Installazione di RHEL su un server UCS C240 M5 autonomo.

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Introduzione

In questo documento viene descritta la procedura di installazione di RHEL sulla configurazione RAID locale in un server UCS C240 M5 standalone.

Configurazione utilizzata

UCS-C240-M5L Controller RAID: HBA SAS Cisco 12G (UCS-SAS-M5) Dischi rigidi 4K CIMC 3.1, paragrafo 3 bis Sistema operativo: RHEL 7.3

Prerequisiti

1. Scaricare RHEL ISO e Controller Driver ISO:

RHEL rhel-server-7.3-x86_64-boot.iso

ISO driver: ucs-cxxx-drivers-linux.3.1.3.iso

(In ISO, selezionare Storage -> LS -> UCSC-SAS-M5 -> RHEL -> RHEL7.3 -> mpt3sas-23.00.00_el7.3-1.x86_64.iso.gz)

2. Se si estrae il file mpt3sas-23.00.00.00_el7.3-1.x86_64.iso.gz, si otterrà il driver ISO -> mpt3sas-23.00.00_el7.3-1.x86_64.iso

3. Analogamente, se si utilizza un controller UCS-RAID-M5 nel server, è possibile passare al driver corrispondente.

Procedura

Passaggio 1. Poiché il server dispone di unità settoriali 4k, verrà eseguito un avvio UEFI. L'ordine di avvio dovrebbe essere simile al seguente:

→ → → → → → → → → → → → → → → → → → →		🐥 🔽 admir C240-WZP21510DCJ 🌣
n / Compute / BIOS 🔺		Refresh Host Power Launch KVM Ping CIMC Reboot Locator LED @ 1
BIOS Remote Management Troubleshooting Power Policies	PID Catalog	
Enter BIOS Setup Clear BIOS CMOS Restore Manufacturing Custom Settings Rest	tore Defaults	
Outform DIOD Confirm Data Output		
Conligure bios Conligure bios Prolite		
BIOS Properties Running Version C240M5.3.1.3d.0.0312180914 UEFI Secure Boot	▼ ▼	
Configured Boot Devices	Actual Boot Devices	
Basic	UEFI: Built-in EFI Shell (UEFI)	
V Advanced	UEFI: PXE IP4 Intel(R) Ethernet Controller X550 (NonPolicyTarget)	
UEFI	UEFI: PXE IP4 Intel(R) Ethernet Controller X550 (NonPolicyTarget)	
	UEPE CISCO WKW-Mapped KUVU1.24 (WinPolicyTarget)	

Passaggio 2. Aprire lo switch KVM e mappare lo standard ISO RHEL:

🗯 Cisco Virtual KVM Console	File	View	Macros	Tools	Power	Boot Device	Virtual Media Help	ទ 🖇 🔗 🕐 🔾 🕰 🕸
• • •							Create Image	
							Activate Virtual Devices	
							rhel-server-7.3-x86_64-boot.iso Mapped to CD/DVD Map Removable Disk Map Floppy	
							Please select boot device:	
							WEFI: Built—in EFI Shell WEFI: PXE IP4 Intel(R) Ethernet Controller WEFI: PXE IP4 Intel(R) Ethernet Controller WEFI: Cisco vKVM-Mapped vDVD1.24 Enter Setup	X550 X550
							† and ↓ to move selection ENTER to select boot device ESC to boot using defaults	

Passaggio 3. Premere F6 e avviare dall'UEFI: Cisco vKVM-Mapped vDVD1.24

Passaggio 4. Selezionare l'opzione "Install Red Hat Enterprise Linux 7.3" e premere 'e'



Passaggio 5. Viene visualizzata la schermata seguente:

• • •	- KVM Console
setparams 'Install Red	Hat Enterprise Linux 7.3'
linuxefi ∕imag	es/pxeboot/vmlinuz inst.stage2=hd:LABEL=RHEL=7.3\x20x86_\
64 quiet	Tec/nucleont/inited imm
	365/ DAEU00(/ 1111(d. 10g
Press [tr]-x to	start. Ctrl-c for a command prompt or Escape to
discard edits an	d return to the menu. Pressing Tab lists possible
completions.	

Passaggio 6. Immettere il comando "linux dd" ed eseguire un Ctrl + x



Passaggio 7. Il comando precedente avvia la modalità interattiva:



Passaggio 8. Annullare la mappatura dell'ISO RHEL e mappare l'ISO del driver del controller:

🔅 Cisco Virtual KVM Console File View Macros Tools Power Boot Device	Virtual Media Help	🔀 🚰 🥥 🕙 验 💫 🖇 奈 🕪 38% 🗈 🛛 Mon 17 Dec 11:19
	Create Image	
	Activate Virtual Devices	
	/ mpt3sas=23.00.00.00.el7.3=1.x86.64 iso Manned to CD/DVD	
	Map Removable Disk	
[18 1621511 i8042: Can't read CTR whi	Map Floppy	
[OK] Started Show Plymouth Boot Scree	n.	
[OK] Reached target Paths.		
[OK] Reached target Basic Sustem.		
[OK] Started Device-Mapper Multipath	Device Controller.	
Starting Open-iSCSI		
[OK] Started Open-iSCSI.		
Starting dracut initqueue hook		
[22.750254] nouveau 0000:60:00.0: priv	: HUB0: 10ecc0 ffffffff (1e40822c)	
[22.824043] nouveau 0000:60:00.0: DRM:	Pointer to TMDS table invalid	
[22.824060] nouveau 0000:60:00.0: DRM:	Pointer to flat panel table invalid	
[23.399872] nouveau 0000:61:00.0: priv	: HUBO: 10ecc0 ffffffff (1a40822c)	
[23.463012] nouveau 0000:61:00.0: DRM:	Pointer to TMDS table invalid	
[23.463029] nouveau 0000:61:00.0: DRM:	Pointer to flat panel table invalid	
[24.037598] nouveau 0000:62:00.0: priv	: HUBO: 10ecc0 ffffffff (1d40822c)	
L 24.101383 nouveau 0000:62:00.0: DRM:	Pointer to IMUS table invalid	
[24.101400] nouveau 0000:62:00.0; pkn;	rointer to flat panel table invalla	
	Pointen to TMDS table invalid	
[24.740001] HOUVEAU 0000.05.00.0. DMI.	Pointer to flat yangl table invalid	
[OK] Created slice sustem_driveryy2du	ndates slice	
Starting Driver Undate Disk III o	n ttu1	
[OK] Started Show Plumouth Boot Scree	n. eeginne	
[OK] Reached target Paths.		
[OK] Reached target Basic System.		
[OK] Started Device-Mapper Multipath	Device Controller.	
Starting Open-iSCSI		
[OK] Started Open-iSCSI.		
Starting dracut initqueue hook		
[OK] Created slice system-driver\x2du	pdates.slice.	
Starting Driver Update Disk UI o	n tty1	
DD: starting interactive mode		
(Page 1 of 1) Driver disk device selection	n	
/DEVICE TYPE LABEL		
1) sda1 vfat ESXi	591C-E3E2	
2) sda2 vfat	4C6C-A2D4	
3) sda3 VMFS_vo1	5aa6e18d-304835ba-1711-4c776d996e2e	
4) sda5 vfat	4C6C-A2CA	
5) sda6 ufat	4C6C-A2CD	
6) sda8 ufat	4C6C-A2C8	
7) sr0 iso9660 RHEL-7.3\x20x86_64	2016-10-19-17-41-40-00	
<pre># to select, 'r'-refresh, or 'c'-continue</pre>	:	

Passaggio 9. Digitare 'r' per aggiornare l'elenco dei dischi del driver:

	view macros roois Power Boot Device		
• • •		- KVM Console	
E OK] Started Open-iSCSI.		
	Starting dracut initgueue hook.		
[22.]	750254] nouveau 0000:60:00.0: pri	u: HUB0: 10ecc0 ffffffff (1e40822c)	
[22.]	824043] nouveau 0000:60:00.0: DRM	: Pointer to TMDS table invalid	
[22.]	824060] nouveau 0000:60:00.0: DRM	: Pointer to flat panel table invalid	l
[23.]	3998721 nouveau 0000:61:00.0: nri	u: HUB0: 10ecc0 ffffffff (1a40822c)	
[23.4	4630121 nouveau 0000:61:00.0: DRM	: Pointer to TMDS table invalid	
[23.	4630291 nouveau 0000:61:00.0: DRM	: Pointer to flat namel table invalid	
[24.1	0375981 nouveau 0000:62:00.0: nri	u: $HIBA: 10eccA ffffffff (100822c)$	
[24	1013831 nouveau 0000:62:00 0: DRM	: Pointer to TMDS table invalid	
[24 ·	1013031 nouveau 0000.62.00.01 DNM	: Pointer to flat namel table invalid	
[24]	6768501 nouveau 0000.62.00.01 pm	HIRO: 100000 ffffffff (1c40822c)	
F 24	2408811 nouveau 0000:63:00.0: DRM	' Pointen to TMDS table invalid	
[24]	7409971 nouveau 0000:03:00.0: DM	Pointer to flat wavel table invalid	
	Created alice suster_drivery v2d	whates object	L Contraction of the second
LUK	Stanting Driver Undate Dick III	updates.silce.	
F 02	Starting priver update pisk of	on ttyl	
L UK	J Started Snow riymouth boot Scree	en.	
LUK	I Reached target Paths.		
LUK	J Reached target Basic System.		
LUK	J Started Device-Mapper Multipath	Device Controller.	
	Starting Upen-iSCS1		
LUK	I Started Upen-ISCSI.		
	Starting dracut initqueue hook.		
E OK	<pre>1 Created slice system-driver\x2d</pre>	updates.slice.	
	Starting Driver Update Disk UI	on tty1	
DD: sta	rting interactive mode		
(Page 1	of 1) Driver disk device selection	on	
∠DE ^t	JICE TYPE LABEL	UUID	
1) sda	l ufat ESXi	591C-E3E2	
2) sdaž	2 ufat	4C6C-A2D4	
3) sda	3 VMFS_uol	5aa6e18d-304835ba-1711-4c776d996e2	le
4) sda	5 ufat	4C6C-A2CA	
5) sdal	6 ufat	4C6C-A2CD	
6) sdat	8 ufat	4C6C-A2C8	
7) sr0	iso9660 RHEL-7.3\x20x86_64	2016-10-19-17-41-40-00	
# to se	lect, 'r'-refresh, or 'c'-continu	e: r	
(Page 1	of 1) Driver disk device selecti	on	
∠DE	VICE TYPE LABEL	UUID	
1) sda	1 ufat ESXi	591C-E3E2	
2) sda	2 ufat	4C6C-A2D4	
3) sda	3 UMFS uol	5aa6e18d-304835ba-1711-4c776d996e2	le
4) sda	5 ufat	4C6C-A2CA	
5) sda	6 ufat	4C6C-A2CD	
6) sdal	8 ufat	4C6C-A2C8	
2) srA	iso9660 CDROM	2017-05-26-05-44-09-00	
	lect. 'r'-refresh. or 'c'-continu	B ¹	
# 00 30			

Passaggio 10. Verrà ora visualizzato l'elenco ISO del driver del controller. Digitare "7" ed effettuare la selezione:

[23.463012] nouveau 0000:61:00.0: DRM:	Pointer to TMDS table invalid
[23.463029] nouveau 0000:61:00.0: DRM:	Pointer to flat namel table invalid
[24.0375981 nouveau 0000:62:00.0: nriu:	HUBA: 10ecca ffffffff (1d40822c)
[24 101383] nouveau 0000.62.00 0. DRM:	Pointer to TMDS table invalid
[24 101400] youyooy 0000:02:00.0: DBM:	Pointer to hab table invalid
1 24.6768501 nouveau 0000:63:00.0: priv:	HUBO: 100CC0 ffffffff (1C40822C)
L 24.740881J nouveau 0000:63:00.0: DRM:	Pointer to IMDS table invalid
[24.740897] nouveau 0000:63:00.0: DRM:	Pointer to flat panel table invalid
[OK] Created slice system-driver\x2dup	dates.slice.
Starting Driver Update Disk UI on	tty1
[OK] Started Show Plymouth Boot Screen	
[OK] Reached target Paths.	
[OK] Reached target Basic System.	
[OK] Started Device-Mapper Multipath D	evice Controller.
Starting Open-iSCSI	
[OK] Started Open-iSCSL	
Starting dracut initgueue hook	
[OK] Created slice sustem-drivers v2dun	dates slice
Stanting Driven Undate Dick III on	44.1
DD: etanting interactive role	- ttg1
DD. Starting Interactive mode	
(Page 1 of 1) Driver disk device selection	
ZDEVICE TYPE LABEL	
1)sda1 ufat ESXi	591C-E3E2
2) sda2 ufat	4C6C-A2D4
3) sda3 VMFS_vo1	5aa6e18d-304835ba-1711-4c776d996e2e
4) sda5 vfat	4C6C-A2CA
5) sda6 ufat	4C6C-A2CD
6) sda8 ufat	4C6C-62C8
7) sr0 iso9660 RHEL-7.3 $x20x86$ 64	2016-10-19-17-41-40-00
t to select. 'r'-refresh. or 'c'-continue!	
	*
(Page 1 of 1) Driver disk device selection	
And the service and the service service service and the service service and the service servic	
1) sda1 ufat FSVi	591C_F3F2
2) oda2 ufat	
	100-1007
4) sda5 Ufat	4COU-HZUH
5) sdab ufat	4CbC-A2CD
6) sda8 ufat	4C6C-A2C8
7) sr0 iso9660 CDROM	2017-05-26-05-44-09-00
<pre># to select, 'r'-refresh, or 'c'-continue:</pre>	7
DD: Examining /dev/sr0	
mount: /dev/sr0 is write-protected, mounti	ng read-only
(Page 1 of 1) Select drivers to install	
1) [] /media/DD-1/rpms/x86_64/kmod-mpt3s	as-23.00.00.00_e17.3-1.x86_64.rpm
# to toggle selection, or 'c'-continue:	

8 - KVM Console

Passaggio 11. Immettere "1" e quindi "c" per continuare:

- KVM Console to flat panel table invalid

24.101400] nouveau 0000:62:00.0: DRM: Pointer to flat panel table invalid 24.676850] nouveau 0000:63:00.0: priv: HUB0: 10ecc0 ffffffff (1c40822c) 24.740881] nouveau 0000:63:00.0: DRM: Pointer to TMDS table invalid 24.7408971 nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid] Created slice system-driver\x2dupdates.slice. Starting Driver Update Disk UI on tty1... Started Show Plymouth Boot Screen.] Reached target Paths. E 1 Reached target Basic System. ſ 1 Started Device-Mapper Multipath Device Controller. Ľ Starting Open-iSCSI...] Started Open-iSCSI. Starting dracut initqueue hook...] Created slice system-driver\x2dupdates.slice. Starting Driver Update Disk UI on tty1... DD: starting interactive mode (Page 1 of 1) Driver disk device selection DEVICE TYPE LABEL UUID 1) sda1 591C-E3E2 ufat ESXi 2) sda2 ufat 4C6C-A2D4 3) sda3 VMFS_uo1 5aa6e18d-304835ba-1711-4c776d996e2e 4) sda5 4C6C-A2CA ufat 4C6C-A2CD 5) sda6 ufat 4C6C-A2C8 6) sda8 ufat iso9660 RHEL-7.3\x20x86_64 2016-10-19-17-41-40-00 7) sr0 'r'-refresh, or 'c'-continue: r # to select, (Page 1 of 1) Driver disk device selection DEVICE TYPE LABEL UUID 1) sda1 ufat ESXi 591C-E3E2 2) sda2 ufat 4C6C-A2D4 3) sda3 VMFS_uo1 5aa6e18d-304835ba-1711-4c776d996e2e 4) sda5 ufat 4C6C-A2CA 5) sda6 ufat 4C6C-A2CD 4C6C-A2C8 6) sda8 ufat iso9660 CDROM 2017-05-26-05-44-09-00 sr0 'r'-refresh, or 'c'-continue: 7 # to select, DD: Examining /deu/sr0 mount: /dev/sr0 is write-protected, mounting read-only (Page 1 of 1) Select drivers to install 1) [] /media/DD-1/rpms/x86_64/kmod-mpt3sas-23.00.00.00_e17.3-1.x86_64.rpm # to toggle selection, or 'c'-continue: 1 (Page 1 of 1) Select drivers to install 1) [x] /media/DD-1/rpms/x86_64/kmod-mpt3sas-23.00.00.00_e17.3-1.x86_64.rpm # to toggle selection, or 'c'-continue:

Passaggio 12. Il driver .rpm si trova all'interno del file .iso. È possibile che venga visualizzato un avviso che indica che il contenuto del repository non è un file, ma è solo un avviso. Il driver sarebbe stato installato.

Passaggio 13. Si dovrebbe essere di nuovo nel menu "Driver disk device selection" (Selezione periferica disco driver). Annullare la mappatura dell'ISO del driver e mappare nuovamente l'ISO RHEL. Premere 'r' per aggiornare, quindi premere 'c' per continuare con l'installazione di RHEL. Il programma di installazione dovrebbe essere in grado di riconoscere il controller RAID e i dischi da esso gestiti.

ual KVM Console File View Macros Tools Power Boot Device	Virtual Media Help	_ Inform 🖪 🕀 🕙 発 🕥 🤴 🛜 🐠
	Create Image	
3) sda3 VMFS_vo1	Activate Virtual Devices	
4) sda5 ufat	Activate virtual Devices	
5) sdab Viat	rhel-server-7.3-x86_64-boot.iso Mapped to CD/DVD	
D Sado VIat 7) sub iso9660 RHFI-7 3x20x86 64	Map Removable Disk	
t to select. 'r'-refresh, or 'c'-continu	Map Floppy	
(Page 1 of 1) Driver disk device selection	on	
✓DEVICE TYPE LABEL	UUID	
1) sda1 vfat ESXi	591C-E3E2	
2) sda2 ufat	4C6C-A2D4	
3) sda3 VMFS_vo1	5aa6e18d-304835ba-1711-4c776d996e2e	
4) sda5 vfat	4C6C-A2CA	
5) sdab ufat	4C6C-A2CD	
b) sda8 Ufat	4UbC-A2C8	
7) Sr0 1SO9660 CDRUM	2017-05-26-05-44-09-00	
# to select, r -refresh, or c -continue		
nount: deutson is write-protected nount	ting read-only	
Mount: 7 acorsio is write protected, Mount	ering read-billy	
(Page 1 of 1) Select drivers to install		
1) [] /media/DD-1/rpms/x86 64/kmod-mpt3	3sas-23.00.00.00 e17.3-1.x86_64.rpm	
# to toggle selection, or 'c'-continue: 1	1	
(Page 1 of 1) Select drivers to install		
1) [x] /media/DD-1/rpms/x86_64/kmod-mpt3	3sas-23.00.00.00_e17.3-1.x86_64.rpm	
# to toggle selection, or 'c'-continue: 1		
(Page 1 of 1) Select drivers to install		
1) [] /media/DD-1/rnms/y86 64/kmod-mut	3sas-23 AA AA AA AA e12 3-1 x86 64 mm	
# to toggle selection, or 'c'-continue:	1	
w to toggie serection, or e continues ;	*	
(Page 1 of 1) Select drivers to install		
1) [x] /media/DD-1/rpms/x86_64/kmod-mpt3	3sas-23.00.00.00_e17.3-1.x86_64.rpm	
<pre># to toggle selection, or 'c'-continue:</pre>		
DD: Extracting: kmod-mpt3sas		
DD: WARNING: DD repo content not a file:	/media/DD-1/rpms/x86_64/repodata	
(Deve 4 of 4) Deiver diel de territ		
(rage 1 of 1) Driver disk device selection		
1) sdat ufat FSVi	5910-F3F2	
$\frac{1}{2} \operatorname{sda2} \operatorname{ufat}$	4060-6204	
3) sda3 UMFS up1	5aa6e18d-304835ba-1711-4c776d996e2e	
4) sda5 $ufat$	4C6C-A2CA	
5) sda6 vfat	4C6C-A2CD	
6) sda8 vfat	4C6C-A2C8	
7) sr0 iso9660 CDROM	2017-05-26-05-44-09-00	
# to select, 'r'-refresh, or 'c'-continue		

🥞 redhat	INSTALLATION	SUMMARY	RED	RED HAT ENTERPRISE LINUX 7.3 INSTALLATION		
	LOCALIZA	TION				
	Θ	DATE & TIME Americas/New York timezone		KEYBOARD English (US)		
	á	LANGUAGE SUPPORT English (United States)				
	SOFTWAR	E				
	0	INSTALLATION SOURCE Setting up installation source		SOFTWARE SELECTION	ıр	
	SYSTEM					
	<u>S</u>	INSTALLATION DESTINATION No disks selected	Q	KDUMP Kdump is enabled		
	∻	NETWORK & HOST NAME Not connected		SECURITY POLICY Not ready		
			We v	Quit Quit won't touch your disks until you cli	Begin Installation	
	A Please complete	items marked with this icon before continuing	to the next step.			

- KVM Console

INSTALLATION DESTINATION		RED HA	T ENTERPRISE LINUX 7.3 INSTALL	ATION Help!
Device Selection Select the device(s) you'd like to Local Standard Disks	install to. They will be left untou	iched until you click on the main i	menu's "Begin Installation" button.	
223.57 GiB	5589.03 GiB	5589.03 GiB	5589.03 GiB	
ATA Mircon_5100_MTFD sda / 79 KiB free	sdf / 5589.03 GiB free	TOSHIBA MGO4SCA6OEA sdg / 5589.03 GiB free	TOSHIBA MGO4SCA6OEA sdh / 5589.03 GiB free	TO sc
Specialized & Network Disks				
Other Storage Options				
Partitioning	a O I will configure partitioning			
 I would like to make additional sp 	ace available.			
Encryption Encrypt my data. You'll set a pass;	phrase next.			
			O disks selected; O B capacity; O B free	Refresh
A No disks selected; please select at	least one disk to install to.			