在Intersight管理模式下升级基础设施和服务器固件

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简介

本文档介绍在Cisco UCS域中的所有交换矩阵组件中执行固件升级的流程。这包括两个交换矩阵互 联(FI)、I/O模块(IOM)和刀片服务器(通过Intersight管理模式(IMM))。

先决条件

要求

Cisco 建议您了解以下主题:

- Intersight
- •思科统一计算系统(UCS)

在升级Intersight托管FI固件之前,请考虑以下先决条件:

- •只有Cisco UCS域中的Cisco UCS 6400系列FI可以升级。
- •您必须在FI分区中至少拥有下一个可用存储才能下载固件捆绑包:

/var/tmp中90%的可用空间/var/sysmgr中的20%可用空间/mnt/pss中30%的可用空间 /bootflash中18%的可用空间

- Cisco UCS域中的所有服务器必须位于许可证层基础版或更高版本。
- •最低捆绑包版本为4.1(2a)。

使用的组件

本文档中的信息基于以下软件和硬件版本:

- Cisco UCS 6400系列FI,初始固件4.2(1e)
- UCSB-B200-M5刀片服务器,初始固件4.2(1a),高级许可证层
- Intersight SaaS

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原 始(默认)配置。如果您的网络处于活动状态,请确保您了解所有命令的潜在影响。

交换矩阵固件升级

要开始基础设施固件升级,您可以选择两个FI中的任意一个,然后单击Upgrade firmware。

* ALE	All Fabric Interconnects																		
Ø	۹. Search imm		iter												t 2 iten	ns found	20 v per page	K (<u>1</u> 0	1 🗩 🖂
Health		Connect	ion nected 10 Connected 6	Firmware Versio	93(5)42(2	Models		Contract Status B Not Covered 21											
•	łame		Health		Contract Status		Manageme		Model		Expansion Modules		UCS Domain Profile	Total	Ports Used	Available	Firmware Versio		9
•			Critical		Not Covered		10.31.123.	168	UCS-F1-6454							50	9.3(5)142(1c)		Å
			Critical		Not Covered		10.31.123.	167	UCS-F1-6454								9.3(5)142(1c)	Open TAC Case	•
0																		Upgrade Firmw	rare
_																			

这将重定向到升级向导初始化的屏幕。

	Upgrade Firmware		
	Version Select a firmware version to upgrade the Fabric Interconnects to.	, ⊂_ ,	
	• •		
	 About Firmware Upgrade Do not show this page again 		
			Start →

步骤1.确认UCS环境(列Fabric Interconnect A和Fabric Interconnect B)和当前固件版本。单击 Next。

E Progress				Step 1 General Ensure selected Fabric Interco requirements for firmware upg	nnecta meet yade.			
3 Summary	Confirm Fabric Interconnects	Selection 1 Selected						
	Infrastructure firmware	e upgrade can be performed only on i	a pair of Fabric Interconnects at o	nce	1 items	found 10 v per page K	(<u>1</u> d1)) ()	
	Domain Name		Fabric Interconnect A			Fabric Interconnect B		
	UCS-TS-MXC-P25	UCS-FI-6454	FD02440009X	9.3(5)42(1c)	UCS-FI-6454	FD024270LDM	9.3(5)/42(1c)	
	Selected 1 of 1 Show S							
K Back	Cancel							Next >

步骤2.单击目标固件版本。单击 Next。

⊡ Progress				Ē	Step 2 Version Select a firmware version to upgrade the Fabric Interconnects to						
1 General											
Version		Select Firmware Bundle				Advanced Mod	•				
3 Summary		The selected firmware bundle will be downloaded from intersight.com. By default, the upgrade enables Fabric Interconnect traffic evacuation. Use Advanced Mode to exclude Fabric Interconnect traffic evacuation.									
		Add Filter			10 items found	10 ∨ per page K < 1 of 1 > >					
		Version		: Release Date :	Description						
		O 4.2(1h)	1.66	GiB Sep 16, 2021 10:49 PM	Cisco Intersight Infrastructure Bundle						
		4.2(11)	1.66	GiB Aug 17, 2021 1:28 PM	Cisco Intersight Infrastructure Bundle						
		O 4.2(1e)	1.67	GiB Aug 4, 2021 7:21 AM	Cisco Intersight Infrastructure Bundle						
		O 4.2(1d)	1.66	GiB Jun 27, 2021 9:57 PM	Cisco Intersight Infrastructure Bundle						
		O 4.1(5i)	1.71	GiB Jul 8, 2021 11:25 PM	Cisco Intersight Infrastructure Bundle						
		O 4.1(31)	1.64	GiB Sep 3, 2021 12:47 AM	Cisco Intersight Infrastructure Bundle						
		() 4.1(3d)	1.65	GiB Jun 1, 2021 2:09 PM	Cisco Intersight Infrastructure Bundle						
		O 4.1(3d)	1.64	GIB Jul 30, 2021 4:10 PM	Cisco Intersight Infrastructure Bundle						
		○ 4.1(3c)	1.65	GiB May 11, 2021 10:47 AM	Cisco Intersight Infrastructure Bundle						
		() 4.1(3b)	1.65	GiB Jan 27, 2021 9:25 PM	Cisco Intersight Infrastructure Bundle						
		Selected 1 of 10									
< Back	Cancel										

步骤3.此摘要显示所选设备和目标固件版本。当目标固件高于当前版本时,固件版本上会显示绿色 箭头,否则,会显示黄色箭头。

Selected firmware bundle will be downloaded to the Fabric Interconnects and upgraded. Click on Requests to monitor the progress of the firmware upgrade. Firmware Version 4.2(11) Add Filter Add Filter Items found 10 per page C Debrin Interconnect A Explore Int				Step 3 Summary Confirm configuration and	initiate the upgrade.			
Firmware Version 42(1f) (10) Size 1.66 GiB Fabric Interconnects to be Upgraded QAdd Filter 1 items found 10 v per page (10) (10) (10) (10) (10) (10) (10) (10)	Selected firmware bur	ndle will be downloaded to the	e Fabric Interconnects and up	ograded. Click on Requests to	monitor the progress of the f	irmware upgrade.		
Version 4.2(11) Size 1.66 GiB Fabric Interconnects to be Upgraded Add Filter I items found 10 per page K I of 1 I I I I I I I I I I I I I I I I I I	Firmware							
Fabric Interconnects to be Upgraded Q. Add Filter 1 items found 10 v per page K < 1 of 1 > 1 (2) Extends Interconnect A		4.2(1f) ©			1.	56 GiB		
QAdd Filter 1 items found 10 ∨ per page (< 1_ of 1 > > 01 > (2) Exhels Interconnect A Exhels Interconnect B	Fabric Interconnects to b	be Upgraded						
Eshria lataroonnart B						10 ∨ perpage K <		
Domain Name : Model Serial Firmware Version Model Serial Firmware Version	Domain Name 0	Model	Fabric Interconnect A Serial	Firmware Version	Model	Fabric Interconnect B Serial		
UCS-TS-MXC-P25 UCS-F1-6454 FD02440009X 9.3(5)/42(1c) ⑦ UCS-F1-6454 FD024270LDM 9.3(5)/42(1c) ⑨		UCS-FI-6454	FD02440009X	9.3(5)142(1c)	UCS-FI-6454	FD024270LDM	9.3(5)142(1c)	

单击升级**后,**必须最后一次确认它。此时,FI尚不需要重新启动。

Upgrade Firmware		
Firmware will be installed on sure you want to upgrade firn	the selected Fabric Interonware?	connects. Are you
	Cancel	Upgrade



要监控升级,请导航至"请求"**,然**后单击"**活动"。**单击活动名称,查看完整的工作流程任务。

Requests > Upgrade	Firmware		L ■ 3 ▲ 2 O 1 ¢\$ 32 C, Ø Ø	ھ
Details		Execution Flow		
Status	O In Progress	Progress		- 115
Name	Upgrade Firmware 6151e543696f6e2d334ec382	Wait for image download to complete in endpoint. 14% completed.		
Target Type Target Name	Fabric Interconnect UCS-TS-MXC-P25-6454-IMM FI-A	 Initiate image download to the endpoint. Download ucs-intersignt-infra-4gh 4.2. If bin request is submitted successfully. 		
Source Type Source Name	Firmware Upgrade	Validate the requirements for the endpoint. Validation of pre-upprade space availability completed successfully.		
Initiator	@cisco.com			
Start Time	Sep 27, 2021 10:37 AM			
End Time				
Duration	6 m 55 s			
Organizations				

要完成此过程,您必须先确认交换矩阵B的重新启动,然后确认交换矩阵A的重新启动。

注意:在继续重新启动第二个FI之前,请确保数据路径已在第一个交换矩阵上就绪。为了验证 这一点,您可以使用API或CLI和命令**(nxos)# show pinning border-interfaces。**

工作流任务如下:

- •从Intersight软件存储库下载Intersight FI捆绑包
- 升级IOM。
- 撤离FI B上的数据流量
- 激活FI B
- 等待用户确认: FI重启
- 等待激活完成
- 撤离FI A上的数据流量
- 激活FI A
- 等待用户确认: FI重启
- 等待激活完成

服务器固件升级

选择要升级的服务器,从"操作"下**拉列**表中,选择"升**级固件"。**

OPERATE > Servers > UCS-TS-MXC-P25-6454-IM	411 	û 🖬 313 🔺 271 🕑 q⊄ 1 32 Q	© © £
General Inventory UCS Server Profile HCL			Actions V
Details	Properties	Events	s Power >
Health Ø Healthy	Cisco UCS8-8200-M5	Front View Top View + A	larms System > 13
Name UCS-TS-MXC-P25-6454-			equests Install Operating System
IMM-1-1 User Label IMM server		+ *	dvisories Upgrade Firmware
Management IP 10.31.123.210			Launch vKVM
Serial FLM2402001F	-	-	Open TAC Case
PID UCS8-8200-M5		-1	Set License Tier
Vendor Cisco Systems Inc			

这将初始化固件升级。

步骤1.确认服务器是否正确并验证当前固件版本。

Servers > Upgrade Firmware				٥	🛚 313 🔺 271 🛛 🖂 🌾	1 32 Q 🔘 💿 🛛
				Step 1		
General				General Ensure selected servers meet require firmware upgrade.	ments for	
2 Version						
3 Summary	Confirm	n Servers Selection 1 Selected				
					1 items found 10 v per page	
		Name 0	User Label 🗘	Model 0	Firmware Version	UCS Domain
			IMM_server	UCSB-B200-M5	4.2(1a)	UCS-TS-MXC-P25-6454-IMM
	Selec	ted 1 of 1 Show Selected Un				

步骤2.单击目标固件版本旁边的单选按钮。

C Progress		Step 2 Version Select a firmware version to upgrade the servers to.							
3 Summary	Select	Select Firmware Bundle Advanced Mod							
	•	The selected firmware bun upgrade of drives and stor	ndle will be download age controllers.	ded from intersight.com. All th	e server components will be upgraded	d along with drives ar	d storage controllers. Use Advanced Mode to exclu	ude	
		Add Filter				5 items found	<u>10 ∨</u> per page K < <u>1</u> of 1 > >		
		Version : S	Size :	Release Date :	Description				
		4.2(1b)	577.84 MiB	Sep 13, 2021 8:35 AM	Cisco Intersight Server Bundle				
		4.2(1a)	575.41 MiB	Aug 6, 2021 7:36 PM	Cisco Intersight Server Bundle				
		4.1(3d)	510.98 MiB	Aug 16, 2021 11:48 AM	Cisco Intersight Server Bundle				
		4.1(3c)	506.01 MiB	Jun 1, 2021 1:48 PM	Cisco Intersight Server Bundle				
		4.1(3b)	494.63 MiB	Jan 27, 2021 11:17 PM	Cisco Intersight Server Bundle				
	Selec	ted 1 of 5 Show Selec							

步骤3.这是显示服务器和目标固件版本的摘要。当目标固件高于当前版本时,固件版本上会显示绿色箭头,否则,会显示黄色箭头。

 ₽rogress Oeneral Version 			÷	Step 3 Sum Confer	imary m configuration and initiate the	e upgrade.		
Summary	Firm	iware						
	Versi	ion	4.2(1b) 👁		Size	57	77.84 MIB	
	Serve	ers to be Upgraded						
		Q Add Filter				1 items fou	ind 10 v per page 🔣	
	Na	ame :	User Label	Model	: Firmware Version		Requires Reboot ()	UCS Domain
			IMM_server	UCSB-B200-M5	4.2(1a)		Yes	UCS-TS-MXC-P25-6454-IMM

在Upgrade Firmware对话框中,您可以选择立即重新启动或稍后确认重新启动。

Upgrade Firmware Firmware will be installed on next boot. To reboot immediately, please enable the option below. Reboot Immediately to Begin Upgrade Cancel Upgrade

要监控升级,请导航至"请求"**,然**后单击"**活动"**。

ୟ ଅ 3 🔺 2 🔵 1 ଟ୍ୟ 32 ପ୍	\$ © £
	Requests All Active Completed ×
Export 60 items fo	 Upgrade Firmware UCS-TS-MXC-P25-6454-IMM-1 a few seconds ago

单击活动名称,查看完整的工作流程任务。

Requests > Upgrade Firmware					ę‡ 32		
Details		Execution Flow					
Status		Prestore power settings for server.					
Name	Upgrade Firmware						
ID	61533125696/6e2d33db6334	Wait for firmware upgrade to complete.					
Target Type	Blade Server						
Target Name		 Initiate firmware upgrade. Initiated upgrade successfully. 					
Source Type	Firmware Upgrade						
Source Name	UCS-TS-MXC-P25-6454-IMM-1-1	Cancer the previous infinware upgrade task if it is in pending state.					34p 20, 2021 10 22 AM
Initiator	@cisco.com	Initiate firmware upgrade on adapter.					
Start Time	Sep 28, 2021 10:13 AM						
End Time	Sep 28, 2021 10:49 AM	Wait For BIOS POST Completion.					
Duration	35 m 58 s						
Organizations		Power On server.					Sep 28, 2021 10:22 AM
		Find image source to download.					

工作流任务如下:

- •从Intersight软件存储库下载Intersight服务器捆绑包
- •升级适配器(适用于刀片)
- •升级服务器
- 等待服务器重新启动
- 等待升级完成

• 要验证FI本地存储可用空间,请选择其中一个FI,单击Inventory,然后单击Local Storage。

OPERATE > Fabric Interconnects > UC\$T\$MXCP2564541MM FH8											
General Inventory Connections UCS Domain Profile Actions											
Sections 2	Local Storage										
Ports & Port Channels											
Fan Modules			8 items found 10 ∨ per page K < 1 of 1 >> (3)								
PSUs	Partition :	Size (MIB) :	Capacity :								
Local Storage	bootflash	84981	38%								
	opt	9951									
	spare	7936									
	usbdrive	9048	32%								
	var_sysmgr	3800									
	var_tmp	600									
	volatile	2048									
	workspace	7935									

基础设施升级后,您可以验证安装日志。这显示了新版本和升级的时间戳,并允许您确认成功升级 。

UCS-TS-MXC-P25-6454-IMM-A(nx-os) # show install all status This is the log of last installation. <Mon Sep 27 07:01:30> Verifying image bootflash:/ucs-6400-k9-system.9.3.5.142.1e.bin for boot variable "nxos". -- SUCCESS <Mon Sep 27 07:02:18> <Mon Sep 27 07:02:18> Verifying image type. -- SUCCESS <Mon Sep 27 07:02:24> <Mon Sep 27 07:02:25> Preparing "nxos" version info using image bootflash:/ucs-6400-k9-system.9.3.5.I42.le.bin. -- SUCCESS <Mon Sep 27 07:02:26> <Mon Sep 27 07:02:26> Preparing "bios" version info using image bootflash:/ucs-6400-k9-system.9.3.5.142.1e.bin. -- SUCCESS <Mon Sep 27 07:02:28> <Mon Sep 27 07:03:14> Performing module support checks. -- SUCCESS <Mon Sep 27 07:03:16> <Mon Sep 27 07:03:16> Notifying services about system upgrade. -- SUCCESS <Mon Sep 27 07:03:29> Compatibility check is done: Module bootable Impact Install-type Reason

1 yes disruptive reset default upgrade is not hitless

1 fpga IO-0x19 MI-0x10 IO-0x22 MI-0x10 yes

Install is in progress, please wait.

<Mon Sep 27 07:03:31> Performing runtime checks. -- SUCCESS <Mon Sep 27 07:03:32>

<Mon Sep 27 07:03:32> Setting boot variables. -- SUCCESS <Mon Sep 27 07:04:11>

<Mon Sep 27 07:04:11> Performing configuration copy. -- SUCCESS <Mon Sep 27 07:04:14>

Module 1: <Mon Sep 27 07:04:14> Refreshing compact flash and upgrading bios/loader/bootrom. Warning: please do not remove or power off the module at this time. -- SUCCESS <Mon Sep 27 07:05:11>

<Mon Sep 27 07:05:11> Install has been successful.



- Cisco Intersight管理模式配置指南:管理固件
- 思科Intersight托管模式(IMM)- UCS刀片固件升级
- <u>- Cisco Systems</u>