如何在不使用KVM的情況下運行UCS C系列診斷 工具?

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驗證

簡介

本文說明如何在不使用核心虛擬機器(KVM)的情況下在命令列模式下運行思科統一計算系統 (UCS)診斷工具。

它利用Serial Over Lan(SOL)功能與診斷工具連線。

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必要條件

需求

思科建議您瞭解以下主題:

- •相容診斷工具:診斷工具映像可從特定伺服器型號的思科軟體下載網站下載。
- •應在思科整合式管理控制器(CIMC)上啟用安全殼層(SSH)並在網路中允許它。

採用元件

本文中的資訊係根據以下軟體和硬體版本:

- UCS C240-M4
- 伺服器韌體: 4.0(2f)
- UCS C系列診斷工具版本6.0(2a)

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。

設定

步驟1.啟用Sol

Serial over LAN(SoL)是一種機制,它允許透過IP的SSH作業階段重新導向受管系統的序列連線埠的 輸入和輸出。

- 1. 登入到CIMC並導航到Compute > Remote Management > Serial over LAN。
- 2. 啟用Serial over LAN。

GUI:



CLI:

Server# scope sol Server /sol # set enabled yes Server /sol *# set baud-rate 115200 Server /sol *# commit

步驟2.將診斷ISO對映為CIMC對映的vMedia卷。

- 1. 導覽至Compute > Remote Management > Virtual Media。
- 2. 在Cisco-IMC對映的vMedia下,新增新對映。
- 3. 在Add New Mapping彈出視窗中,填寫的詳細資訊以建立對映。
 - 附註: 使用HTTP裝載型別,還有其他選項,如SMB和NFS。

GUI:

	➔ duals cisco Integrated	Management C	Controller			÷ 🗸	admin@10.196.104.120 - C220)-FCH2018
	A / Compute / Remote Manag	gement 🖈			R	efresh Host Power La	unch KVM Ping CIMC Reboot L	ocator LEI
Chassis +	BIOS Remote Management	roubleshooting	Power Policies	PID Catalog				
Compute	Virtual KVM Virtual Media Se Low Power USB Enabled	erial over LAN						
Networking •	✓ Cisco IMC-Mapped vMedia	Add New Mappi	ing		@ X			
Storage	Last Mapping Status	Volume	Volume]			
Admin 👻	Current Mappings	Mount Type:	NFS	٣			Selected 0 / Total 0	Q. •
User Management	Add New Mapping Properties	Remote Share:	NFS CIFS		Browse			
Networking	Volume Mount Type	Mount Optio	WWW(HTTP/HTTPS)		0		Mapping Status	
Communication Services	No data available			Save	Cancel			
Security Management								
Event Management								

	Second Cisco Integrated Management	Controller	÷ 🗸 3	admin@10.196.104.120 - C220-FCH201
	A / Compute / Remote Management *		Refresh Host Power Laune	th KVM Ping CIMC Reboot Locator LE
Chassis •	BIOS Remote Management Troubleshooting	Power Policies PID Catalog		
Compute	Virtual KVM Virtual Media Serial over LAN			
Compate	Low Power USB Enabled			
Networking •	Cisco IMC-Mapped vMedia Add New Map	pina	0 X	
Storage +	Last Mapping Status			
	Volume	diagtest		
Admin •	Current Mappings Mount Type: Remote Share:	WWW(HTTP/HTTPS) ▼		Selected 0 / Total 0 🛛 🧔 👻
User Management	Add New Mapping Properties Remote File:	ucs-cox-diag.6.0.2a.iso	Browse	
Networking	Volume Mount Type Mount Optio	1	0	Mapping Status
Communication Services	No data available User Name	Username		
Security Management	Password:	Password		
Event Management		Sav	Cancel	
Firmware Management				
Utilities				
	Sector Cisco Integrated Management (Controller	🐥 🔽 3	admin@10.196.104.120 - C220-FCH2018
	ስ / Compute / Remote Management 🔺		Refresh Host Power Laund	h KVM Ping CIMC Reboot Locator LEI
Chassis •	BIOS Remote Management Troubleshooting	Power Policies PID Catalog		
Compute	Virtual KVM Virtual Media Serial over LAN			
compare	▼ vKVM Console Based vMedia Properties			
Networking	Enabled 🗸			
Storage •	Active Sessions 0			
	Enable Virtual Media Encryption Low Power USB Enabled			
Admin 🔹				
User Management	 Cisco IMC-Mapped vMedia 			
Networking	Last Mapping Status Success			
Communication Services	Current Mappings			Selected 0 / Total 1 🛛 🖏 👻
Security Management	Add New Mapping Properties Unmap Re	emap Delete		
Event Management	Volume Mount Type Remote Share	Remote File	Status	Mapping Status
Firmware Management	diagtest www http://10.197.242.206	Vfiles/ ucs-cox-diag.6.0.2a.iso	OK	Mapped
Utilities				

確保對映狀態顯示OK,對映狀態顯示Mapped。這意味著CIMC已對映了ISO,並且可以使用此 ISO引導伺服器。

步驟3.配置引導順序並將Cisco CIMC對映的vDVD設定為引導裝置

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- 1. 導覽至Compute > Bios > Configure Boot Order
- 2. 向下滾動到底部,按一下Configure Boot order。
- 3. 螢幕上彈出一個視窗,導航到Advanced頁籤。
- 4. 在Add Boot Device下,選擇Add Virtual Media。
- 5. 另一個視窗彈出,用於填寫Add virtual Media的資訊。
- 6. 輸入所需的Name,然後在Sub Type下拉選單中選擇CIMC MAPPED DVD。
- 7. 將order保留為1st Priority並儲存更改。

CIMC GUI:



	🔁 🖞 Cisco Integrated Management Controller 🔶 🚺 admin@10 196 104.120 - c220
Chassis >	Configure Boot Order
Compute	Basic Advanced
Networking •	Add Boot Device Advanced Boot Order Configuration Selected 1 / Total 1 🔅 👻
Storage	Add Local HDD Enable/Disable Modify Delete Clone Re-Apply Move Up Move Down
Admin -	Add SAN Boot Name Type Order State Add ISCSI Boot Image: Compared to the state Image: Compared to the state Image: Compared to the state
User Management	Add USB
Networking	Add Villidar Media
Communication Services	Add UEFISHELL
Security Management	Add SU Card
Event Management	
Firmware Management	
Utilities	Save Changes Reset Values Close
Device Connector	
	•••••••••••••••••••••••••••••
Chassis	Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Integrated Management Controller Image: Clisco Integrated Management Controller Image: Clisco Integrated Management Integrated Management Controller Image: Clisco Integrated Management Integrate
Chassis Compute	Image: Second
Chassis Compute Networking	Image: Second
Chassis Compute Storage	 Instruction Cisco Integrated Management Controller Compute / BIOS * Refresh Host Power Launch KVM Ping CIMC Reboot Launch KVM
Chassis Compute Networking Storage Admin	 Configure BIOS Configure BIOS
Chassis Compute Networking Storage Admin User Management	 Configure BIOS Configure Boot Order BIOS Properties Running Version C220M4.4.0.1f.0.0521190217 UEFI Secure Boot Last Configured Boot Order Source CIMCOne TimeBoot
Chassis F Compute Compute Comp	Image: Cisco Integrated Management Controller Image: Compute / BIOS Remote Management Troubleshooting Power Policies PID Catalog Image: Configure BIOS Configure BIOS Configure BIOS Running Version C220M4.4.0.1fl.0.0521190217 UEFI Secure Boot Image: Configured Boot Mode Image: Configure Bios Mode<
Chassis Compute Compute Storage Admin User Management Networking Communication Services	 Cisco Integrated Management Controller Cisco Integrated Management Controller Compute / BIOS * Refresh Host Power Launch KVM Ping CIMC Reboot Configured Boot Order Super Configured Boot Configured Boot device
Chassis Compute Compute Compute Compute Compute Communication Services Security Management	Image: Second
Chassis Chassis Compute Compute Networking Storage Admin User Management Networking Communication Services Security Management	Image: Streep Cisco Integrated Management Controller Image: Control of the control of
Image:	 Configure BIOS Configure
Image:	Ittel: Clisco Integrated Management Controller Ittel: Refresh Host Power Launch KVM Ping CIMC Reboot La BIOS Remote Management Troubleshooting Power Policies PID Catalog Configure BIOS Configure Boot Order Configure BIOS Profile BIOS Properties Running Version C220M4 4.0 110.0521190217 UEFI Secure Boot Actual Boot Mode Last Configured Boot Order Source Configured Boot Devices Basic Configured Boot Devices Basic Actual Boot Devices Basic Configured Boot Devices Basic Cisco CIMC/Mapped vDVD12 (rav(2)) UEFI Bait-in EFI Shett (NetPolicyTarget) (Bas 0E Dev 00)PCI RAD Adapter (NetPolicyTarget) Basic Elsen (Device) Configured Boot Devices Basic Cisco CIMC/Mapped vDVD12 (rav(2)) UEFI Bait-in EFI Shett (NetPolicyTarget) (Bas 0E Dev 00)PCI RAD Adapter (NetPolicyTarget) Basic Elsen (Device) Configured Boot Devices Basic Cisco CIMC/Mapped vDVD12 (rav(2)) UEFI Bait-in EFI Shett (NetPolicyTarget) (Bas 0E Dev 00)PCI RAD Adapter (NetPolicyTarget) (Bas 0E Dev 00)
Image:	definition of the second

或者:如果不想更改引導順序,請**將一次性引導順序**配置為CIMC對映的DVD。這樣,無論配置的 引導順序如何,diag-ISO都可以在下次重新啟動時進行引導。

現在,SoL已啟用,診斷ISO對映為CIMC對映的DVD,並且已配置引導順序,準備啟動到CIMC IP的SSH會話,並且確實連線主機以在SSH上重定向輸出。

- 1. 重新啟動伺服器以啟動診斷測試工具;由於診斷工具安裝在CIMC對映的vDVD上,並將其配置 為第一個引導裝置(或一次性引導裝置),因此診斷測試應自動引導
- 2. 通過SSH連線到CIMC IP。



3.運行connect host,通過SSH(SOL)連線到伺服器串列控制檯。

🛃 10.106.42.12 - PuTTY	-	×
n login as: admin		\sim
C220-FCH2018V1AG# connect host		
CISCO Serial Over LAN:		
Press Ctrl+x to Exit the session		

4.等待將輸出重定向到SOL(SSH會話),請注意,當伺服器執行bios開機自檢且診斷工具在後台 啟動時,可能無法在SSH螢幕上看到任何活動。diag工具啟動後,它會顯示End-User License Agreement(終端使用者許可協定)螢幕(EULA),此時輸出開始進入SOL(SSH會話)。 在實驗室 中,diag工具只用了3-5分鐘就啟動了。



5.接受EULA(突出顯示Accept時按a或按Enter)後,它將獲得diag#命令列。可用命令如下圖所示。



附註:確保網路中允許在SOL配置中使用的SSH埠。

驗證

UCS機架式伺服器診斷v6.0.2a

左鍵和按一下右鍵捲軸分別向下和向上滾動

按?隨時檢視可用命令/子命令的清單

diag#?

Cimc	cimc tests
clear	clear commands
comprehensive	comprehensive test suite
cpu	cpu tests
gui	enter GUI mode
memory	memory tests
pci	pci tests
quick	quick test suite
reboot	reboot the server
saveusb	save logs to USB drive
server	server information
show	show information
smbios	show smbios information

diag# show

analysis

cpu	show /proc/cpuinfo
ecc	show ecc info
ipmi	show ipmi sensor info
log	show test log
memory	show /proc/memory
performance	show processor perf ctr monitor info
sel	show sel log
spd	show dimm spd info
status	show test status
temperature	show system temperature info
version	blade diagnostics software version

要檢查Dlag工具版本:

diag# show version
6.0.2a