使用NFS在SNS设备上安装ISE操作系统

目录

<u>简介</u>

<u>先决条件</u>

<u>要求</u>

<u>使用的组件</u>

<u>配置</u>

<u>1 节.在Ubuntu上启用NFS服务器</u> <u>2 节.将ISO映射到硬件上的引导设备</u> <u>3 节.安装37xx硬件的ISE</u> <u>4 节.安装36xx硬件的ISE</u> <u>第5部分:从CIMC盒中卸载ISO映像(SNS 36xx和SNS 37xx)</u>

简介

本文档介绍使用NFS而不是KVM虚拟驱动器在SNS设备上安装ISE的步骤。

先决条件

- SNS服务器
- 身份服务引擎(ISE) ISO
- 网络文件系统(NFS)服务器

要求

思科建议您具备ISE和SNS思科集成管理控制器(CIMC)的基本知识。

使用的组件

本文档中的信息基于以下软件和硬件版本:

- SNS-36xx
- SNS-37xx

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。

配置

1节.在Ubuntu上启用NFS服务器

步骤1:使用命令sudo apt install nfs-kernel-server在Ubuntu上安装NFS服务器。

第二步:使用命令sudo mkdir -p /mnt/nfs_share创建NFS共享目录。

第三步:使用sudo chown -R superadmin:admin_group /mnt/nfs_share/删除对文件夹的限制。

根据命令, superadmin表示用户, admin_group表示用户组。这样, 您可以根据用户帐户和用户组限制用户。

第四步:使用sudo chmod 327 /mnt/nfs_share为文件夹提供读写权限。

根据chmod,327文件夹名称为用户提供写和执行(3)权限,w(2)为组提供权限,为用户提供读、写和执行权限。

第五步:使用sudo vim /etc/exports授予对NFS文件夹的客户端系统的访问权限。

运行该命令后,请按I以插入文件路径和客户端子网,以便使用/mnt/nfs_share 192.168.146.0/24(rw,sync,nosubtree_check)访问NFS共享。

/mnt/nfs_share:已在系统上创建的NFS文件夹

192.168.146.0/24:已添加的子网是可访问NFS共享的客户端子网

rw:文件夹的读写权限

sync:对硬盘的写入权限

no_subtree_check:跳过文件夹上的子树检查

按esc,然后键入:wq以写入和退出文件/etc/exports。

第六步:使用sudo exportfs -a导出系统上的NFS共享目录。

步骤 7.请在系统上重新启动NFS服务,以便使用sudo systemctl restart nfs-kernel-server使更改生效。



注意:确保NFS端口在操作系统上处于打开状态,并在NFS服务器和ISE服务器之间建立通信以防止任何中断。

2节.将ISO映射到硬件上的引导设备

要从Cisco.com下载ISE ISO,请导航至Downloads > Products > Security > Access Control and Policy > Identity Services Engine > Identity Services Engine Software(此处)。



注意:在准备将ISO安装到硬件之前,请确保检查受支持硬件的版本说明。

步骤1:NFS服务器必须映射到SNS盒才能继续安装。在CIMC中,导航到Compute > Remote Management > Virtual Media > Add New Mapping。

Add New Mapp	bing	0 ×		
		1		
Volume	NFS	J		
Mount Type:	NFS]	d 0 / Total 0	ž
Remote Share:	10.127.196.169:/NFS]		
Remote File:	test.iso]		
Mount Optio	nolock] 🕜	tatus	
	Save	ncel		
		noer		

在卷中,提供驱动器的名称,并且安装类型必须选择为NFS。

在"远程共享"下,输入服务器IP:/File路径以从NFS服务器获取映像。在Remote File中,输入要在Hardware SNS框中加载的映像的文件 名。

S Remote Management Power Policies PID Catalog Persistent Memory ual KVM Virtual Media Serial over LAN	10.00								
ual KVM Virtual Media Serial over LAN vKVM Console Based vMedia Properties Enabled Enabled Active Sessions 1 Low Power USB Enabled C Cisco IMC-Mapped vMedia Last Mapping Status Last Mapping Status Success rrent Mapping Properties Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS texture OK Mapping	5105	Remote Ma	nagement	Power Policies	PID Catalog	Persistent Memory			
vKVM Console Based vMedia Properties Enabled Active Sessions 1 Low Power USB Enabled Cisco IMC-Mapped vMedia Last Mapping Status Success rrent Mappings From thapping Properties Unmap Remap Delete Volume Mount Type Remote Share Remote File Status Mapping Status Mapping Status NFS nfs 10.127.196.169/NFS test.iso OK Mapped	Virtual	KVM Virtu	al Media	Serial over LAN					
vKVM Console Based vMedia Properties Enabled Ø Active Sessions 1 Low Power USB Enabled Ø Cisco IMC-Mapped vMedia Last Mapping Status Success rrent Mappings Add New Mapping Properties Unmap Remap Delete Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS test.iso OK Mapped									
Enabled Image: Circumper USB Enabled Cisco IMC-Mapping Status Success	• vK	VM Console	Based vMed	lia Properties					
Active Sessions 1 Low Power USB Enabled Cisco IMC-Mapping Status Last Mapping Status Success Add New Mapping Properties Unmap Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS text.iso OK Mapping			Enabled	\checkmark					
Low Power USB Enabled ✓ Cisco IMC-Mapping Status Last Mapping Status Success rrrent Mappings Selected 0 / Total 1 ≮ Add New Mapping Properties Ummap Delete Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS test.iso OK Mapped		A	ctive Sessions	1					
Cisco IMC-Mapping Status Success rrent Mappings Success Add New Mapping Properties Ummap Delete Volume Mount Type Remote Share Remote File Status Mapping Status Mapping Status NFS nfs 10.127.196.169/NFS text.iso OK Mapped		Low Powe	r USB Enabled	\checkmark					
Cisco IMC-Mapped vMedia Last Mapping Status Success rrrent Mappings Selected 0 / Total 1 \$ Add New Mapping Properties Ummap Delete Volume Mount Type Remote Share Remote File Status Mapping Status Mapping Status NFS nfs 10.127.196.169/NFS test.iso OK Mapped									
Last Mapping Status Success rrent Mappings Selected 0 / Total 1 Add New Mapping Properties Unmap Remap Delete Volume Mount Type Remote Share Remote File Status Mapping Status Image: Constraint of the status NFS nfs 10.127.196.169/NFS test.iso OK Mapped	• C	isco IMC-Ma	pped vMedia	a					
Selected 0 / Tota 1 Selected 0 / Tota 1 Add New Mapping Properties Unmap Remap Oblete Status Mapping Status NFS nfs 10.127.196.169/NFS test.iso OK Mapped		Last	Mapping State	IS Success					
Selected 0 / Total 1 Add New Mapping Properties Unmap Remap Delete Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS testiso OK Mapped				ana di kata di ka					
Add New Mapping Properties Unmap Remap Delete Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS testiso OK Mapped								Selected 0 / Total 1	Ö.,
Volume Mount Type Remote Share Remote File Status Mapping Status NFS nfs 10.127.196.169/NFS testiso OK Mapped	Currer	nt Mappings						Selected 07 Total 1	
NFS nfs 10.127.196.169/NFS test.iso OK Mapped	Currei Add	nt Mappings New Mapping	Propertie	unmap	Remap Dele	te		Selected 07 Iotal 1	
	Add	nt Mappings I New Mapping Volume	Propertie Mount Type	Remote Share	Remap Dele Remo	te Dte File	Status	Mapping Status	
	Add	nt Mappings I New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo	te ote File	Status OK	Mapping Status	
	Add	nt Mappings I New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS test.isc	to Dete File	Status OK	Mapping Status	
	Add	nt Mappings I New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS test.isc	te Ste File	Status OK	Mapping Status	
		nt Mappings I New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS test.isc	te File D	Status OK	Mapping Status Mapped	
		t Mappings New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS tost.isc	to te File D	Status OK	Mapping Status Mapped	
		t Mappings New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS test.isc	to te File D	Status OK	Mapping Status Mapped	
		New Mappings New Mapping Volume NFS	Propertie Mount Type nfs	Remote Share	Remap Dele Remo FS test.isc	to te File D	Status OK	Mapping Status Mapped	

验证映射驱动器的状态为"成功"。

第二步:之后,必须配置引导顺序,以便可以从SNS框引导ISE ISO。

导航到BIOS > Configure Boot Order > Configure Boot Order。请参阅下一个屏幕截图以导航到位置。

/ Compute / BIOS *		Refresh Host Power Launch vKVM Ping CIMC Reboot Locator LED @
BIOS Remote Management Power Policies PID Catalog	Persistent Memory	
Configure BIOS Configure Boot Order Configure BIOS Profil	Secure Boot Certificate Management	
BIOS Properties		
Running Version C220M6.4.2.3-0.19E		
UEFI Secure Boot		
Actual Boot Mode Uefi		
Configured Boot Mode UEFI	(UEFI Secure Boot is enabled, disable it to modify Configured Boot Mode.)	
Last Configured Boot Order Source CIMCOneTimeBool		
Configured One time boot device	•	
	Save Changes	
 Configured Boot Devices 	Actual Boot Devices	
Basic	UEFI: Cisco CIMC-Mapped vDVD2.00 (NFS)	
🔻 🗹 Advanced	Cisco Identity Services Engine (NonPolicyTarget)	
NFS	UEFI: Built-in EFI Shell (NonPolicyTarget)	
	UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	UEFI: PXE IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	UEFI: PXE IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)	
	Configure Boot Q	rder

然后,点击高级选项卡,并从添加引导设备列表列表中选择添加虚拟媒体。

Configure Boot Order	(UEFI Secure Boot is enabled	, disable it to moonly confidure	ed Boot Mode.)		0 ×
Configured Boot Level: Adva	inced				
Basic Advanced					
Add Boot Device	Advanced Boot Order Cor	figuration		Selected 0 / Total 0	ų dar −
Add Local HDD Add PXE Boot	Enable/Disable Modify	Delete Clone	Re-Apply	Move Up Move Down	
Add SAN Boot	Name	Туре	Order	State	
Add iSCSI Boot Add USB Add Virtual Media Add PCHStorage Add UEFISHELL Add NVME Add Local CDD Add HTTP Boot Add Embedded Storage	No data available				
				Save Changes Reset Valu	es Close

在Name字段中,您可以更新首选项的名称。您必须在子类型下选择CIMC映射的DVD,并保存更改。

UEFI VIEFI Secure	Boot is enabled, disable it to modify Configured Boot Mode.)	
Configure Boot Order		@ ×
Configured Boot Level: Advanced Basic Advanced		
Add Boot Device Advanced Boo	t Order Configuration	Selected 0 / Total 0
Add Local HDD Add Virtual N	ledia	×
Add PXE Boot		
Add SAN Boot	Name NFS	
Add iSCSI Boot	Sub Type CIMC MAPPED DVD 🔻	
Add USB	State Enabled	
Add Virtual Media	Order 1 (1	- 1)
Add PCHStorage		
Add UEFISHELL	Save Chang	ges Cancel
Add NVME		
Add Local CDD		
Add HTTP Boot		
Add Embedded Storage		
		Save Changes Reset Values Close
	Configure Boot	Order

虚拟媒体的名称将填写在配置引导顺序的高级下。

BIOS Remote Management Por	PID Catalog	Persistent Memory
Configure BIOS Configure Boot Ord	Contigure BIOS Profile	Secure Boot Certificate Management
BIOS Properties		
Running Vers UEFI Secure E Actual Boot M Configured Boot Order Sou Configured One time boot de	on C220M6.4.2.3c.0_ISE pot Uefi UEFI CIMCOneTimeBoot ice	 (UEFI Secure Boot is enabled, disable it to modify Configured Boot Mode.) Save Changes
 Configured Boot Devices Basic Advanced NFS 		Actual Boot Devices UEFI: Cisco CIMC-Mapped vDVD2.00 (NFS) Cisco Identity Services Engine (NonPolicyTarget) UEFI: Built-in EFI Shell (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: PXE IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: PXE IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)



注意:36xx和37xx的引导驱动器映射执行类似步骤。

3节.**安装37xx硬件的ISE**

第1步:在SNS框中通过单击CIMC GUI右上角的Launch vKVM启动键盘/视频/鼠标(KVM)控制台。

Server Properties	Cisco Integrated M			
		Management Controller (Cisco	IMC) Information	
Product Name: SNS-3715-K9	Hostname:			
Serial Number:	IP Address:			
PID: SNS-3715-K9	MAC Address:			
UUID: 720B048D-0FB1-4945-9196-0B90C0332A18	Firmware Version:	4.2(3g)		
BIOS Version: C220M6.4.2.3c.0_ISE	Current Time (UTC):	Wed Oct 25 01:04:23 2023		
Description:	Local Time:	Wed Oct 25 01:04:23 2023 UTC +0000 (Local)		
Asset Tag: Unknown	Timezone:	итс	Select Timezone	
Power State: On († Post Completion Status: Completed 100 g	5.)		Overall Utilization (%)	
Overall Server Status: Sood			CPU Utilization (%)	
Temperature: Good			Memory Utilization (%)	
Overall DIMM Status: Good 60			IO Usizason (%)	
Power Supplies: Good 50				
Fans: Sood				
Locator LED: Off				
Overall Storage Status: Good 10-				
		Server	-	

第二步:KVM控制台在浏览器上的新选项卡上启动。在屏幕左侧,单击Boot Device,然后选择您创建的虚拟介质的名称。



在KVM控制台中选择"虚拟媒体"后,屏幕上会填充提示。单击confirm以继续从NFS服务器的ISO映像启动SNS框。

Boot Device

You are about to change the one-time boot device. The server will boot from the selected boot device only for the next server boot, without disrupting the currently configured boot order. Once the server boots from the one-time boot device, all its future reboots occur from the previously configured boot order. Are you sure you want to continue?



第三步:重新启动SNS框或打开SNS服务器以便从ISO启动服务器。要打开SNS框或重新启动框,请导航到KVM控制台下的电源。



在服务器完成引导过程后,您会进入ISE的安装菜单。选择Cisco ISE安装(键盘/监视器)以继续进行安装。



4节.安装36xx硬件的ISE

在36xx SNS框中,启动ISE安装的步骤类似,但36xx的KVM控制台GUI与37xx不同。

第1步:从SNS框中单击CIMC GUI右上角的Launch vKVM启动KVM控制台。

🗲 dhala Cisco	Integrated Management Controlle	er			+ 🗹 0	admin@10.142.188.102 - C220-V	VZP232111YZ 🌣
A / Chassis / Sum	mary 🚖				Refresh Host Power Laure	ch vKVM Ping CIMC Reboot Loca	ator LED 🞯 🛈
Server Proper	ties	Cisco Integrated M	Management Controller (Cisco	o IMC) Information			
Product Name: Serial Number:	SNS-3855-K9	Hostname: IP Address:	=				
PID: UUID: BIOS Version:	SNS-3655-K9 61C0F227-2018-4B23-8F09-560D17F7B355 C220M5.4.0.4q.0_ISE	MAC Address: Firmware Version: Current Time (UTC):	2C:4F:52:95:3C:D8 4.1(3d) Thu Oct 26 00:36:23 2023				
Description: Asset Tag:	Unknown	Local Time: Timezone:	Thu Oct 26 00:38:23 2023 UTC +0000 (Loca UTC	I) Select Timezone			
Chassis Statu	s	Server Utilization					
Power Overall Server S	r State: On Status: Good	Overall Utilizat CPU Utilizat	ion (%): N/A ion (%): N/A				
Overall DIMM S	Status: Sood	Memory Utilizat	ion (%): N/A				
Locato	Fans: Good or LED: Off						
Overall Storage 5	Status: C000						
						Saus Chapras	Parat Valuar

第二步:KVM控制台将在新的浏览器窗口中弹出。单击Boot Device,然后选择您创建的虚拟介质的名称。

	C220-WZP232111YZ - vKVM Conso	le
A Not Secure https://t	/html/kvmViewer.html	
Cisco Integrated N	Management Controller	admin - C220-WZP232111YZ 🏾 🌣
File View Macros Tools Powe	Anagement Controller r Boot Device Virtual Media Help No Override NFS No Signal	admin - C220-WZP232111YZ

在KVM控制台中选择"虚拟媒体"后,屏幕上会填充提示。单击Confirm以继续从NFS服务器的ISO映像启动SNS框。





在服务器完成引导过程后,您会进入ISE的安装菜单。选择Cisco ISE安装(键盘/监视器)以继续进行安装。



第5部分:从CIMC盒卸载ISO映像(SNS 36xx和SNS 37xx)

步骤1:在CIMC中,导航到BIOS > Configure Boot Order > Configure Boot Order。请参阅下一个屏幕截图以导航到位置。

BIOS Remote Management Powe	r Policies PID Catalog	Persistent Memory
Configure BIOS Configure Boot Orde	Configure BIOS Profile	Secure Boot Certificate Management
BIOS Properties Running Versio UEFI Secure Boo Actual Boot Moo Configured Boot Moo Last Configured Boot Order Sourc Configured One time boot device	n C220M6.4.2.3c.0_ISE ot ♥ e Uefi e UEFI e CIMCOneTimeBoot e	 (UEFI Secure Boot is enabled, disable it to modify Configured Boot Mode.) Save Changes
 Configured Boot Devices Basic Advanced NFS 		Actual Boot Devices UEFI: Cisco CIMC-Mapped vDVD2.00 (NFS) Cisco Identity Services Engine (NonPolicyTarget) UEFI: Built-in EFI Shell (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: PXE IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv4 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget) UEFI: HTTP IPv6 Cisco X550-TX 10 Gig LOM (NonPolicyTarget)
		Configure Boot Order

第二步:然后,单击高级选项卡,并选择**添加**虚拟媒体。

Configure Boot Order	-	-	_	-	-	-	_	_			0 X
Configured Boot Level: Adva	anced										
Basic Advanced											
Add Boot Device	Advan	ced Boot	Order Config	uration				Selected 1 /	Total 1	¢	
Add Local HDD	Ena	ble/Disable	Modify	Delete	Clone	Re-Apply	Move Up	Move Down			
Add PXE Boot											
Add SAN Boot		Name		Туре		Order	State				
Add iSCSI Boot		NFS		VMEDIA	1	1	Enabled				
Add USB											
Add Virtual Media											
Add PCHStorage											
Add UEFISHELL											
Add NVME											
Add Local CDD											
Add HTTP Boot											
Add Embedded Storage											
							Save Cha	Rese	t Values	Clo	ose

第三步:从列表中选择虚拟媒体,然后点击列表中的删除。这会从CIMC卸载ISO。

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言,希望全球的用户都能通过各 自的语言得到支持性的内容。

请注意:即使是最好的机器翻译,其准确度也不及专业翻译人员的水平。

Cisco Systems, Inc. 对于翻译的准确性不承担任何责任,并建议您总是参考英文原始文档(已提供 链接)。