further firmware upgrade recommendations (when using the Firmware Upgrade TAC Assistant tool) can be obtained via the **Support Case Manager** when opening a Service Request.

¹ Support Manager



2 Support Case Manager

Download the required firmware bundle for your specific Fabric Interconnect model from the <u>Cisco</u> <u>Software Download Center</u> website.

Log in with your Cisco account for download.

Note that the FI-6454 uses the same firmware image as the FI-64108 Fabric Interconnects because they are both 6400 series Fabric Interconnects.

Accept Cisco's General Terms for the download to begin.

Q Search) UCS Infrastructure and UCS Mana	re		
Expand All Collapse All	Release 4.3(3a)	Related Links a Release Note for 4.3	nd Documentation	
Suggested Release	A My Housebook			
4.3(3a) 오				
4.2(3j) <mark>O</mark>	File Information	Release Date	Size	
4.1(3m) <mark>O</mark>	The UCS Infrastructure Software Bundle contains: - NX-OS software for the UCS 6332 Fabric Interconnects - Firmware for the	15-Feb-2024	1472.60 MB	+
Latest Release	 fabric extenders and I/O modules - UCS Manager - Chassis Management Controller - UCSM Capability Catalog. 			
4.3(3c)	ucs+6300-k9-bundle-infra.4.3.3a.A.bin Advisories			
4.2(3)) 🔿	The LICS Infrastructure Software Bundle contains: - NV-OS	15-Eeh-2024	2602.95 MB	
4.1(3m) <mark>O</mark>	software for the UCS 6454 Fabric Interconnects - Firmware for the	10 100 2024	2002.00 000	-
4.0(4o)	fabric extenders and I/O modules - UCS Manager - Chassis Management Controller - UCSM Capability Catalog.			
All Release	ucs-6400-k9-bundle-infra.4.3.3a.A.bin Advisories			
4.3	The UCS Infrastructure Software Bundle contains: - NX-OS	15-Feb-2024	2643.70 MB	+
4.2	software for the UCS 6536 Fabric Interconnects - Firmware for the fabric extenders and I/O modules - UCS Manager - Chassis			
4.1	Management Controller - UCSM Capability Catalog.			
4.0	Advisories 🗅			

When the download is complete, log on to UCS Manager web interface using the Fabric Interconnect cluster IP address or the fully qualified domain name with an account possessing admin privileges.

Navigate to Equipment>Firmware Management>Installed Firmware.

Expand UCS Manager and confirm the running UCS Manager firmware version.

Navigate to Download Tasks, and click Download Firmware.

	Main Topology View	Fabric	Interconne	cts	Servers	Therma	Decommission	ed	Firmw	are Manager	ment	Policies	Faults
_	Installed Firmware	Firmware	Auto Insta	all	Catalog Pac	kage	Download Tasks	Pack	ages	Images	Upg	rade Validation	Faults
	Ty Advanced Filter	♠ Export	🖶 Print	😵 Dov	vnload Firmwa	re							
	Filename				Path				Trans	sfer State			

5 Download Tasks

In the pop-up window, click Choose file

Download Firmware						
Location of the Image File:						
 Local File System						
Filename : Choose file No file chosen						

6 Choose File

Browse to the directory where the downloaded Fabric Interconnect bundle was saved and select the **Infra A**,Bundle file, click **Open** and **OK**.

< > ∷	Downloads	0	\ Search		9
Name			Size		Kind
ucs-6400-k9-bundle-infra	a.4.3.3a.A.bin			2,73 GB	Ма
			Canaal		
			Cancel	Open	

7 Open File

After the downloaded bundle has been imported into UCS Manager, click on **Firmware Auto Install,** select**Install Infrastructure Firmware** under**Actions**.

Equipment					
Main Topology View Fabric Interconnects	Servers The	rmal Decommission	ned Firmware Manag	ement Policies	Faults Diagnostics
Installed Firmware Auto Install	Catalog Package	Download Tasks	Packages Images	Upgrade Validation	Faults
General FSM					
Status	Inf	rastructure Firmware			
Firmware Installer : 🛉 Ready	Pa	ackage Version	: 4.2(2e)A		
	Ba	ackup Version	:		
	St	tartup Version	: 4.2(2e)A		
	Se	ervice Pack Running Ver	rsion : 4.2(2)SP0(Default	t)	
	Se	ervice Pack Startup Vers	sion :		
Actions	0	wner	: Local		
Install Infrastructure Firmware					
Install Chassis Firmware					
Install Server Firmware					
Clear StartUp Version					
Prepare for Firmware Install					

8 Install Firmware

Carefully review all warnings and resolve any pending issues in the pop-up if required before proceeding. Select **Ignore all**and click **Next**

		Install Infrastructure Firmware	?)	×
0	Prerequisites Install Infrastructure Firmware	What happens during this stage: This wizard will enable you to perform infrastructure firmware upgrade, which would upgrade UCS Manager and the UCS interconnects. If the backup version is set through Prepare for Firmware Install and is the same as the selected infra firmware version, the backup version is set as the startup version. If the backup version is not set earlier, the selected firmware version is set as the backup version. If the backup version is not set earlier, the selected firmware version is set as the backup version. This version is then set startup version. Completing this stage will result in a reboot. The system has performed a sanity check and found the following issues. Suggestions about fixing these issues are also displayed. Please on through the list of issues and supposted fixes carefully, and take appropriate action.	} fabric he t as the	
		Warnings If ignore All 1) Critical and major faults exist. Proceeding without fix might lead the system in unexpected state. Click here to see the existing critical and major faults. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release. Image: Click if any hardware (fabric interconnects, io-modules, servers or adapters) is unsupported in the target release.)

9 Ignore All, Next

Choose the appropriate Infra Pack from the drop-down and check Upgrade Now checkbox. Click Finish.

		Install Infrastructure F	irmware	? ×
	Prerequisites	Firmware System Status	Properties	
2	Install Infrastructure Firmware	Firmware Installer : † Ready Actions	Name : default Description : Infrastructure Pack	
		Cancel Infrastructure Upgrade	Backup Version : Infra Pack : 4.3(3a)A v Service Pack : <not set=""> v Force : Evacuate :</not>	
			Infrastructure Upgrade Schedule Admin State : Untriggered Owner : Local Max Number Of Concurrent Tasks : Unlimited Start Time : 2024-05-17 01:39:2 Upgrade Now	
			< Prev Next > Finish	Cancel

10 Upgrade Now, Finish

Click Yes to disregard the warning for the Service Pack not being selected. Click OK.

Prerequisites	Firmware System Status	Properties
	Firmware Installer : 🕇 Ready	Name : default
Install Infrastructure Firmware	Actions	Description : Infrastructure Pack Backup Version :
		Infra Pack : 4.3(3a)A
		Service Pack : <pre></pre>
		Force : 🗆
Instal	I Infrastructure Firmware e Pack has not been selected, so any Se Yes to disregard the warning and submit icel to make changes to the current conf	rvice Pack if already installed in the system, will be removed. changes, No to quit the wizard figuration.

To monitor the upgrade progress, click the **FSM** tab. The upgrade begins after a few moments.

It is highly recommended to enable the **Evacuate** option, to ensure traffic is moved between Fabric Interconnects during the upgrade process and to avoid traffic disruption.

This is typically done first on the Secondary Fabric Interconnect.

* Equipment	General Physical Ports Fans	PSUs Physical Display FSM Neighbors Faults Events S				
Chassis Dark-Mounts	Fault Summary	Physical Display				
Fabric Interconnects	8 0 0					
Fabric Interconnect A (primary) Fabric Interconnect B (subordinate)		Up 🖬 Admin Down 📕 Fail 📕 Link Down				
* Policies	Status Co	onfigure Evacuation X				
Port Auto-Discovery Policy	Overall Status : 1 Operable Thermal : 1 OK Ethernet Mode : End Host FC Mode : End Host Admin Evac Mode : On Oper Evac Mode : Off	Configure Evacuation Admin Evac Mode : On Off Force : S T				
	Actions Configure Evacuation Configure Unified Ports Internal Fabric Manager	OK Apply Cancel Help				
	LAN Uplinks Manager	⊕ Access				
	NAS Appliance Manager SAN Uplinks Manager	High Availability Details				
	SAN Storage Manager	VI AN Port Count				

12 Configure and Apply

Verify paths are functioning (from UCS perspective) as well as any virtual path and/or virtual machine, virtual NIC, or HBA.

This ensures that traffic is not impacted during the upgrade process.

If there are any vNIC or vHBA down, verify the impact and resolve the situation before the upgrade.

By design, the UCS Infrastructure upgrade, starts the upgrade on the Secondary Fabric Interconnect.

When the upgrade is about to finish at the Secondary Fabric Interconnect, you are temporarily logged-out by the UCS system.

This happens because the UCS Manager is being upgraded and management processes are down, however the data plane remains up as it is detached from the management plane.

If you configured **SNMP**, you can possibly receive alerts regarding the state of the management plane.

This is normal, hence it is recommended to disable **SNMP** notifications during your upgrade and re-enable after having completed the activity.

As soon as the system becomes available again, the upgrade of the UCS Manager component is completed.

You can log back in to UCS Manager to monitor the rest of the upgrade via the FSM tab

Al v	Equipment					
Equipment	Main Topology View Fabri	ic Interconnects Servers T	hermal Decommissioned	Firmware Management Pr	olicies Faults Diagnostic	
* Chassis	Installed Firmware Firmwa	are Auto Install Catalog Packag	e Download Tasks Pack	ages Images Upgrade	Validation Faults	
+ Chassis 1 🛞	General FSM					
 Rack-Mounts 	FSM Status :	In Progress				
 Fabric Interconnects 	Description :					
 Fabric Interconnect A (primary) 	Current FSM Name :	Deploy				
Eshuic Interropert B (insentirable)	Comdicted at :					
- rabie interestinger bitrabbiesenst	Progress Status :		90%			
* Policies	Remote Invocation Result :	Not Applicable				
Port Auto-Discovery Policy	Remote Invocation Error Code :	None				
	Remote Invocation Description :					
	Step Sequence					
	Order	Name	Description	Status	Timestamp	Retried
	1	Deploy Wait For Deploy	Waiting for Deploy to begin(F.,.	Success	2024-05-18T11:35:31Z	0
	2	Deploy Resolve Distributable	Resolving distributable name	Skip	2024-05-18T11:35:31Z	0
					2024-05-18711-25-212	

13 Firmware Auto Install

The subordinate **Fabric Interconnect** and its corresponding chassis **IO Module** then complete their respective upgrades.

All 👻	Equipment / Fabric Interconnects / Fabric Interconnect B (inapplicable)							
✓ Equipment	General	Physica	I Ports	Fans	PSUs	Physical Display	FSM	Neighbors
 Chassis ✓ Chassis 1 ⊗ 	Fault Summ	nary		•	_	Physical Display		
Fans IO Modules IO Module 1	1	2	0	1		Up Admin Dow	n <mark>–</mark> Fail	Link Down
 IO Module 2 PSUs 	Status Overall Sta	itus :	V Inope	rable	_	Properties Name :	в	
Servers Rack-Mounts	Thermal Ethernet M FC Mode	: lode :	† OK End Host End Host			Product Name : Vendor :	Cisco UCS Cisco Syst	6454 tems, Inc.
 Fabric Interconnects Fabric Interconnect A (primary) 	Admin Eva Oper Evac	c Mode : Mode :	Off Off			Revision : Available Memory :	0 55.560 (GE	3)
Fabric Interconnect B (inapplicable) Policies	Actions				_	Locator LED :	•	
Port Auto-Discovery Policy	Configure E Configure L Internal Fab	vacuation Inified Por ric Manag	ts er			① Local Storag	e Informa	ation

14 Fabric Interconnect

Upon completion, verify that the new firmware versionisinstalledon the subordinateFabric Interconnectby selecting the**subordinateFabric Interconnect**

(in this caseFabric InterconnectBin theEquipmentsection of the navigation pane).

Scroll down under the **General**tab. In the **Firmware**section, observe the newly installed firmware version on the subordinateFabric Interconnect.

Al v	Equipment / Fabric Interconnects / Fabric Interco	onnect B (subordinate)	Pending Activities ×				
Equipment	General Physical Ports Fans PSUs	Physical Display FSM Neig	There are activities in the system requiring reboot. Click the Pending Activities button on the toolbar to acknowledge.				
* Chassis	Configure Unified Ports	Local Storage Information	Do not show again				
 Chassis 1 (0) 	Internal Fabric Manager	-		_			
Rack-Mounts	LAN Uplinks Manager	Access					
* Fabric Interconnects	NAS Appliance Manager						
 Fabric Interconnect A (primary) 	SAN Uplinks Manager	High Availability Details					
 Fabric Interconnect B (subordinate) 	SAN Storage Manager	VLAN Port Count					
* Policies	Disable Ports *						
Port Auto-Discovery Policy	Set Ethernet End-Host Mode	FC Zone Count					
	Set Ethernet Switching Mode						
	Set FC End-Host Mode	Firmware	`				
	Set FC Switching Mode	Boot-loader Version : v05.47(04/2	18/2022)				
	Activate Firmware	Kernel Version : 9.3(5)(43(3)	0				
	Management Interfaces	System Version : 9.3(5)(43(3a	0				
	Turn on Locator LED	Service Pack Version : 4.3(3)SP0(0	hefault)				
	Install Secure FPGA	Package Version					
		Startup Kernel Version : 9.3(5)143(3a	0				
		Activate Status : Ready					
		Startup System Version : 9.3(5)43(3a	0				
		Activate Status : Ready					
		Startup Service Pack Version : 4.3(3)	SP0(Default)				
		Activate Status : Ready					

14 Fabric Interconnect

For completeness, the primary Fabric Interconnect needs to upgrade and be rebooted.

There is an alert that a reboot is required to make effective changes.



Note: This is a critical step. Verify that all paths are physically and virtually running as well as the high availability in both Fabric Interconnects prior to the reboot of the Fabric Interconnect A.

This is key to ensure success and avoid any downtime or outage. An Operating System or Virtual Machine seems to be running, however its secondary path is not fully up.

If this is the situation, upon Fabric Interconnect A reboot, the Operating System or the Virtual Machine possibly loses connection due to its inability to find a path.

Once all have been verified, proceed safely to reboot Fabric Interconnect A.

Click on the Pending Activities pop-up at the top right corner

	Pending Activities	X
Decommissi	There are activities in the system requiring reboot. Click the Pending Activities button on the toolbar to ackno	wledge.
	Do not show again	

14 Fabric Interconnect

Select **Fabric Interconnects.** Click **Reboot Now.** Select **Yes** in the pop-up window and click **OK** to close the pop-ups.

Pending Activities	×
User Acknowledged Activities Scheduled Activities	
Service Profiles Fabric Interconnects Servers Chassis Profiles	
Actions	
Rebogt now	
Pending Disruptions : defaultValue	
Pending Changes :	
Details	
Modified at : 2024-05-18T03:21:02Z	
Acknowledgment State : Waiting For User Schedule : fi-reboot	
	OK Apply Cancel Help

This action reboots the primary Fabric Interconnect to complete the firmware upgrade.

During this reboot process, the cluster leadership role of the system is taken over by the subordinate, hence you are logged out of UCS Manager temporarily.

UCS Manager	8	Connection Error	
Al	Equipment Eabrin In	Inable to connect to the server. The application	OK Insperment Policies
Chassis	Installed Firmware Firmware zooo rest	Catalog Package Download Task	s Packages amages Upgrade Validatio
Chassis 1 Reck-Mounts	General FSM	Infrastructure Firmwo	
Fabric Interconnects Fabric Interconnect A (primary) Fabric Interconnect B (subordinate)	Firmware Installer : OIn Progress	Package Version Backup Version	: 4.3(3a)A,4.2(2e)A :
 Policies Port Auto-Discovery Policy 		Startup Version Service Pack Running Service Pack Startup	: 4.3(3a)A Version : 4.3(3)SP0(Default),4.2(2)SP0(Default) Version :
	Actions	Owner	: Local
	Install Chassis Firmware Install Server Firmware		

18 Connection Error

Once access to the UCS Manager GUI is restored, log back in.

Monitor the FSM once again to verify the upgrade progress.

Equipment	Main Topology View Fabric Interconnects Servers Thermal Decommissioned Firmware Management Policies Faults Diagnostics
Chassis	Installed Firmware Auto Install Catalog Package Download Tasks Packages Images Upgrade Validation Faults
Chassis 1 😗	General FSM
* Rack-Mounts	FSM Status : In Progress
Enclosures	Description :
FEX	Current FSM Name : Deploy
Servers	Completed at
· Fabric Interconnects	Progress Status : 90%
Fabric Interconnect A (subordinate)	Remote Invocation Result : Not Applicable
 Fabric Interconnect B (primary) 	Remote Invocation Description :
* Policies	Step Sequence



Upon upgrade completion, the previous primary Fabric Interconnect assumes the subordinate role in the cluster.

Verification

To verify a successful UCS Manager upgrade, in the **Equipment** section of the navigation pane, select **Fabric Interconnects**.

Under the Installed Firmware tab, click the expand all plus (+) icon.

5 6454 -	Equipment / Fabric Interconnects						
Equipment Crassis	Fabric Interconnects IO Modules	Thermal Power Fans	Enstalled Firmware Fault	s Events Performance			0
Rack-Mounts	Name	Model	Package Version	Running Version	Startup Version	Activate Status	
Fabric Interconnects	¥ UCS Manager						
 Fabric Interconnect A (subordinate) 	UCS Manager Service Pack	(4.3(3)SP0(Default)	4.3(3)SP0(Default)	Ready	
 Fabric Interconnect B (primary) 	UCS Manager System		4.3(3a)A	4.3(3a)	4.3(3a)	Ready	
Policies							
Port Auto-Discovery Policy	¥ Fabric Interconnect A (subordi	Cisco UCS 6454					
	Kernel		4.3(3a)A	9.3(5)43(3a)	9.3(5)43(3a)	Ready	
	Service Pack			4.3(3)SP0(Default)	4.3(3)SP0(Default)	Ready	
	System		4.3(3s)A	9.3(5)+43(3a)	9.3(5)(43(3a)	Ready	
		Cisco UCS 6454					
	Kernel		4.3(3a)A	9.3(5)43(3a)	9.3(5)(43(3a)	Ready	
	Service Pack			4.3(3)SP0(Default)	4.3(3)SP0(Default)	Ready	
	System		4.3(3a)A	9.3(5)43(3a)	9.3(5)(43(3a)	Ready	
		· · · · · · · · · · · · · · · · · · ·					
	Equipment Chasals Active Interconnect A (subordnate) Fabric Interconnect A (subordnate) Fabric Interconnect B (primary) Patrices Port Auto-Discovery Policy	 Equipment Chassis Rack-Mounts Fabric Interconnect & (subordinate) <li< th=""><th> Equipment Chassis Rack-Mounts Fabric Interconnect & (Subordinate) Fabric Interconnect A (Subordinate) Fabric Interconnect B (Subordinate) <li< th=""><th>SERSE • Equipment. • Chastis • Fabric Interconnects ID Modules Thermal Power Fabric Interconnects • Fabric Interconnects • Power Fabric Interconnects •</th><th>SEASE Function • Explorent: Function Aution Aution</th><th> Sesse Sess</th><th> Specifie (a) Specifie (b) Spec</th></li<></th></li<>	 Equipment Chassis Rack-Mounts Fabric Interconnect & (Subordinate) Fabric Interconnect A (Subordinate) Fabric Interconnect B (Subordinate) <li< th=""><th>SERSE • Equipment. • Chastis • Fabric Interconnects ID Modules Thermal Power Fabric Interconnects • Fabric Interconnects • Power Fabric Interconnects •</th><th>SEASE Function • Explorent: Function Aution Aution</th><th> Sesse Sess</th><th> Specifie (a) Specifie (b) Spec</th></li<>	SERSE • Equipment. • Chastis • Fabric Interconnects ID Modules Thermal Power Fabric Interconnects • Fabric Interconnects • Power Fabric Interconnects •	SEASE Function • Explorent: Function Aution Aution	 Sesse Sess	 Specifie (a) Specifie (b) Spec

20 Installed Firmware

UCS Manager has been successfully upgraded.

If you previously configured the **evacuation** setting, remember to now disable it.

Enclosures	Ø		0		desairsa Jesurs
FEX	0	0	0		
Servers				Up 📕 Admin Down 📕 Fail 📕 Link Down	
* Fabric Interconnects	Status		_	Configure Evacuation ×	
 Fabric Interconnect A (subordinate) 	Overall Status		t Operab		
Fabric Interconnect B (primary)	Thermal	:	т ок	Configure Evacuation	
- Delicios	Ethernet Mod	e : 1	ind Host	Admin Evac Mode : On Of	ş
* Policies	FC Mode	11	Ind Host		
Port Auto-Discovery Policy	Admin Evac N	fode : (Dn	Forde : O	
	Oper Evac Mo	ode : O	Dn		1
	Actions				
	Actions				
	Configure Eva	cuation		OK Apply Cancel Help	
	Configure Unif	ed Port	5	(+) Local Storage information	
	Internal Fabric	Manage	r		

21 Admin mode Off

If required, you can change the cluster lead by using this CLI command in the **local-mgmt** mode:

#cluster lead a



22 Connect Cluster Lead

TypeYesto continue. You are then temporarily logged out of out of the CLI and GUI instances.

Log back into UCS Manager to verify that the cluster lead is now your previous primary Fabric Interconnect.

Your UCS Manager upgrade is now complete.