

Obtain and Run Recovery Software on the CUCM VM

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Introduction

This document describes how to obtain and run the Recovery Software for the Cisco Unified Communications Manager (CUCM), as well as the changes that are required to the Virtual Machine (VM) settings before and after the recovery.

Background Information

The Recovery Software ISO images are saved in the ESXi datastore.

Datastores are logical containers, analogous to file systems, which hide the specifics of each storage device and provide a uniform model for the storage of VM files. Datastores can also be used in order to store ISO images, VM templates, and floppy images.

The vSphere Client is used in order to access the different types of storage devices that your ESXi host discovers, and in order to deploy datastores on them.

Download Recovery Software ISO Image

Complete these steps in order to obtain the Recovery Software ISO image:

1. From the Cisco home page, navigate to **Downloads Home > Products > Unified Communications > Call Control > Unified Communications Manager (CallManager)**.
2. Click the appropriate CUCM version and download the **Recovery Software**:

Select a Software Type:

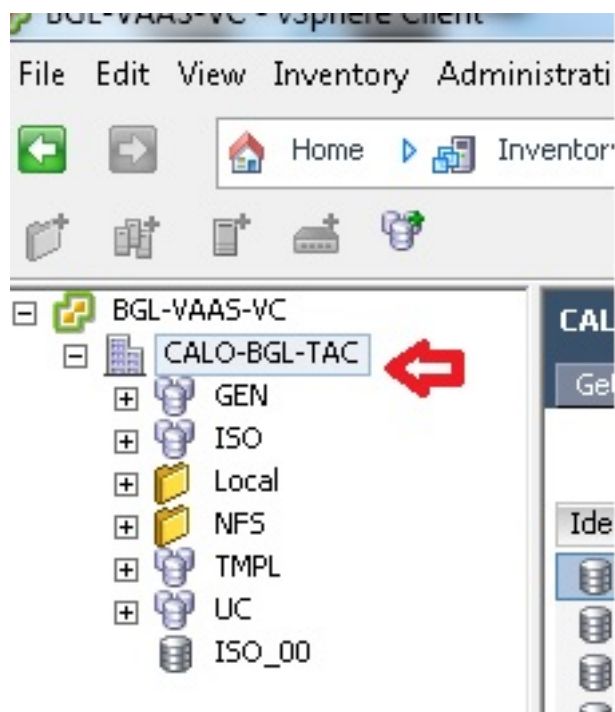


3. Download the Recovery Software ISO image and save it in the **ESXi Datastore**.

Upload ISO Image to the ESXi Datastore

Complete these steps in order to upload the Recovery Software ISO image to the datastore via the vSphere Client Version 5.0:

1. Log into the vSphere Client:



2. Click **Datastore and Datastore Clusters**:



Identification	Status	Device	Drive Type	Capacity
bgl-vaas-33:datas...	✓ Normal	naa.60030130f09...	Non-SSD	552.00 GB
bgl-vaas-35:datas...	✓ Normal	naa.60030130f09...	Non-SSD	552.00 GB
bgl-vnap-04:datas...	✓ Normal	naa.60030130f09...	Non-SSD	131.00 GB
bgl-vnap-05:datas...	✓ Normal	naa.60030130f09...	Non-SSD	131.00 GB
bgl-vnap-06:datas...	✓ Normal	naa.60030130f09...	Non-SSD	131.00 GB

3. Right-click the datastore to which you would like to upload the file and click **Browse Datastore**:

Identification	Status	Device	Drive Type	Capacity
bgl-vaas-33:datas...	✓ Normal	naa.60030130f09...	Non-SSD	552.00
bgl-vaas-35:datas...				552.00
bgl-vnap-04:datas...				131.00
bgl-vnap-05:datas...				131.00
bgl-vnap-06:datas...				131.00
bgl-vnap-07:datas...				552.00
bgl-vnap-08:datas...				552.00
bgl-vnap-09:datas...				552.00
bgl-vnap-10:datas...				552.00
bgl-vnap-11:datas...				552.00
bgl-vnap-18:datas...				366.50
bgl-vnap-19:datas...	✓ Normal	naa.60030130f09...	Non-SSD	366.50

Browse Datastore...

Alarm

Assign User-Defined Storage Capability...

Rename

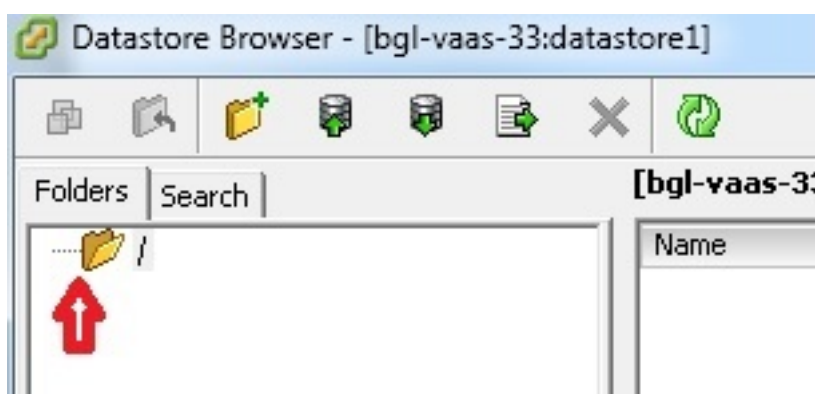
Delete

Open in New Window... Ctrl+Alt+N

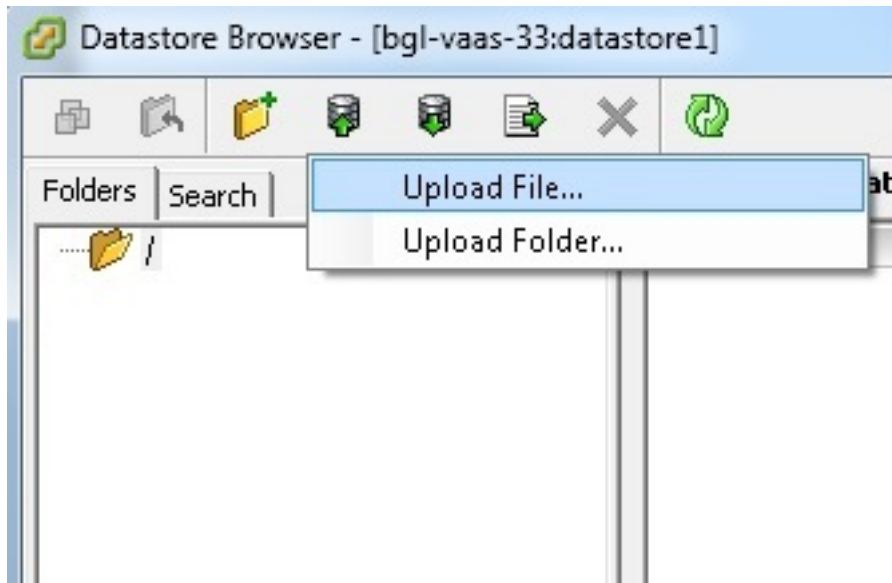
Refresh

Copy to Clipboard Ctrl+C

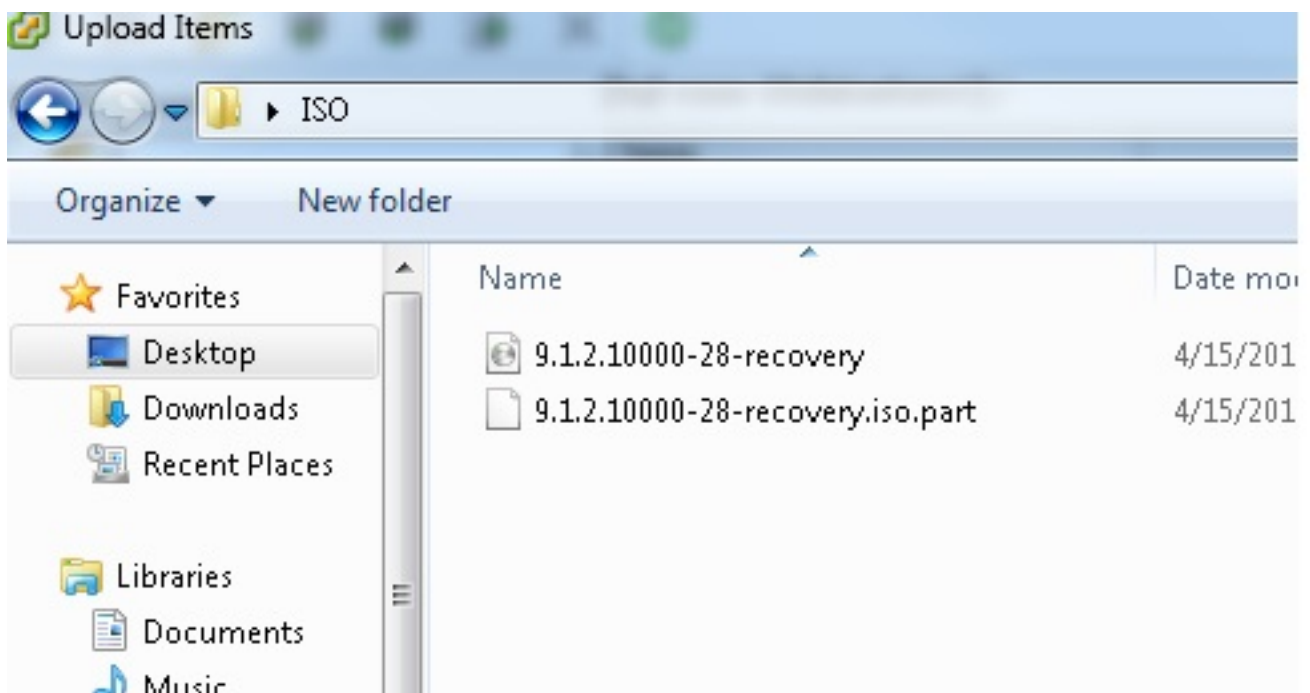
4. Choose the folder to which you would like to upload the ISO image:



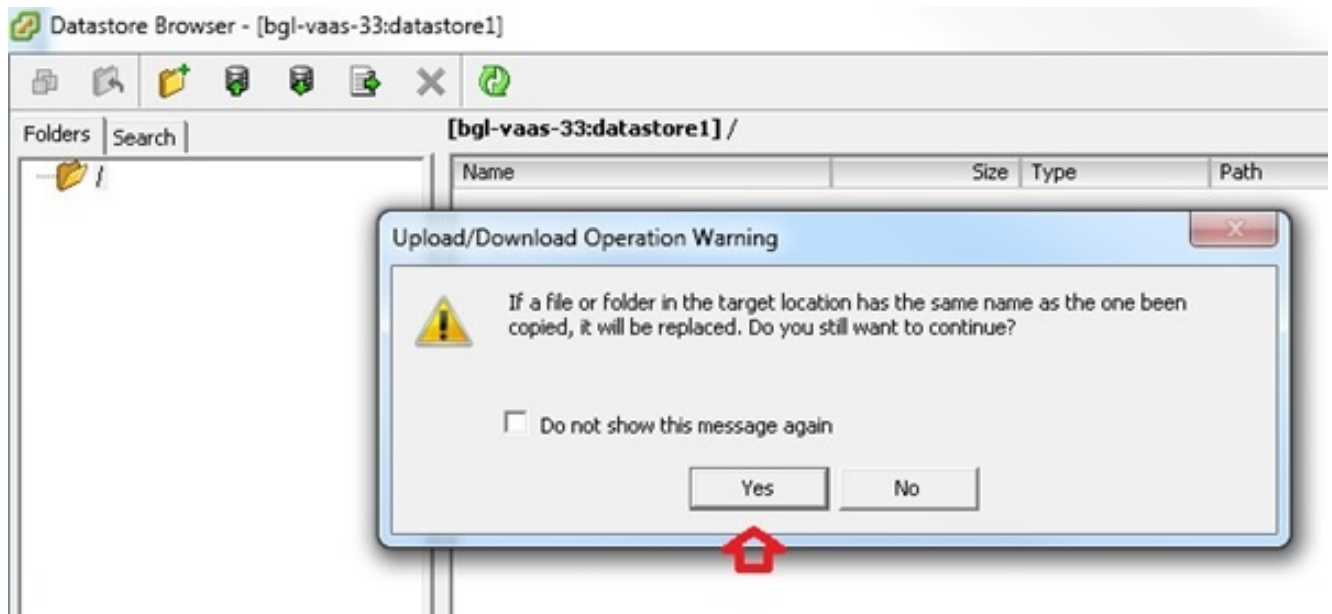
5. Click the **Upload files** tab:



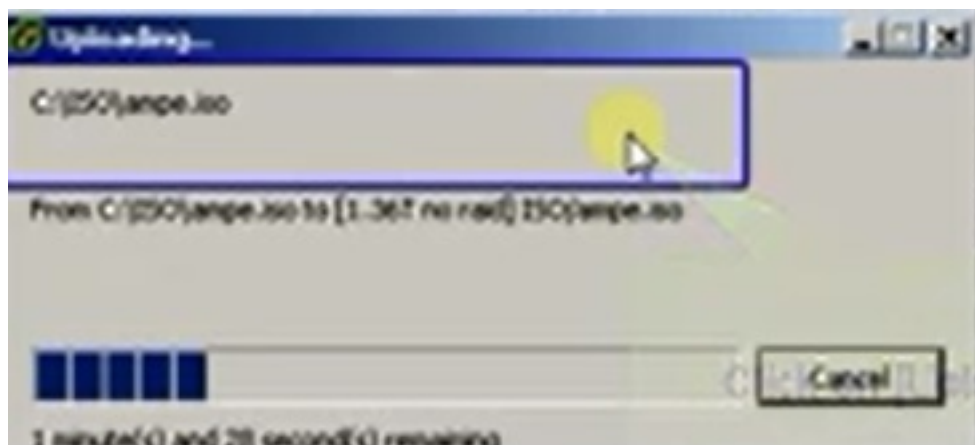
6. Browse to the folder location where the image is saved on your machine:



7. Once you select the file, a pop-up message appears. Choose **Yes**:



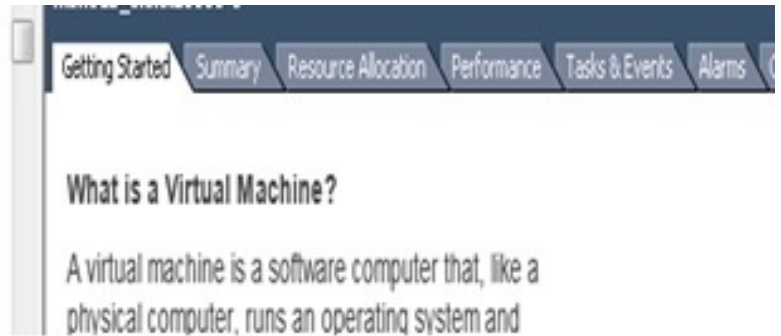
The ISO image then begins to upload to the datastore:



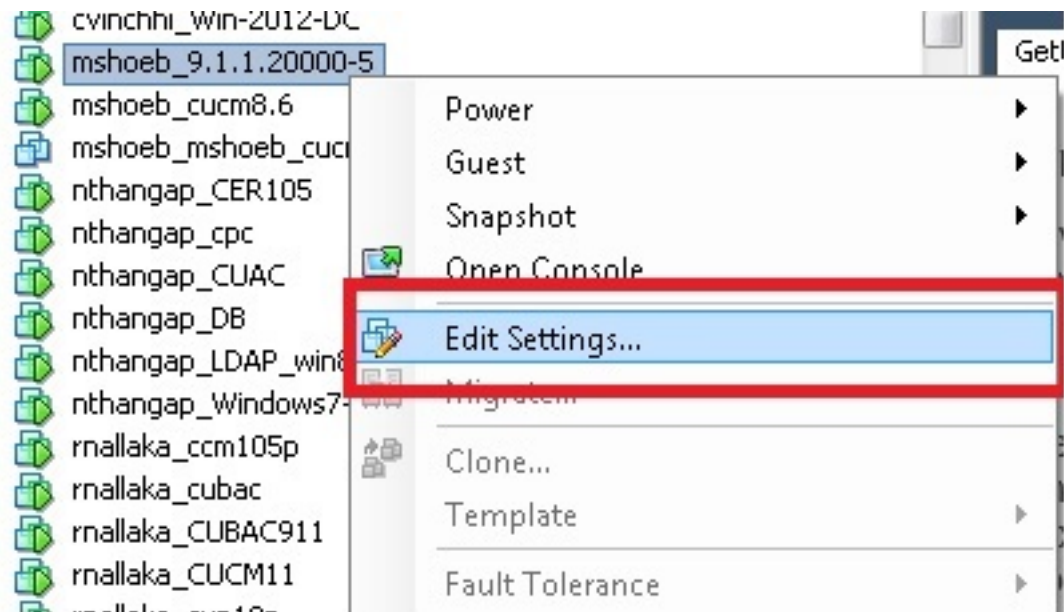
Required VM Settings Prior to Recovery

Complete these steps in order to ensure that the VM settings are correct before you run the Recovery Software:

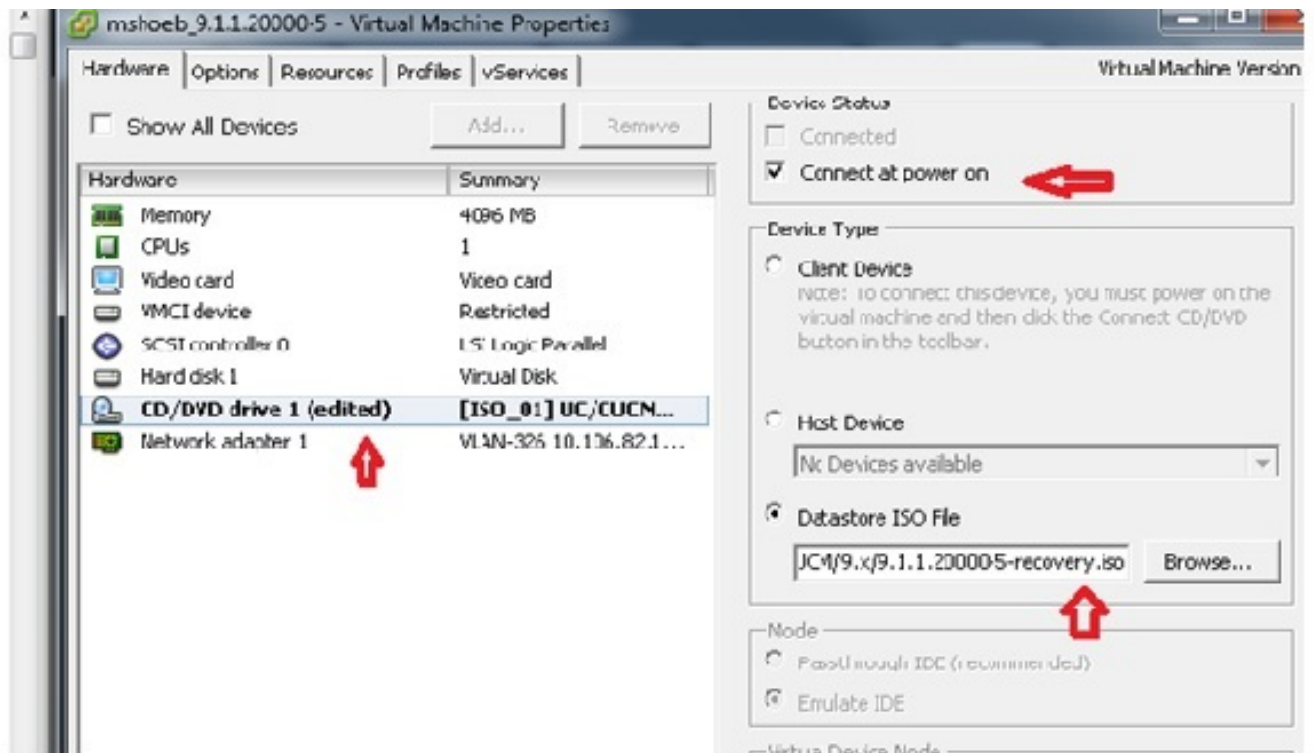
1. From the vSphere Client, navigate to the CUCM VM machine.
2. Right-click the VM for which you would like to run the Recovery Software and power off the VM:



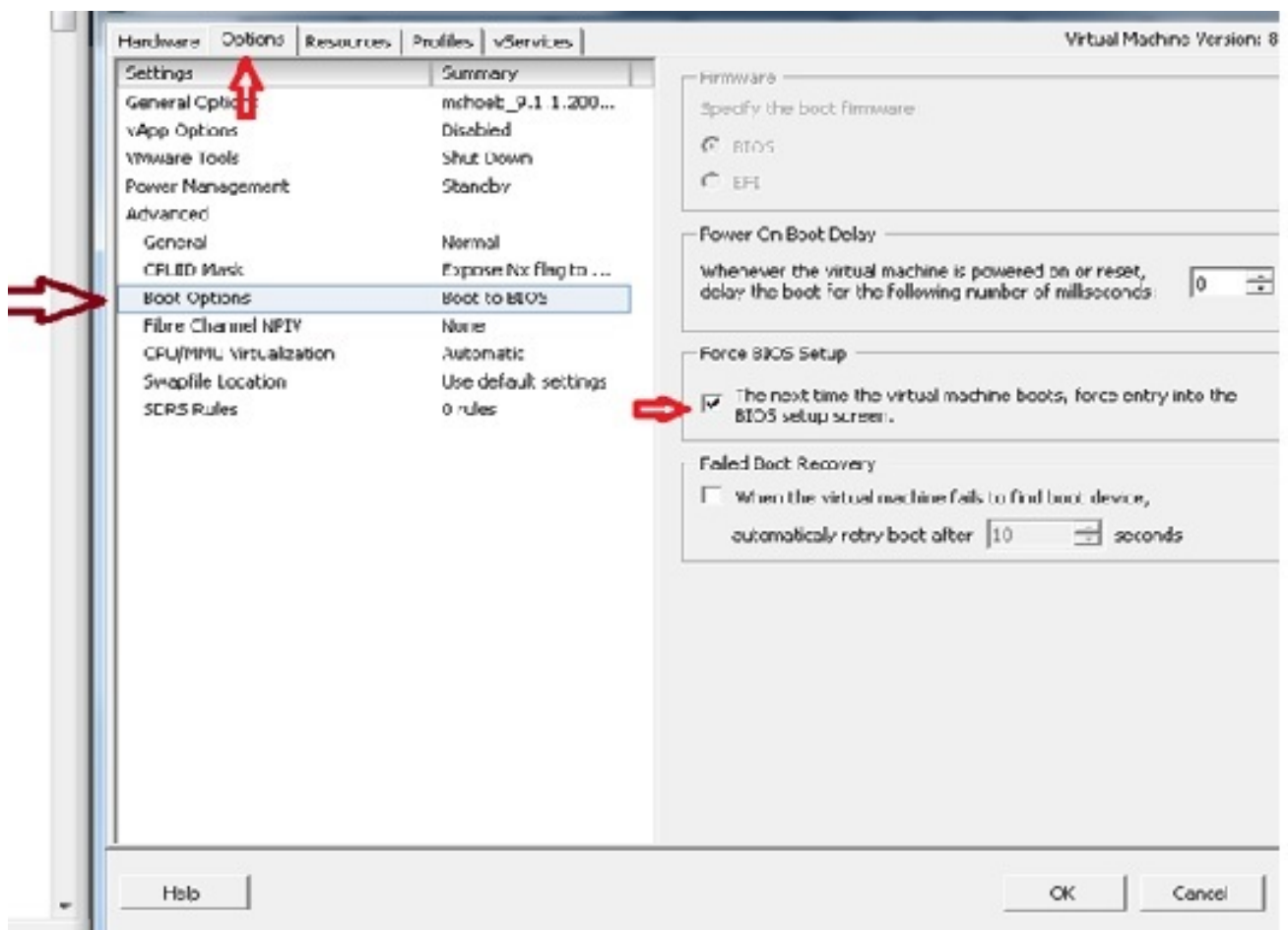
3. Right-click and navigate to **Edit Settings**:



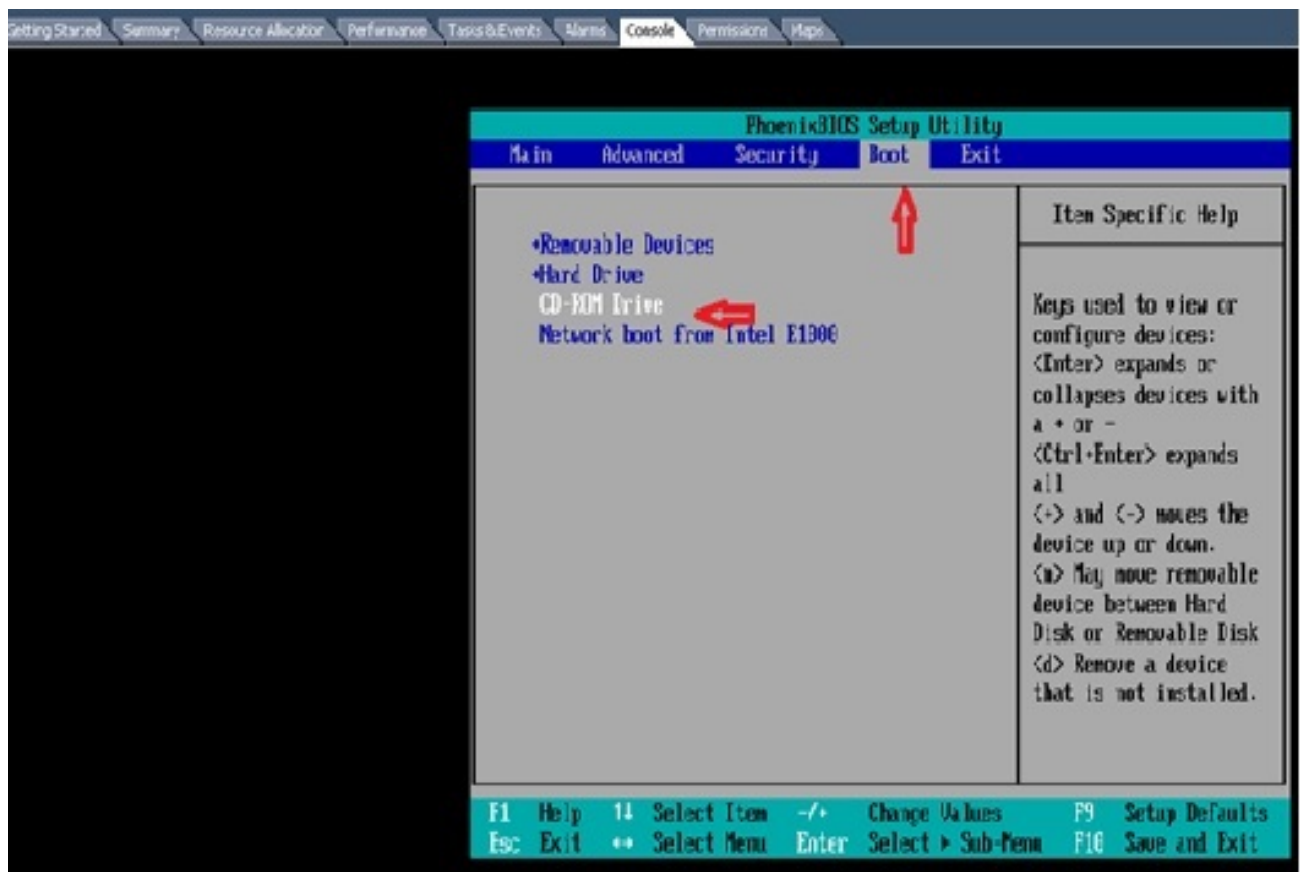
4. From the *Hardware* tab, select **CD/DVD drive**, check the **Connect at power on** check box, and browse to the **recovery.iso** image that you saved in the datastore:



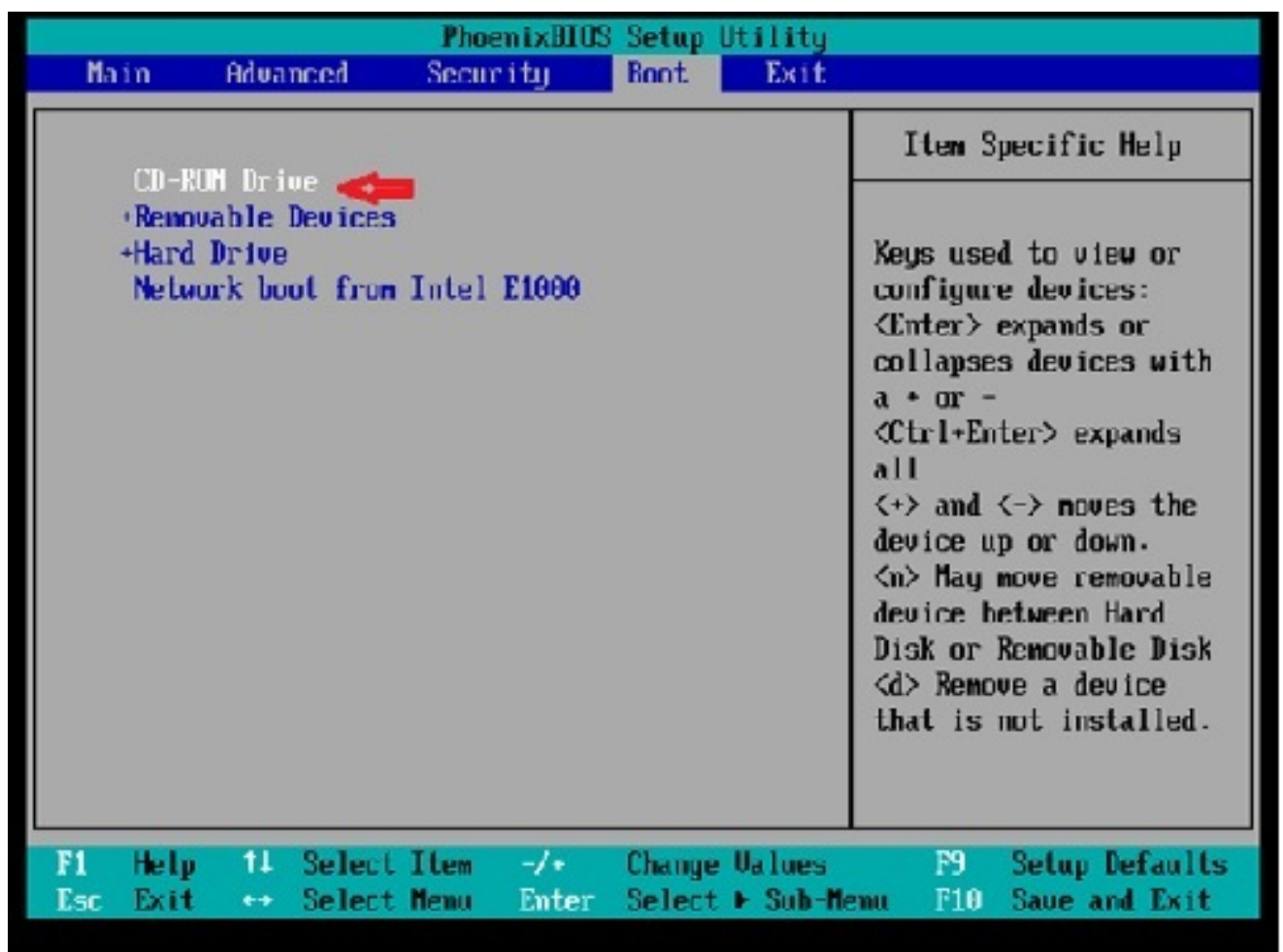
5. From the *Options* tab, select **Boot Options**, check the **Force BIOS Setup** check box, select **OK**, and power on the VM:



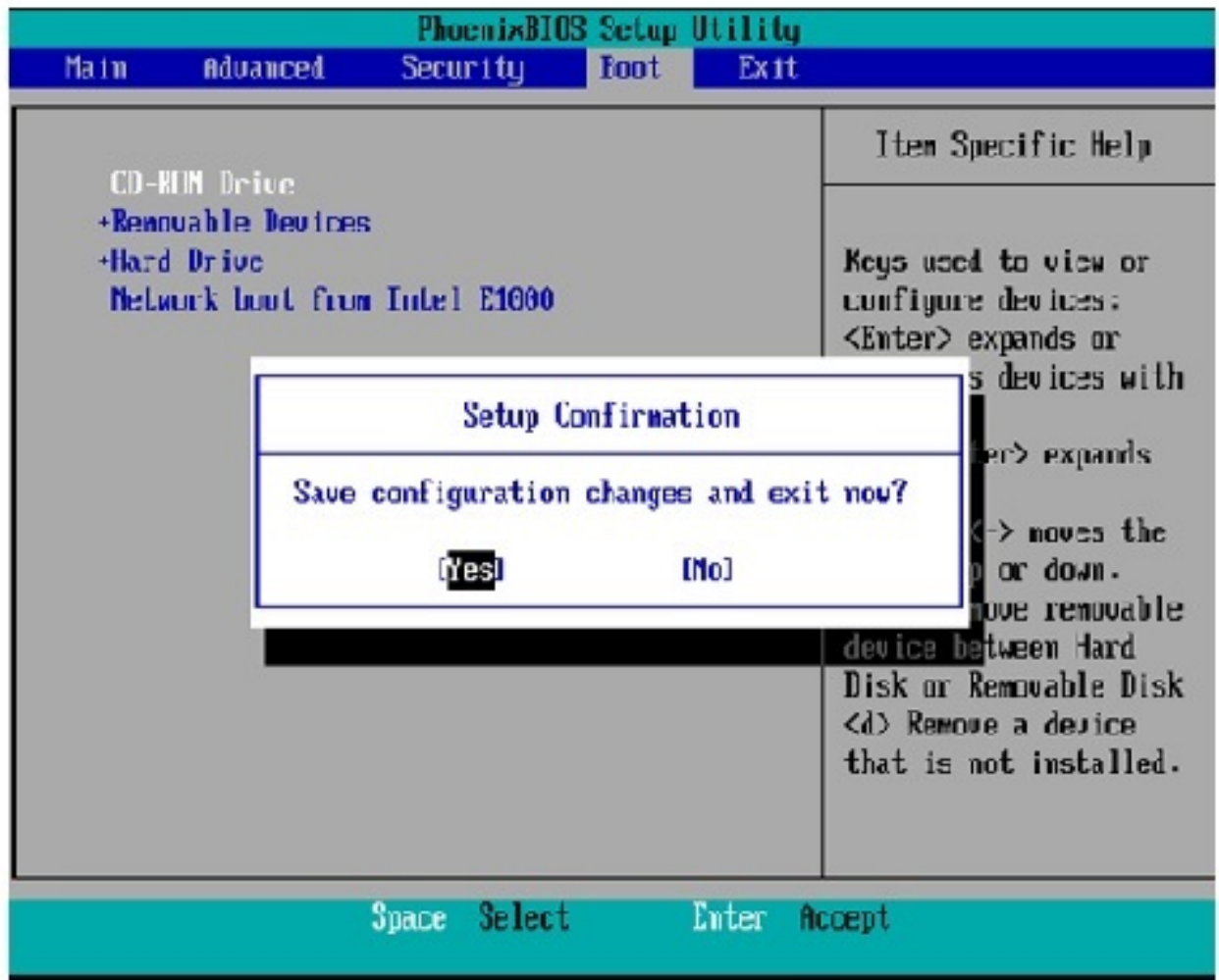
6. The VM boots into BIOS mode. Navigate to the boot menu:



7. Use the plus (+) symbol in order to move the **CD-ROM Drive** option to the top of the list:



8. Press the **F10** key, and you are prompted to save this setting:



The system now loads with the CD-ROM drive where the Recovery Software is located. When the system boots up, you see the options that are shown in the next image.

9. Choose option **F** (press the **F** key):

```
Running the system installer.
Please wait...
Detecting Server Hardware - this can take several minutes
VMware: passed detection validation
```

```
*****
***      Welcome to Cisco Unified Communications Recovery Disk
***      Version 9.1.1.20000-5
***      Copyright - Cisco System, Inc. 2005-2010
***
*** active partition:  PARTITION A - 9.1.1.20000-5
***
*** Please enter one of the following options:
***
*** [F]||[f] Check and correct disk file systems.
*** [U]||[u] Verify the disk partitioning layout.
*** [A]||[a] Align partitions on disk(s).
*** [Q]||[q] Quit this recovery disk program.
*****
> _
```

The File System check begins:

```
*** Please enter one of the following options:
***
*** [F]||[f] Check and correct disk file systems.
*** [U]||[u] Verify the disk partitioning layout.
*** [A]||[a] Align partitions on disk(s).
*** [Q]||[q] Quit this recovery disk program.
*****
> F
***** WARNING! *****
Use of the file system repair on the recovery disc does not guarantee
a fully functioning system. Even if the server is recovered into an operable
state, full functionality of all features and services cannot be guaranteed.
Cisco strongly recommends a server rebuild if the file system has become
corrupted to ensure full functionality.
*****
Press Enter key to continue..
Unmounting partition /mnt/part1
Unmounting partition /mnt/part2
Unmounting partition /mnt/part3
Unmounting partition /mnt/part4
Checking device /dev/dev1
fsck 1.41.14 (22-Dec-2010)
Pass 1: Checking inodes, blocks, and sizes
Pass 2: Checking directory structure
/?: |=====|                                     \ 86.5%
```

Once the File System check is complete, you are taken back to the main menu:

```
Pass 4: Checking reference counts
Pass 5: Checking group summary information
/COMMON: 57819/12958784 files (8.6% non-contiguous), 6924958/12958398 blocks
OK.

Mounting partition /mnt/part1 : [ OK ]
Mounting partition /mnt/part2 : [ OK ]
Mounting partition /mnt/part3 : [ OK ]
Mounting partition /mnt/part6 : [ OK ]

*****
***      Welcome to Cisco Unified Communications Recovery Disk
***      Version 9.1.1.28888-5
***      Copyright - Cisco System, Inc. 2886-2810
***
*** Active partition:  PARTITION A - 9.1.1.28888-5
***
*** Please enter one of the following options:
***
*** [F]||[f] Check and correct disk file systems.
*** [U]||[u] Verify the disk partitioning layout.
*** [A]||[a] Align partitions on disk(s).
*** [Q]||[q] Quit this recovery disk program.
*****
> _
```

10. Choose option **Q** (press the **Q** key) in order to quit the Recovery Software program. You are then prompted to reboot the system, as shown here:

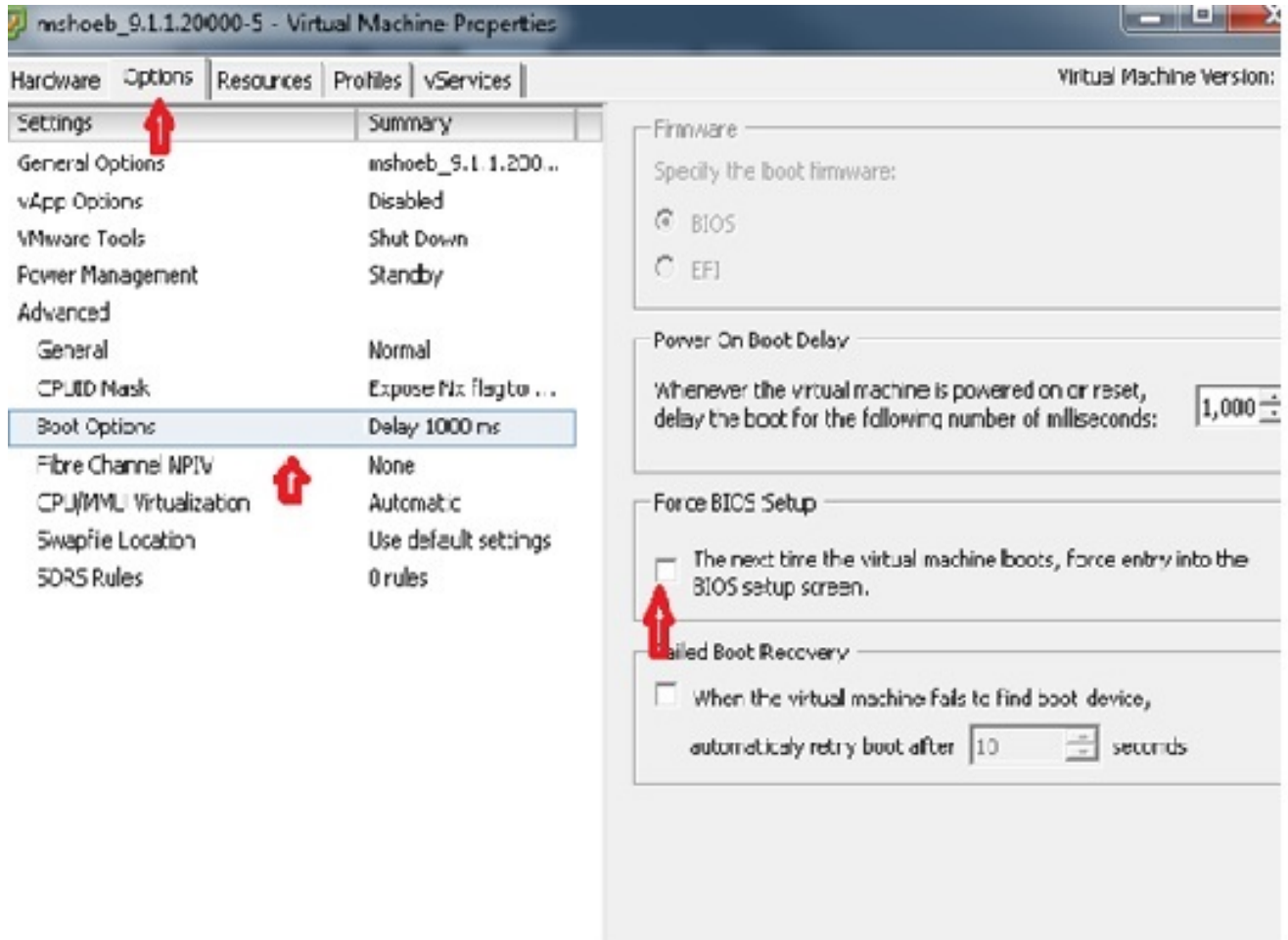
```
*** [U]||[u] Verify the disk partitioning layout.
*** [A]||[a] Align partitions on disk(s).
*** [Q]||[q] Quit this recovery disk program.
*****
> Q
The system will HALT NOW!!! Once halted, please eject the CD.
install exited abnormally [1/1]
sending termination signals...done
sending kill signals...done
disabling swap...
unmounting filesystems...
  /mnt/runtime done
  disabling /dev/loop#
  /proc done
  /dev/pts done
  /sys done
  /tmp/rampfs done
  /mnt/source done
  /selinux done
  /mnt/part1 done
  /mnt/part2 done
  /mnt/part3 done
  /mnt/part6 done
you may safely reboot your system
-
```

Post-Recovery Requirements

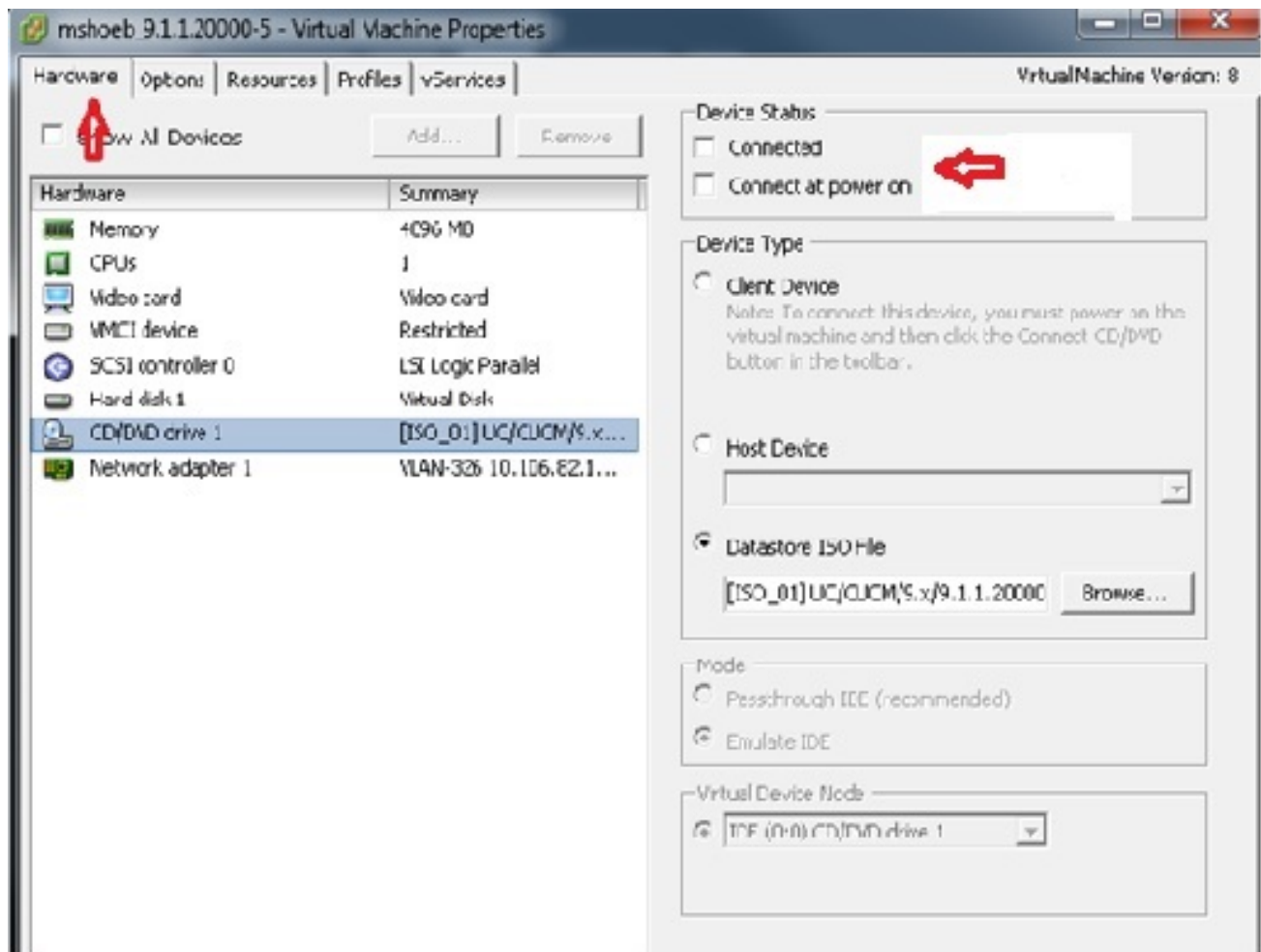
Note: Before you proceed with the reboot, ensure that you uncheck the **Force entry into BIOS** check box.

Complete these steps after you have run the Recovery Software:

1. Right-click the VM, navigate to **Edit Settings > Options > Advanced > Boot Options**, and ensure that the **The next time the virtual machine boots, force entry into the BIOS setup screen** check box is unchecked:



2. From the *Hardware* tab, uncheck the **Connected** and **Connect at Power ON** check boxes:

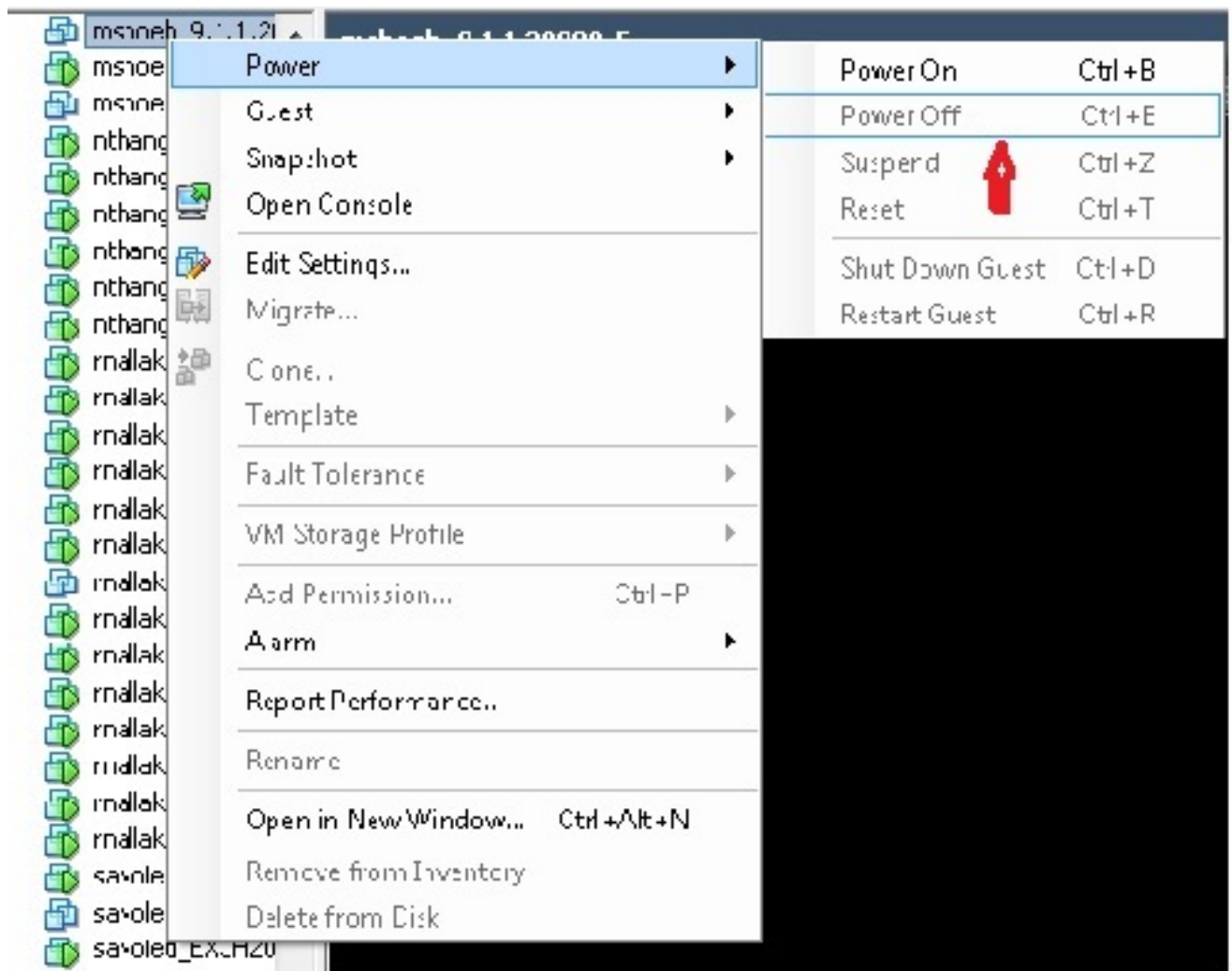


3. Proceed to reboot the system:

Right-click the CUCM VM.

Power off the machine.

Power on the machine.



Note: Although the Recovery Software helps to fix the *file system* errors and move the system out of the *Read-Only* mode, Cisco recommends as a best practice that either the server is upgraded to the next patch level or is rebuilt.