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Introduction

This document describes how to install Redhat Enterprise Linux (RHEL) or CentOS Linux on the Cisco Unified Computing System (UCS) M-Series server using local storage.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco UCS Manager 2.5 or 3.1 version
- Storage Profiles
- Linux Operating Systems (OS)

Components Used

The information in this document is based on UCS M-Series.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

Cisco M-Series modular server is one of the Cisco products that represents Composable Infrastructure design. The modular servers do not have a local storage but a centralized storage that can be shared by all servers. To access the shared storage, OS requires new Small Computer System Interface (SCSI) driver called as storage Network Interface Card (sNIC) and

has to be added during installation for OS to detect the disks.

The next few sections of this document provides information on how to download the driver and install it during the OS installation.

Download Required Driver ISO Bundle

The UCS Hardware and Software Interoperability Matrix outlines the driver versions that are required for a particular OS, device, and firmware combination. These links for the Matrix Utility Tool and the Matrix PDFs, determines the required driver version.

[UCS Hardware and Software Interoperability Matrix Utility Tool](#)
[UCS Hardware and Software Interoperability Matrix PDFs](#)

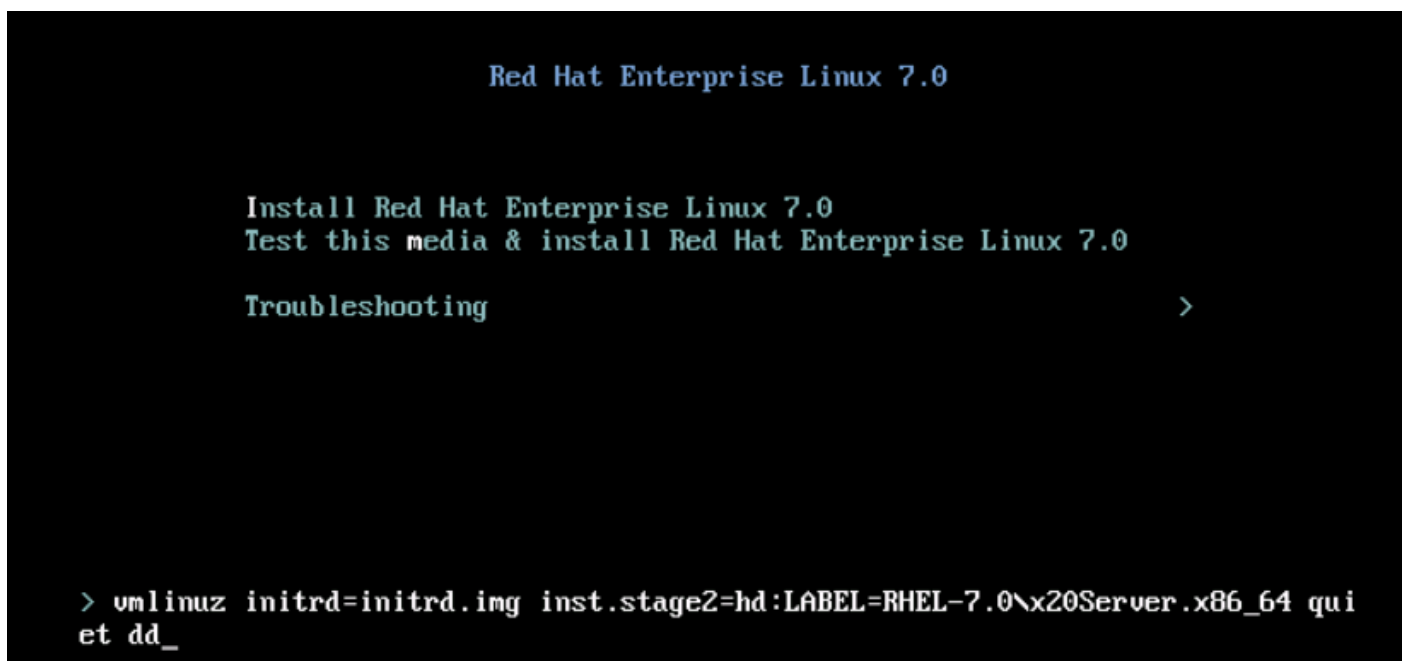
Complete these steps in order to download the driver bundle:

1. In a web browser, navigate to <http://www.cisco.com>.
2. Under **Support**, navigate to **Downloads > All Downloads**.
3. Click **Servers - Unified Computing**.
4. Choose **UCS M-Series Modular Server Software**
5. Click **Unified Computing System (UCS) Drivers**.
6. Select the bundle you want to download, and click **Download Now**.

Steps to install RHEL 7.0 or CentOS 7.0

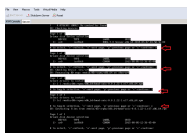
It is assumed that the user has powered up the server and is configured to boot from OS installation ISO image.

Step 1. At the first screen of OS installation wizard, highlight **Install Redhat Enterprise Linux 7.0** option and press **Tab** key to view/add additional boot parameters of the installer. Add **dd** keyword at the end and click **Enter** key as shown in the image.



Step 2. The installer takes you to identify the source of driver disk (dd) file, as shown in the image. In this step, unmap the OS installation image and map the sNIC driver disk ISO file.

Step 3. Press **r** to rescan the media and select 1. It enlists the sNIC driver RPM file included in the driver disk ISO. Select 1 to include the driver and press **c** to load the driver, as shown in the image.



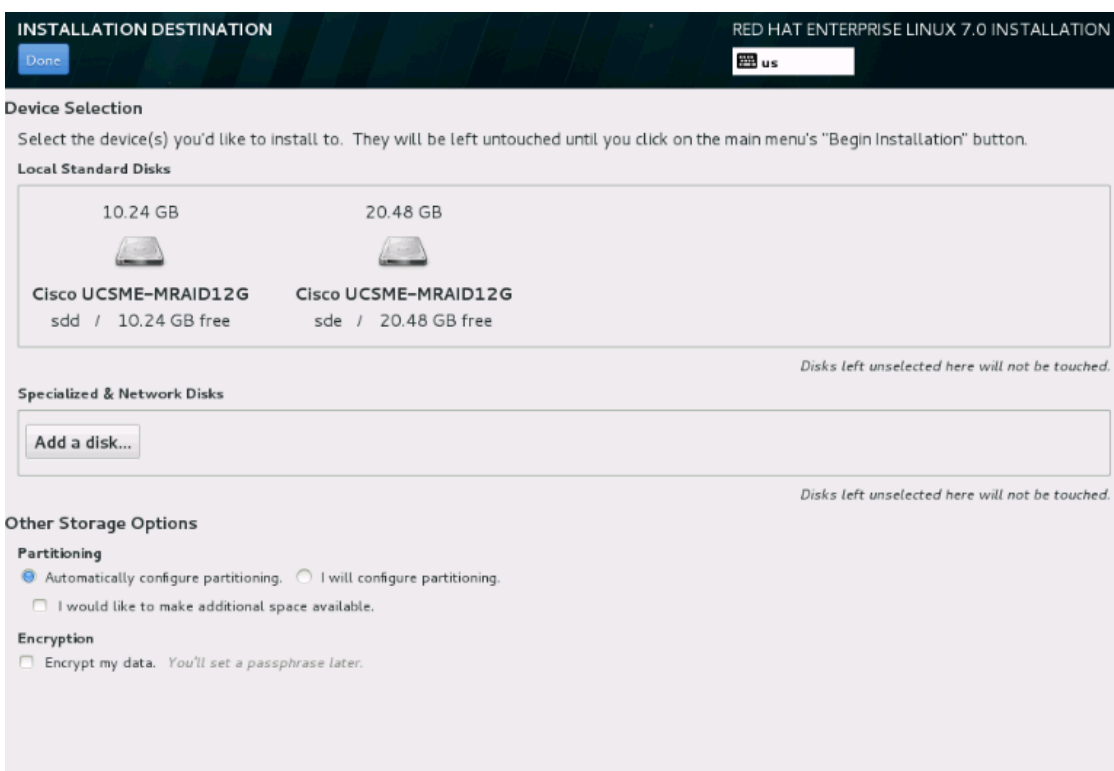
Step 4. Once the driver is extracted to memory space, unmap the driver disk ISO and map the OS installation ISO file. Press **r** to rescan it and press **c** to proceed with OS installation wizard, as shown in the image.

```
# to select, 'r'-refresh, 'n'-next page, 'p'-previous page or 'c'-continue: r
Page 1 of 1
Driver disk device selection
  DEVICE      TYPE      LABEL      UUID
  1) sr0       iso9660   RHEL-7.0 Server.x86_64 2014-05-07-03-58-46-00

# to select, 'r'-refresh, 'n'-next page, 'p'-previous page or 'c'-continue: c
[ OK ] Started Show Plymouth Boot Screen.
[ OK ] Reached target Paths.
[ OK ] Reached target Basic System.
dracut-initqueue[B3B]: mount: /dev/sr0 is write-protected, mounting read-only
[ OK ] Started dracut initqueue hook.
      Starting dracut pre-mount hook...
[ OK ] Started dracut pre-mount hook.
[ OK ] Reached target Initrd Root File System.
      Starting Reload Configuration from the Real Root...
[ OK ] Started Reload Configuration from the Real Root.
[ OK ] Reached target Initrd File Systems.
      Starting dracut mount hook...
[ OK ] Started dracut mount hook.
[ OK ] Reached target Initrd Default Target.
```

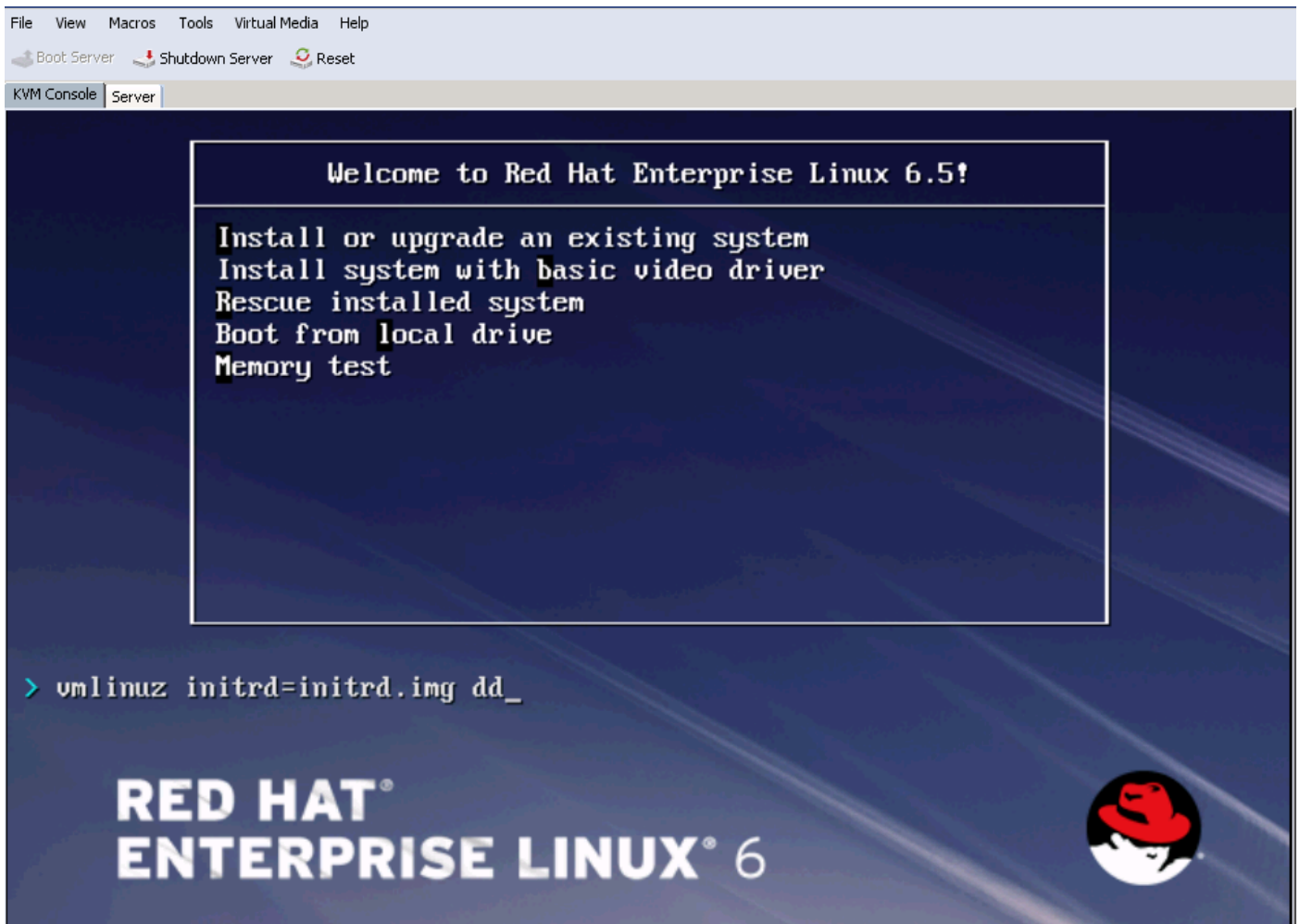
Verify

Once you proceed with the OS installation wizard, the Logical Unit Numbers (LUNs) created on the centralized shared storage via storage profile policy is detected by OS with the help of sNIC driver.

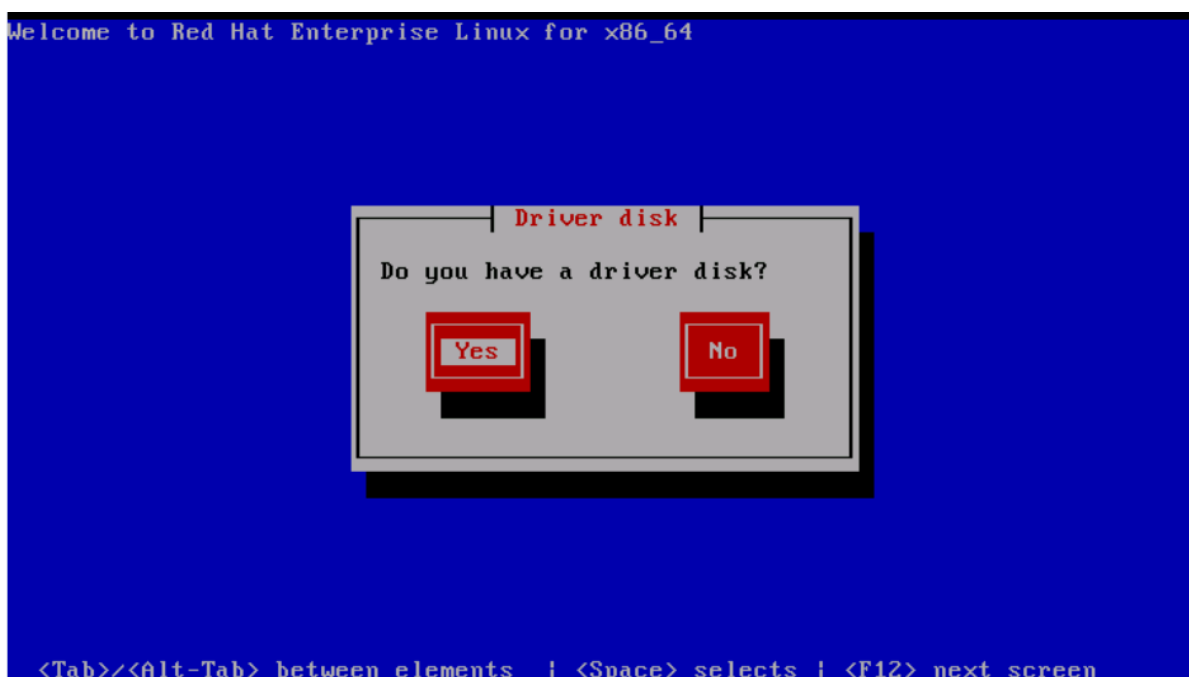


Steps to install RHEL 6.5 or CentOS 6.5

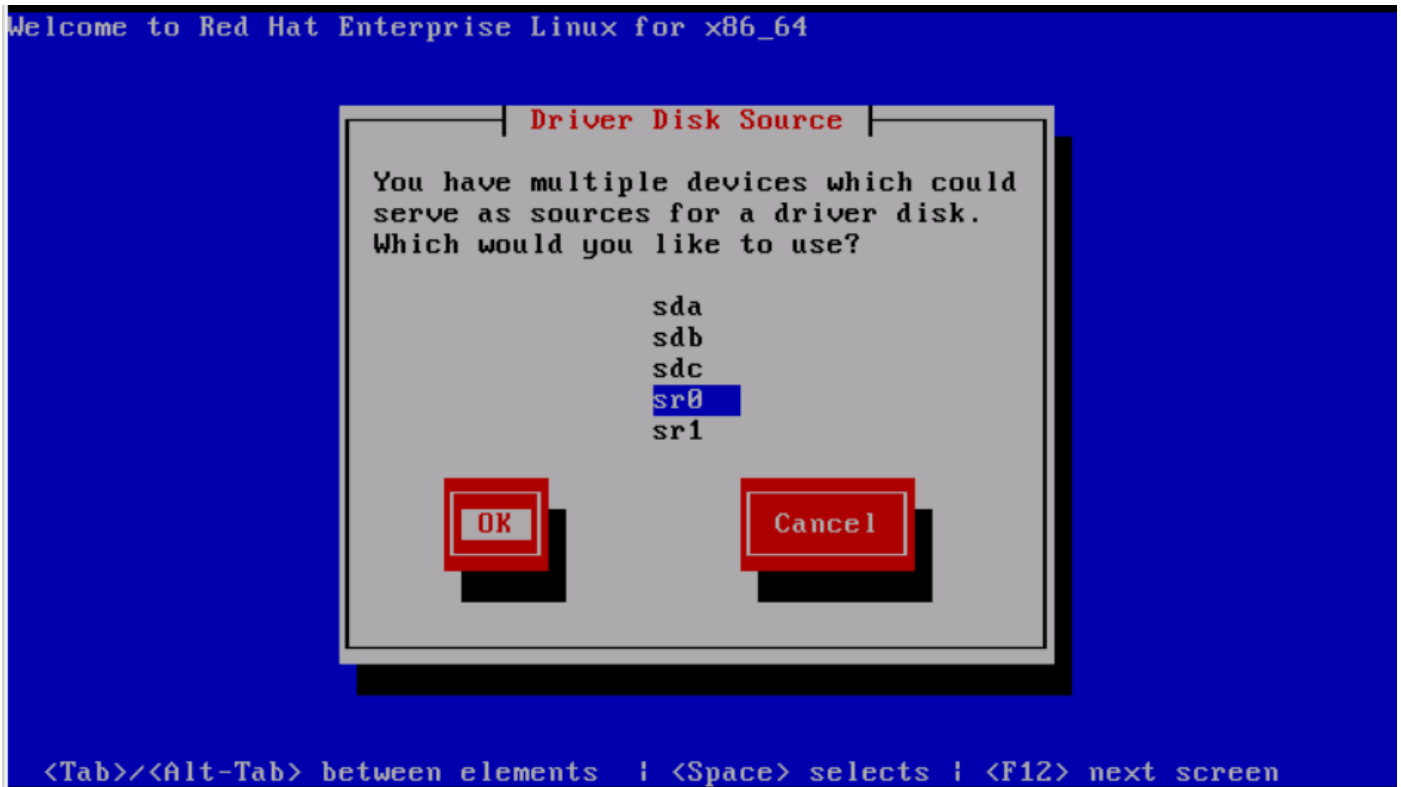
Step 1. From the welcome screen of the OS installation wizard, highlight **Install or upgrade an existing system** option and press **Tab** key to view/edit boot parameters. At the end of the line, add **dd** keyword and click on **Enter** key.



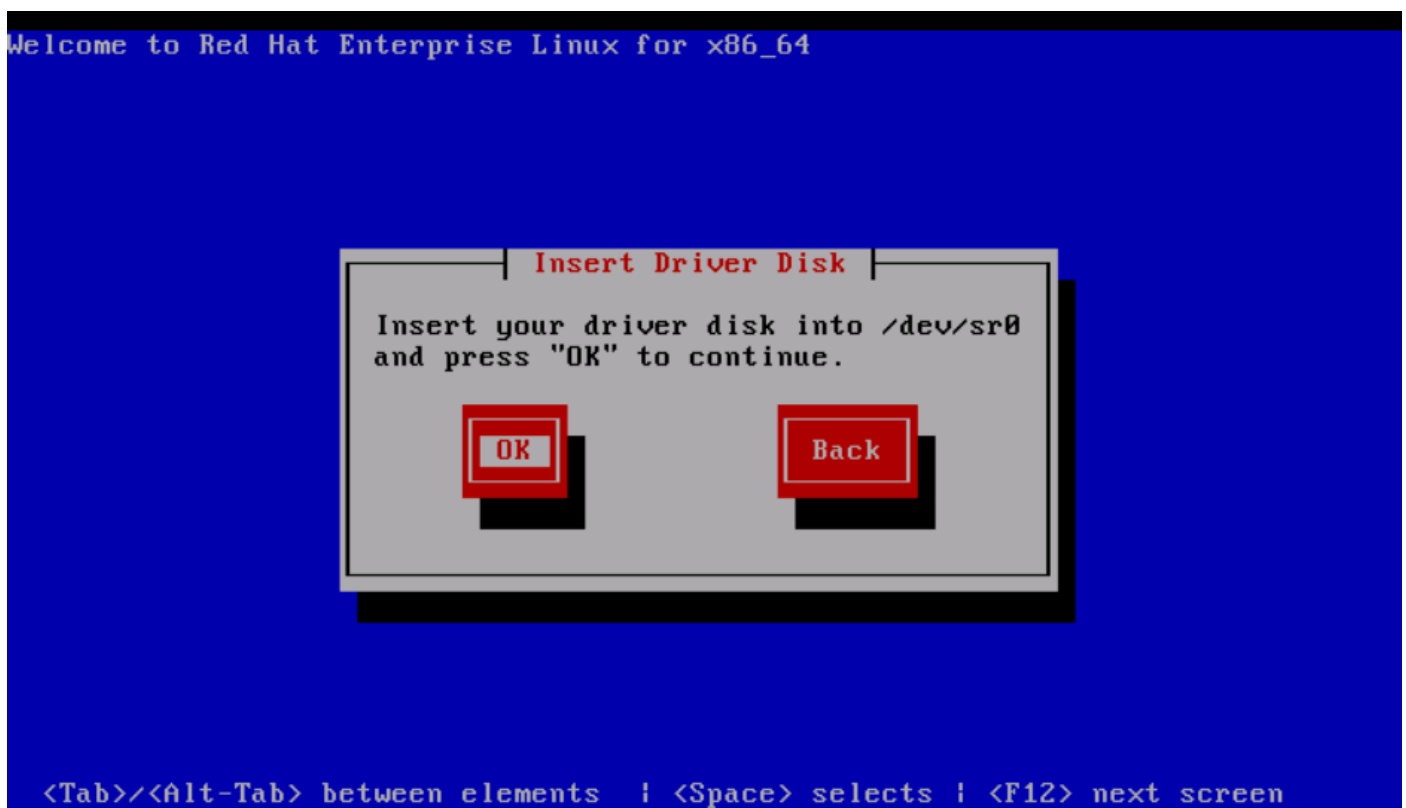
Step 2. OS installation wizard prompts for driver disk. Click **Yes**, as shown in the image.



Step 3. As shown in the image, select option **sr0** as the driver source location.



Step 4. Unmap OS installation ISO and map the sNIC driver disk ISO for RHEL 6.5 . After mapping the driver disk ISO, click **OK**, as shown in the image.

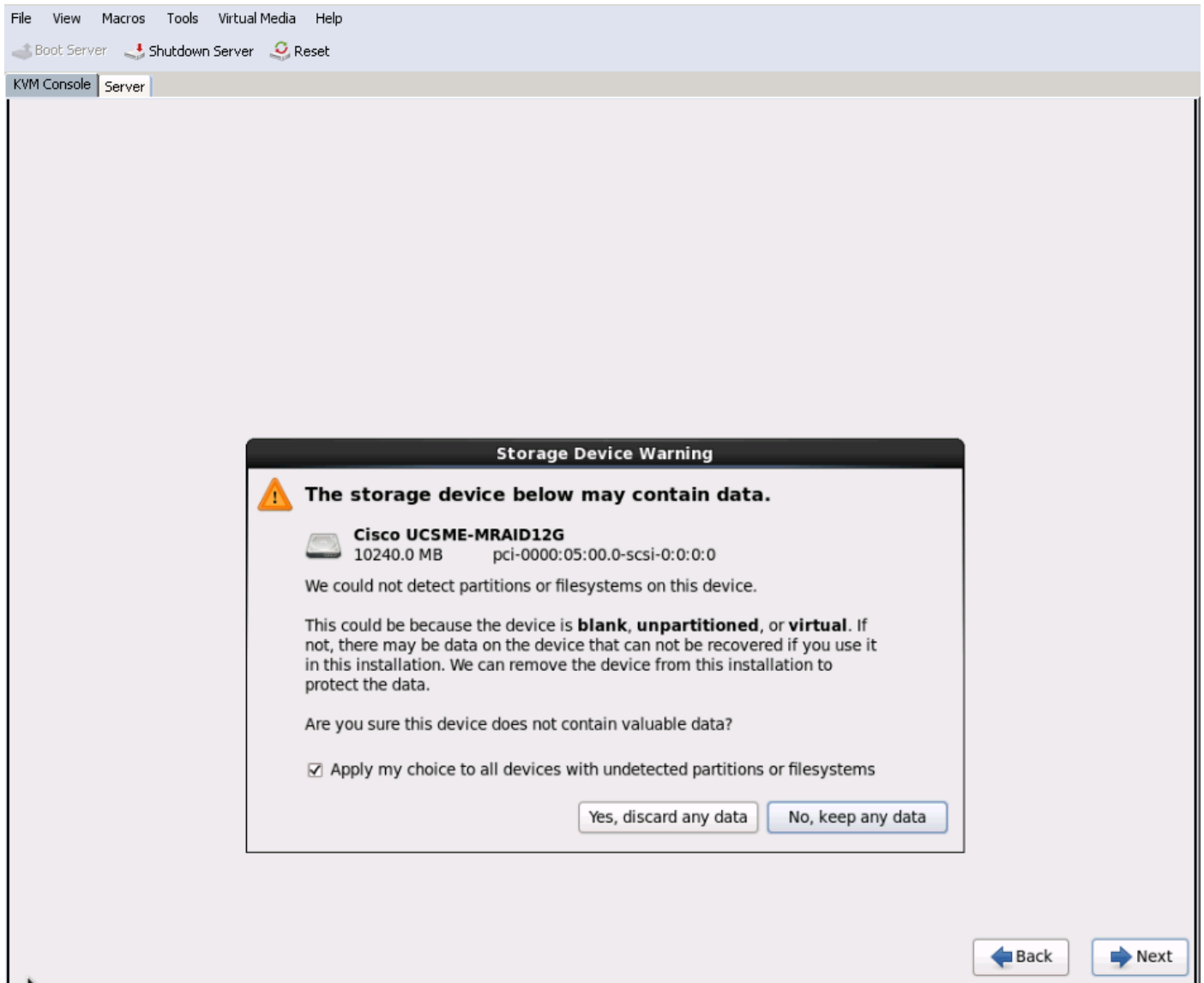


Step 5. OS extracts the sNIC driver and prompt for loading additional drivers during the installation. Click on **No**, as shown in the image and unmap the driver disk ISO file. Map the OS installation ISO image and continue with OS installation.



Verify

If the sNIC driver is loaded, OS will be able to detect the shared storage LUN as shown in the image.



Post Installation Verification

These OS commands enlists the sNIC driver details,

To view the sNIC driver module into kernel

sNIC driver module details:

Using `snic_admin` utility,

Related Information

- [Cisco UCS M-Series Modular Servers](#)
- [Cisco UCS Manager \(UCSM \) Configuration Guide](#)
- [Videos - Cisco UCS Tech Talk Series](#)
- [Technical Support & Documentation - Cisco Systems](#)