RHEL auf einem eigenständigen UCS C240 M5-Server installieren.

Inhalt

Einführung

Dieser Artikel beschreibt das Verfahren für die Installation von RHEL auf einer lokalen RAID-Konfiguration in einem eigenständigen UCSC C240 M5-Server.

Verwendete Einrichtung

UCSC-C240-M5L
RAID-Controller: Cisco 12G SAS HBA (UCSC-SAS-M5)
4.000 HDDs
CIMC: 3.1(3a)
Betriebssystem: RHEL 7.3

Voraussetzungen

1. Laden Sie RHEL ISO und den Controller-Treiber-ISO herunter:

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

   Treiber-ISO: [ucs-cxxx-drivers-linux.3.1.3.iso](#)

   (Navigieren Sie im ISO zu Storage -> LS -> UCSC-SAS-M5 -> RHEL -> RHEL7.3 -> mpt3sas-23.00.00.00_el7.3-1.x86_64.iso.gz)

2. Wenn Sie die Datei mpt3sas-23.00.00.00_el7.3-1.x86_64.iso.gz extrahieren, erhalten Sie den Treiber ISO -> mpt3sas-23.00.00.00_el7.3-1.x86_64.iso

3. Wenn Sie einen UCSC-RAID-M5-Controller in Ihrem Server verwenden, können Sie zu dem entsprechenden Treiber navigieren.

Vorgehensweise

Schritt 1: Da der Server 4.000 Sektorlaufwerke hat, wird ein UEFI-Boot durchgeführt. Die Bootreihenfolge sollte wie folgt aussehen:

Schritt 2: Öffnen Sie das KVM, und ordnen Sie RHEL ISO zu:

Schritt 3: Drücken Sie F6, und starten Sie von UEFI: Cisco vKVM-Mapped vDVD1.24

Schritt 4: Wählen Sie die Option "Install Red Hat Enterprise Linux 7.3" aus, und drücken Sie "e".
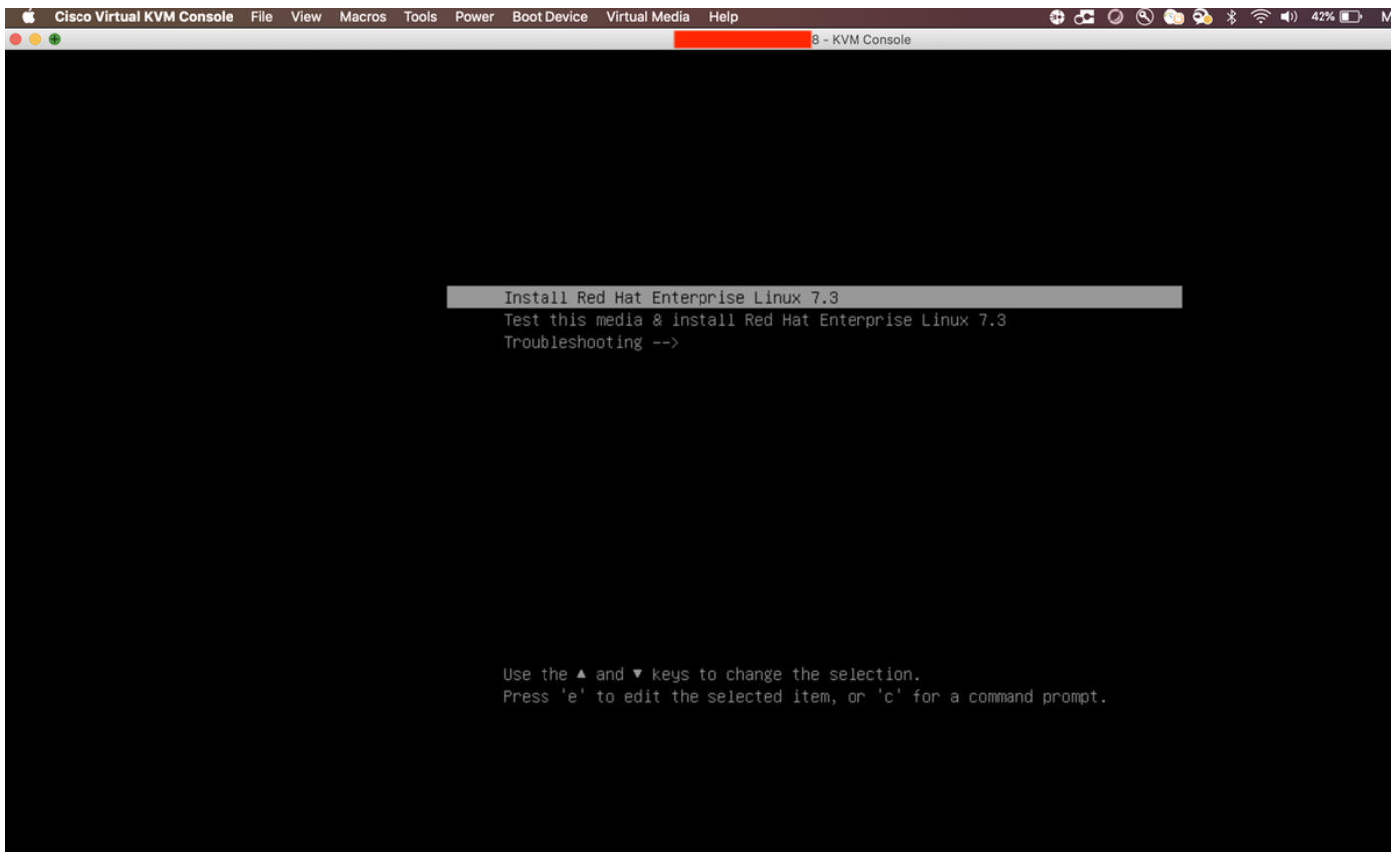
Schritt 5: Der folgende Bildschirm wird angezeigt:
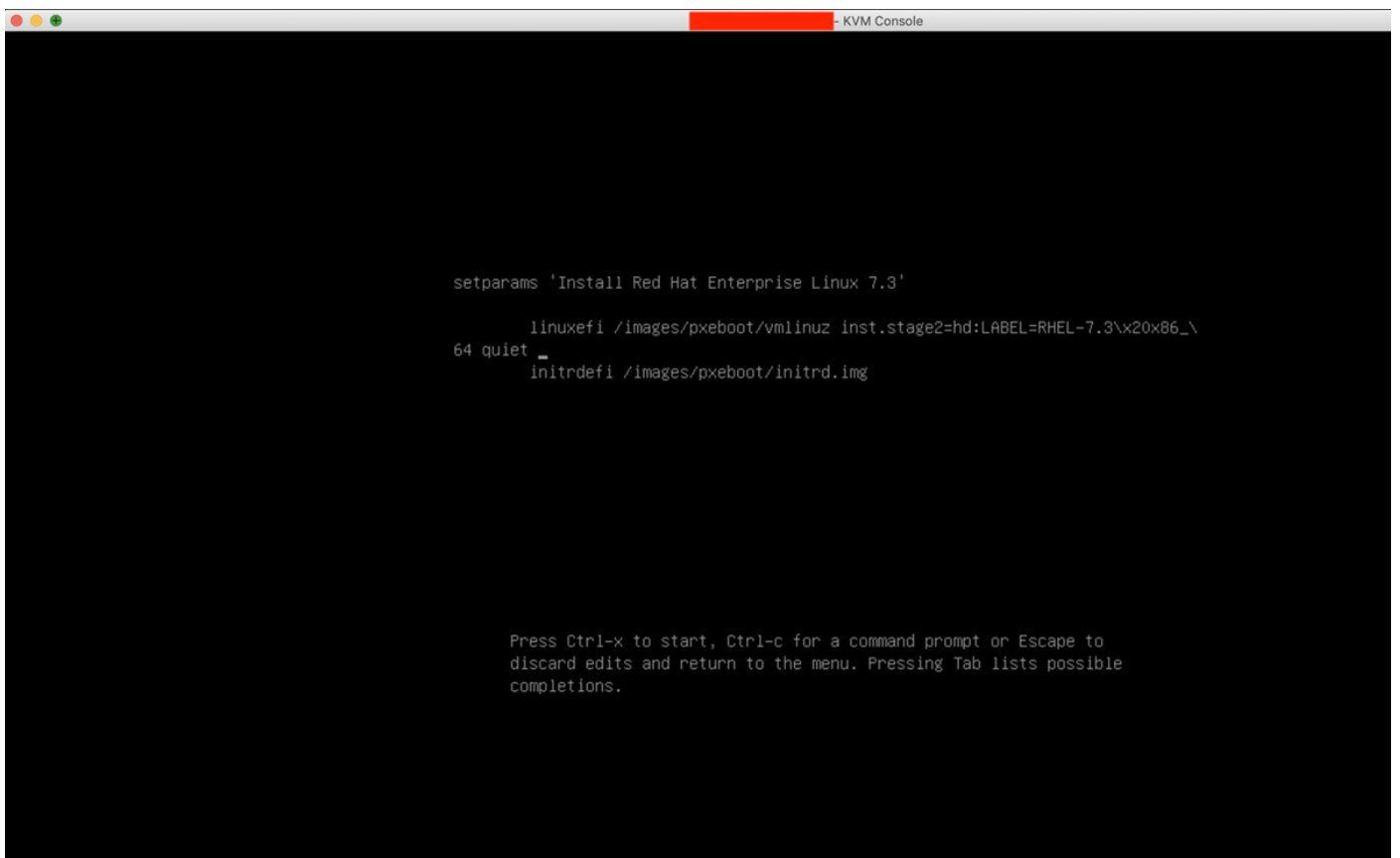
Schritt 6: Geben Sie den Befehl "linux dd" ein, und führen Sie die Tastenkombination Strg + x aus.

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.

Schritt 7: Der obige Befehl startet den interaktiven Modus:


```
[   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.
         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-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     vfat     ESXi               591C-E3E2
  2) sda2     vfat                        4C6C-A2D4
  3) sda3     VMFS_vol                    5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5     vfat                        4C6C-A2CA
  5) sda6     vfat                        4C6C-A2CD
  6) sda8     vfat                        4C6C-A2C8
  7) sr0      iso9660  RHEL-7.3\x20x86_64 2016-10-19-17-41-40-00
# to select, 'r'-refresh, or 'c'-continue: _
```

Schritt 8: Entpacken Sie das RHEL-ISO, und ordnen Sie dem Controller-Treiber ISO Folgendes zu:

Schritt 9: Geben Sie "r" ein, um die Liste der Treiberdisketten zu aktualisieren:

```
[  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        vfat      ESXi            591C-E3E2
 2) sda2        vfat                      4C6C-A2D4
 3) sda3        VMFS_vol                  5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5        vfat                      4C6C-A2CA
 5) sda6        vfat                      4C6C-A2CD
 6) sda8        vfat                      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        vfat      ESXi            591C-E3E2
 2) sda2        vfat                      4C6C-A2D4
 3) sda3        VMFS_vol                  5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5        vfat                      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:
```

Schritt 10: Sie sehen nun den Controller-Treiber in der ISO-Liste. Geben Sie "7" ein, und wählen Sie:

```
[   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      vfat      ESXi               591C-E3E2
 2) sda2      vfat                         4C6C-A2D4
 3) sda3      VMFS_vol                     5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5      vfat                         4C6C-A2CA
 5) sda6      vfat                         4C6C-A2CD
 6) sda8      vfat                         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      vfat      ESXi               591C-E3E2
 2) sda2      vfat                         4C6C-A2D4
 3) sda3      VMFS_vol                     5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5      vfat                         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: 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_el7.3-1.x86_64.rpm
# to toggle selection, or 'c'-continue: _
```

Schritt 11: Geben Sie "1" und dann "c" ein, um fortzufahren:

```
[    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      vfat      ESXi             591C-E3E2
 2) sda2      vfat                       4C6C-A2D4
 3) sda3      VMFS_vol                   5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5      vfat                       4C6C-A2CA
 5) sda6      vfat                       4C6C-A2CD
 6) sda8      vfat                       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      vfat      ESXi             591C-E3E2
 2) sda2      vfat                       4C6C-A2D4
 3) sda3      VMFS_vol                   5aa6e18d-304835ba-1711-4c776d996e2e
 4) sda5      vfat                       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: 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_el7.3-1.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_el7.3-1.x86_64.rpm
# to toggle selection, or 'c'-continue:
```

Schritt 12: Der RPM-Treiber befindet sich in der ISO-Datei. Sie erhalten möglicherweise eine Warnung, dass "DD Repo-Inhalt keine Datei", aber es ist nur eine Warnung - der Treiber wäre installiert worden.

Schritt 13: Sie sollten sich wieder im Menü "Driver Disk Device Selection" (Treiberdatenträger-Geräteauswahl) befinden. Entpacken Sie das Treiber-ISO und ordnen Sie Ihr RHEL ISO wieder zu. Drücken Sie r, um die Aktualisierung durchzuführen, und drücken Sie dann c, um mit der RHEL-Installation fortzufahren. Das Installationsprogramm sollte in der Lage sein, den RAID-Controller und die von ihm verwalteten Festplatten zu erkennen.

Create Image

✓ Activate Virtual Devices

✓ rhel-server-7.3-x86_64-boot.iso Mapped to CD/DVD
  Map Removable Disk ...
  Map Floppy ...

```
  3) sda3      VMFS_vol
  4) sda5      vfat
  5) sda6      vfat
  6) sda8      vfat
  7) sr0       iso9660   RHEL-7.3\x20x86_64
# to select, 'r'-refresh, or 'c'-continu

(Page 1 of 1) Driver disk device selection
    /DEVICE   TYPE      LABEL              UUID
  1) sda1      vfat      ESXi               591C-E3E2
  2) sda2      vfat                         4C6C-AZD4
  3) sda3      VMFS_vol                     5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5      vfat                         4C6C-AZCA
  5) sda6      vfat                         4C6C-AZCD
  6) sda8      vfat                         4C6C-AZC8
  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_el7.3-1.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_el7.3-1.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_el7.3-1.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_el7.3-1.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/repodata

(Page 1 of 1) Driver disk device selection
    /DEVICE   TYPE      LABEL              UUID
  1) sda1      vfat      ESXi               591C-E3E2
  2) sda2      vfat                         4C6C-AZD4
  3) sda3      VMFS_vol                     5aa6e18d-304835ba-1711-4c776d996e2e
  4) sda5      vfat                         4C6C-AZCA
  5) sda6      vfat                         4C6C-AZCD
  6) sda8      vfat                         4C6C-AZC8
  7) sr0       iso9660   CDROM              2017-05-26-05-44-09-00
# to select, 'r'-refresh, or 'c'-continue:
```
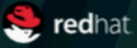
redhat

INSTALLATION SUMMARY

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.

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	5589.03 GiB	5589.03 GiB	5589.03 GiB	
ATA Mircon_5100_MTFD	**TOSHIBA MG04SCA60EA**	**TOSHIBA MG04SCA60EA**	**TOSHIBA MG04SCA60EA**	**TO**
sda / 79 KiB free	sdf / 5589.03 GiB free	sdg / 5589.03 GiB free	sdh / 5589.03 GiB free	s¢

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.