

# RHEL installeren op een standalone UCS C240 M5-server

## Inhoud

[Inleiding](#)

[Gebruikte installatie](#)

[Voorwaarden](#)

[Procedure](#)

### Inleiding

Dit artikel beschrijft de procedure voor het installeren van RHEL op een lokale configuratie in een standalone UCSC C240 M5 server.

### Gebruikte installatie

UCS C240-M5-L switch  
BAL-controller: Cisco 12G SAS HBA (UCSC-SAS-M5)  
4K sector HDD's  
CIMC: 3.1(3a)  
IOS: RHEL 7.3

### Voorwaarden

1. Download de RHEL ISO en de controllerstuurprogramma ISO:

RHEL: `hel-server-7.3-x86_64-booster.iso`

Stuurprogramma ISO: [UCS-xxx-chauffeurs-linux.3.1.3.iso](#)

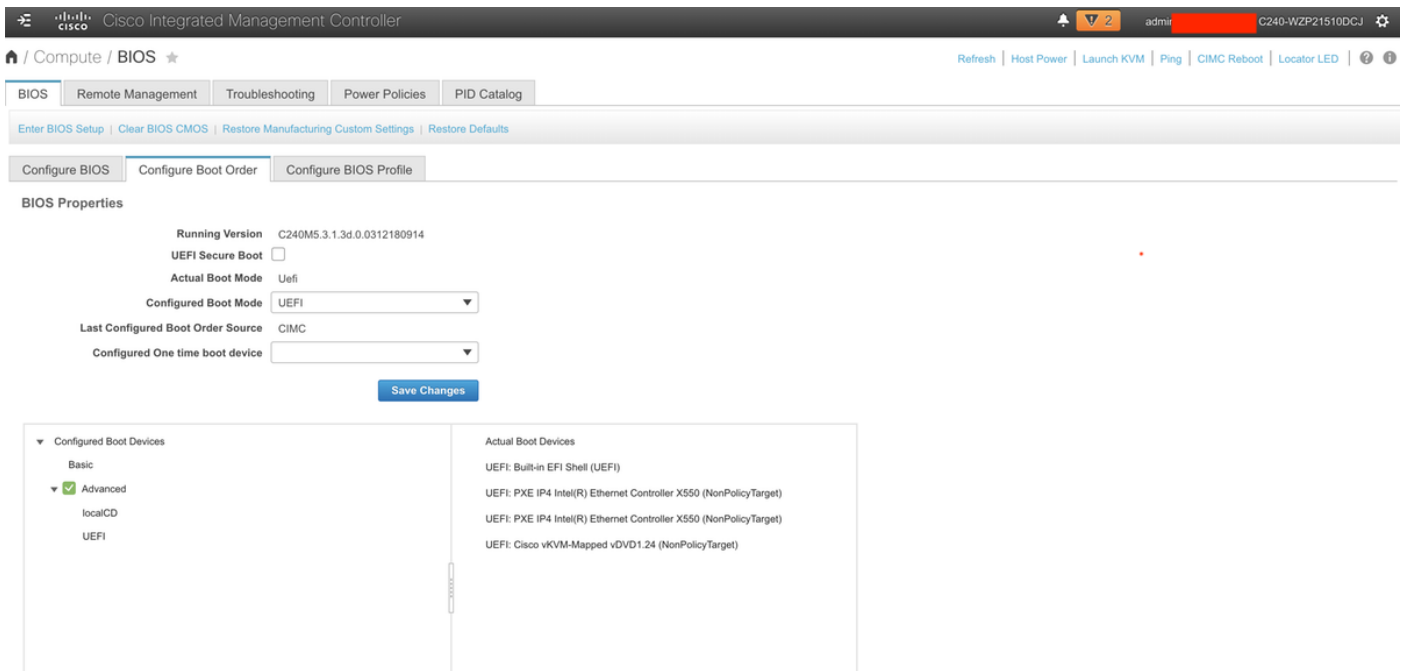
(In de ISO-norm navigeren naar opslag -> LS -> UCSC-SAS-M5 -> RHEL-7.3 -> mpt3sas-23.00.00\_el7.3-1.x86\_64.iso.gz )

2. Als u het `mpt3sas-23.00.00.00_el7.3-1.x86_64.iso.gz`-bestand extraheert, krijgt u de chauffeur ISO -> `mpt3sas-23.00.00_el7.3-1.x86_64.isu o`

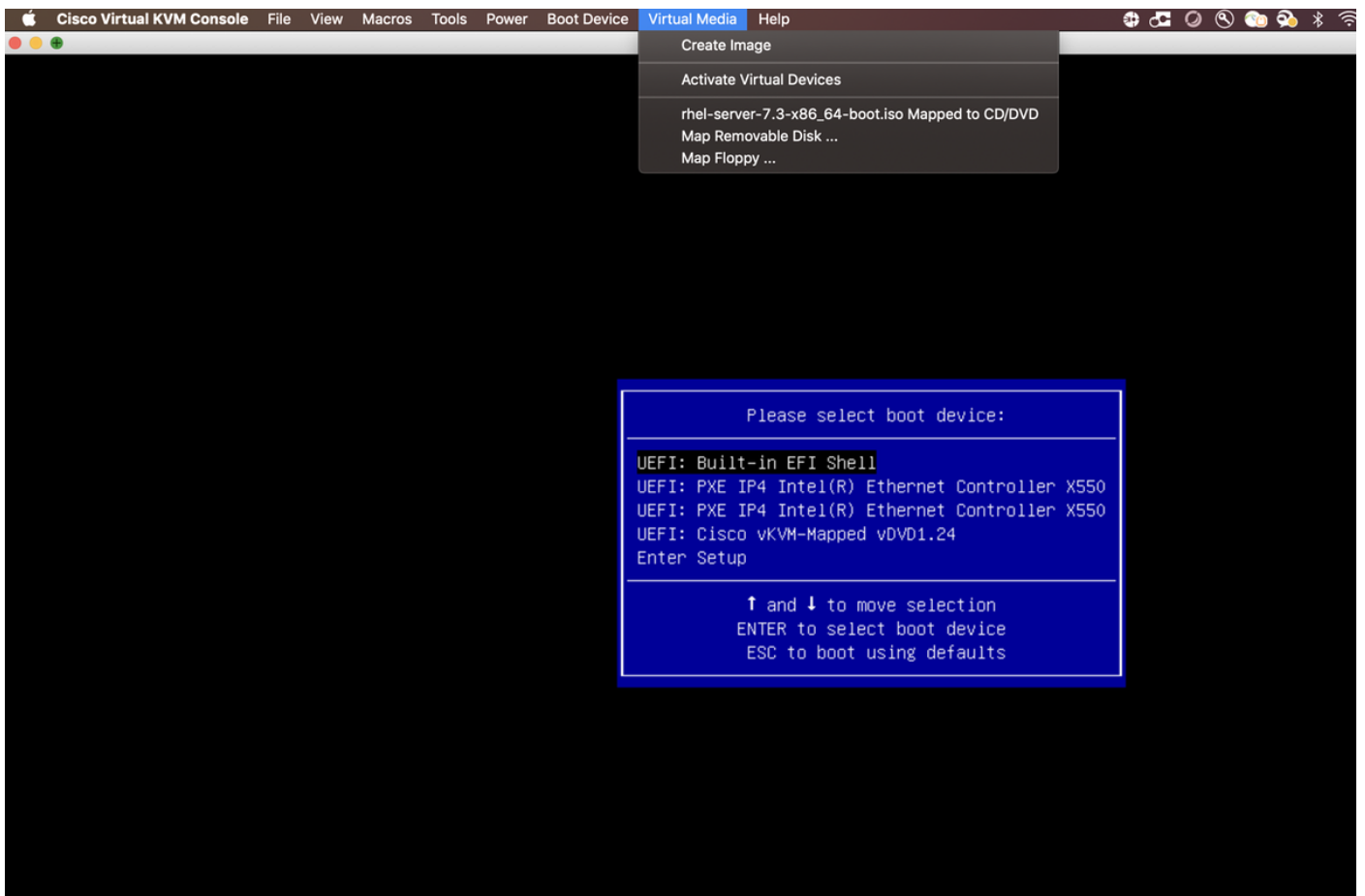
3. Op dezelfde manier kunt u, als u in uw server een UCSC-RAID-M5-controller gebruikt, naar het corresponderende stuurprogramma navigeren.

### Procedure

Stap 1. Aangezien de server 4k sectorschijven heeft, doen we een UEFI-start. De Opstartvolgorde moet er als volgt uitzien:

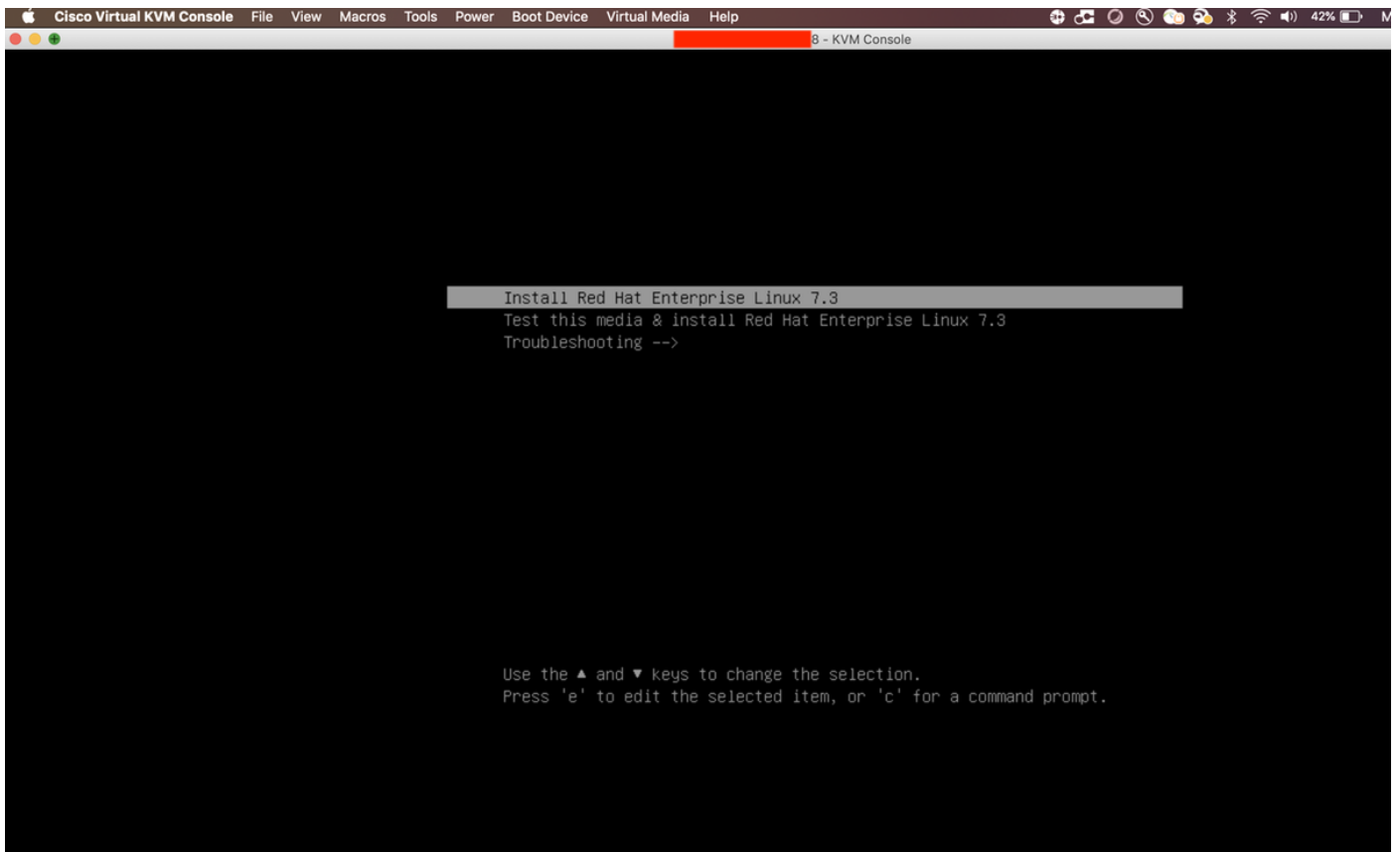


Stap 2. Open de KVM en stel de RHEL-ISO in kaart:

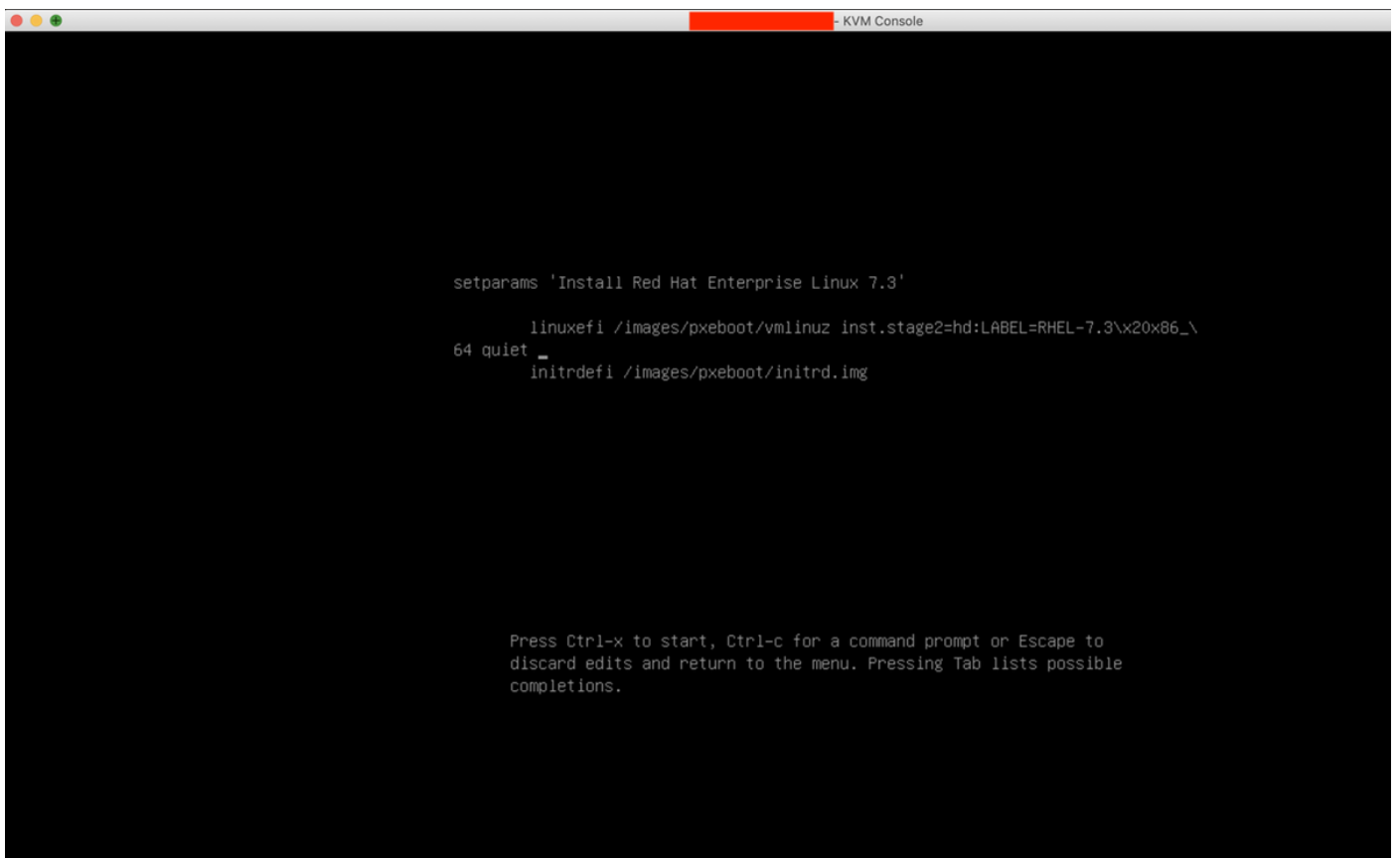


Stap 3. Druk op F6 en start het programma vanuit de UEFI: Cisco vKVM-ontkoppelde vDVD1.24

Stap 4. Selecteer de optie "Install Red Hat Enterprise Linux 7.3" en druk op "e"



Stap 5. U ziet het volgende scherm:



Stap 6. Voer de opdracht "linux dd" in en doe een Ctrl + x

```
8 - KVM Console

setparams 'Install Red Hat Enterprise Linux 7.3'

    linuxefi /images/pxeboot/vmlinuz inst.stage2=hd:LABEL=RHEL-7.3\x20x86_\
64 quiet linux dd_
    initrdefi /images/pxeboot/initrd.img

Press Ctrl-x to start, Ctrl-c for a command prompt or Escape to
discard edits and return to the menu. Pressing Tab lists possible
completions.
```

Stap 7. De bovenstaande opdracht start de interactieve modus:

```
- KVM Console

[ 18.162151] i8042: Can't read CTR while initializing i8042
[ OK ] Started Show Plymouth Boot Screen.
[ OK ] Reached target Paths.
[ OK ] Reached target Basic System.
[ OK ] Started Device-Mapper Multipath Device Controller.
[ OK ] Started Open-iSCSI...
[ OK ] Started Open-iSCSI.
[ OK ] Started dracut initqueue hook...
[ 22.750254] nouveau 0000:60:00.0: priu: HUB0: 10ecc0 ffffffff (1e40022c)
[ 22.824043] nouveau 0000:60:00.0: DRM: Pointer to TMD5 table invalid
[ 22.824060] nouveau 0000:60:00.0: DRM: Pointer to flat panel table invalid
[ 23.399372] nouveau 0000:61:00.0: priu: HUB0: 10ecc0 ffffffff (1e40022c)
[ 23.463012] nouveau 0000:61:00.0: DRM: Pointer to TMD5 table invalid
[ 23.463029] nouveau 0000:61:00.0: DRM: Pointer to flat panel table invalid
[ 24.037598] nouveau 0000:62:00.0: priu: HUB0: 10ecc0 ffffffff (1e40022c)
[ 24.101383] nouveau 0000:62:00.0: DRM: Pointer to TMD5 table invalid
[ 24.101400] nouveau 0000:62:00.0: DRM: Pointer to flat panel table invalid
[ 24.676850] nouveau 0000:63:00.0: priu: HUB0: 10ecc0 ffffffff (1e40022c)
[ 24.740881] nouveau 0000:63:00.0: DRM: Pointer to TMD5 table invalid
[ 24.740897] nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid
[ OK ] Created slice system-driver\x2dupdates.slice.
[ OK ] Started 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 Device Controller.
[ OK ] Started Open-iSCSI...
[ OK ] Started Open-iSCSI.
[ OK ] Started dracut initqueue hook...
[ OK ] Created slice system-driver\x2dupdates.slice.
[ OK ] Started Driver Update Disk UI on tty1...
DD: starting interactive mode

(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  UMFS_ool  5aa6e18d-304835ba-1711-4c776d996e2e
4) sda5  ufat  4C6C-A2CA
5) sda6  ufat  4C6C-A2CD
6) sda8  ufat  4C6C-A2C8
7) sr0  iso9660  RHEL-7.3\x20x86_64  2016-10-19-17-41-00
# to select, 'r'-refresh, or 'c'-continue:

10.197.242.78 | admin | 5.0 fps | 2.816 KB/s
```

Stap 8. Koppel de RHEL-ISO los en geef de controleleider ISO-kaart:

```
Cisco Virtual KVM Console  File  View  Macros  Tools  Power  Boot Device  Virtual Media  Help
Create Image
  Activate Virtual Devices
  mpt3sas-23.00.00.00.el7.3-1.x86_64.iso Mapped to CD/DVD
  Map Removable Disk ...
  Map Floppy ...

[ 18.162151] i8042: Can't read CTRL whi
[ OK ] Started Show Plymouth Boot Screen.
[ 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...
[ 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: HUB0: 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: HUB0: 10ecc0 ffffffff (1d40822c)
[ 24.101383] nouveau 0000:62:00.0: DRM: Pointer to TMDS 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
[ 24.740897] nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid
[ OK ] Created slice system-driverxx2updates.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 Device Controller.
      Starting Open-iSCSI...
[ OK ] Started Open-iSCSI.
      Starting dracut initqueue hook...
[ OK ] Created slice system-driverxx2updates.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   vfat    ESXi                               591C-E3E2
  2) sda2   vfat    4C6C-A2D4
  3) sda3   UMF5_vo1 5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   vfat    4C6C-A2CA
  5) sda6   vfat    4C6C-A2CD
  6) sda8   vfat    4C6C-A2CB
  7) sr0    iso9660 RHEL-7.3x20x86_64 2016-10-19-17-41-40-00
# to select, 'r'-refresh, or 'c'-continue:
```

Stap 9. Typ "r" om de disklijst van het stuurprogramma op te frissen:

```
Cisco Virtual KVM Console File View Macros Tools Power Boot Device Virtual Media Help - KVM Console
[ 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: HUB0: 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: HUB0: 10ecc0 ffffffff (1d40822c)
[ 24.101383] nouveau 0000:62:00.0: DRM: Pointer to TMDS 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
[ 24.740897] nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid
[ OK ] Created slice system-driver\x2dupdates.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 Device Controller.
Starting Open-iSCSI...
[ OK ] Started Open-iSCSI.
Starting dracut initqueue hook...
[ OK ] 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   ufat    ESXi                                  591C-E3E2
  2) sda2   ufat                                4C6C-A2D4
  3) sda3   UMFS_vol 5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat                                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
# to select, 'r'-refresh, or 'c'-continue: r

(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   UMFS_vol 5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat                                4C6C-A2CA
  5) sda6   ufat                                4C6C-A2CD
  6) sda8   ufat                                4C6C-A2C8
  7) sr0    iso9660  CDROM 2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue:
```

Stap 10. U ziet nu de ISO-controlleraar van de controller. Type '7' en selecteer de volgende opties:

```
3 - KVM Console
[ 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: HUB0: 10ecc0 ffffffff (1d40822c)
[ 24.101383] nouveau 0000:62:00.0: DRM: Pointer to TMDS 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
[ 24.740897] nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid
[ OK ] Created slice system-driver\x2dupdates.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 Device Controller.
      Starting Open-iSCSI...
[ OK ] Started Open-iSCSI.
      Starting dracut initqueue hook...
[ OK ] 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   ufat  ESXi    591C-E3E2
  2) sda2   ufat                4C6C-A2D4
  3) sda3   UMFS_vol 5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat                4C6C-A2CA
  5) sda6   ufat                4C6C-A2CD
  6) sda8   ufat                4C6C-A2CB
  7) sr0    iso9660  RHEL-7.3\x20x86_64 2016-10-19-17-41-40-00
# to select, 'r'-refresh, or 'c'-continue: r

(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   UMFS_vol 5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat                4C6C-A2CA
  5) sda6   ufat                4C6C-A2CD
  6) sda8   ufat                4C6C-A2CB
  7) sr0    iso9660  CDROM    2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue: 7
DD: Examining /dev/sr0
mount: /dev/sr0 is write-protected, mounting read-only

(Page 1 of 1) Select drivers to install
  1) [ l /media/DD-1/rpms/x86_64/kmod-mpt3sas-23.00.00.00_e17.3-1.x86_64.rpm
# to toggle selection, or 'c'-continue: _
```

Stap 1. Voer '1' en vervolgens 'c' in om verder te gaan:

```

[ 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
[ 24.740897] nouveau 0000:63:00.0: DRM: Pointer to flat panel table invalid
[ OK ] Created slice system-driver\x2dupdates.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 Device Controller.
      Starting Open-iSCSI...
[ OK ] Started Open-iSCSI.
      Starting dracut initqueue hook...
[ OK ] 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   ufat       ESXi                 591C-E3E2
  2) sda2   ufat
  3) sda3   UMFS_vol   5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat       4C6C-A2D4
  5) sda6   ufat       4C6C-A2CA
  6) sda8   ufat       4C6C-A2CD
  7) sr0    iso9660    RHEL-7.3\x20x86_64  2016-10-19-17-41-40-00
# to select, 'r'-refresh, or 'c'-continue: r

(Page 1 of 1) Driver disk device selection
  /DEVICE  TYPE      LABEL                UUID
  1) sda1   ufat       ESXi                 591C-E3E2
  2) sda2   ufat
  3) sda3   UMFS_vol   5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5   ufat       4C6C-A2D4
  5) sda6   ufat       4C6C-A2CA
  6) sda8   ufat       4C6C-A2CD
  7) sr0    iso9660    CDROM                2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue: 7
DD: Examining /dev/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:

```

Stap 12. Het .rpm-stuurprogramma bevindt zich in het .iso-bestand. Mogelijk krijgt u een waarschuwing dat "DD repocontent geen bestand" is, maar het is alleen een waarschuwing - het stuurprogramma is geïnstalleerd.

Stap 13. U dient opnieuw in het menu "Stuurprogramma voor de keuze van het diskapparaat" te zijn. Koppel de ISO-stuurprogramma los en geef de RHEL-ISO-kaart weer. Druk op 'r' om deze op te frissen en vervolgens op 'c' om verder te gaan met de RHEL-installatie. De installateur moet de RAID-controller en de door hem beheerde schijven kunnen herkennen.



```
Cisco Virtual KVM Console File View Macros Tools Power Boot Device Virtual Media Help
Create Image
Activate Virtual Devices
rhel-server-7.3-x86_64-boot.iso Mapped to CD/DVD
Map Removable Disk ...
Map Floppy ...

3) sda3  UMFS_vo1
4) sda5  ufat
5) sda6  ufat
6) sda8  ufat
7) sr0   iso9660  RHEL-7.3\x20x86_64
# to select, 'r'-refresh, or 'c'-continue:

(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  UMFS_vo1  5aa6e18d-304835ba-1711-4c776d996e2e
4) sda5  ufat           4C6C-A2CA
5) sda6  ufat           4C6C-A2CD
6) sda8  ufat           4C6C-A2C8
7) sr0   iso9660  CDROM  2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue: ?
DD: Examining /dev/sr0
mount: /dev/sr0 is write-protected, mounting read-only

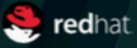
(Page 1 of 1) Select drivers to install
1) [ ] /media/DD-1/rpms/x86_64/kmod-mpt3sas-23.00.00.00_e17.3-1.x86_64.rpm
# to toggle selection, or 'c'-continue: 1

(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: 1

(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: c
DD: Extracting: kmod-mpt3sas
DD: WARNING: DD repo content not a file: /media/DD-1/rpms/x86_64/repoata

(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  UMFS_vo1  5aa6e18d-304835ba-1711-4c776d996e2e
4) sda5  ufat           4C6C-A2CA
5) sda6  ufat           4C6C-A2CD
6) sda8  ufat           4C6C-A2C8
7) sr0   iso9660  CDROM  2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue:
```



# INSTALLATION SUMMARY

RED HAT ENTERPRISE LINUX 7.3 INSTALLATION

us

Help!

## LOCALIZATION



**DATE & TIME**  
*Americas/New York timezone*



**KEYBOARD**  
*English (US)*



**LANGUAGE SUPPORT**  
*English (United States)*

## SOFTWARE



**INSTALLATION SOURCE**  
*Setting up installation source...*



**SOFTWARE SELECTION**  
*Installation source not set up*

## SYSTEM



**INSTALLATION DESTINATION**  
*No disks selected*



**KDUMP**  
*Kdump is enabled*



**NETWORK & HOST NAME**  
*Not connected*



**SECURITY POLICY**  
*Not ready*

Quit

Begin Installation

*We won't touch your disks until you click 'Begin Installation'.*

Please complete items marked with this icon before continuing to the next step.

Done

us

Help!


Device Selection

Select the device(s) you'd like to install to. They will be left untouched until you click on the main menu's "Begin Installation" button.

Local Standard Disks

223.57 GiB  ATA Mircon_5100_MTFD sda / 79 KiB free	5589.03 GiB  TOSHIBA MGO4SCA60EA sdf / 5589.03 GiB free	5589.03 GiB  TOSHIBA MGO4SCA60EA sdg / 5589.03 GiB free	5589.03 GiB  TOSHIBA MGO4SCA60EA sdh / 5589.03 GiB free	TO sc
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Specialized & Network Disks

 Add a disk...

Other Storage Options

Partitioning

Automatically configure partitioning.  I will configure partitioning.

I would like to make additional space available.

Encryption

Encrypt my data. You'll set a passphrase next.

0 disks selected; 0 B capacity; 0 B free [Refresh...](#)

 No disks selected; please select at least one disk to install to.