

vSphere: Hot Add or Remove a VMDK with a Linux VM

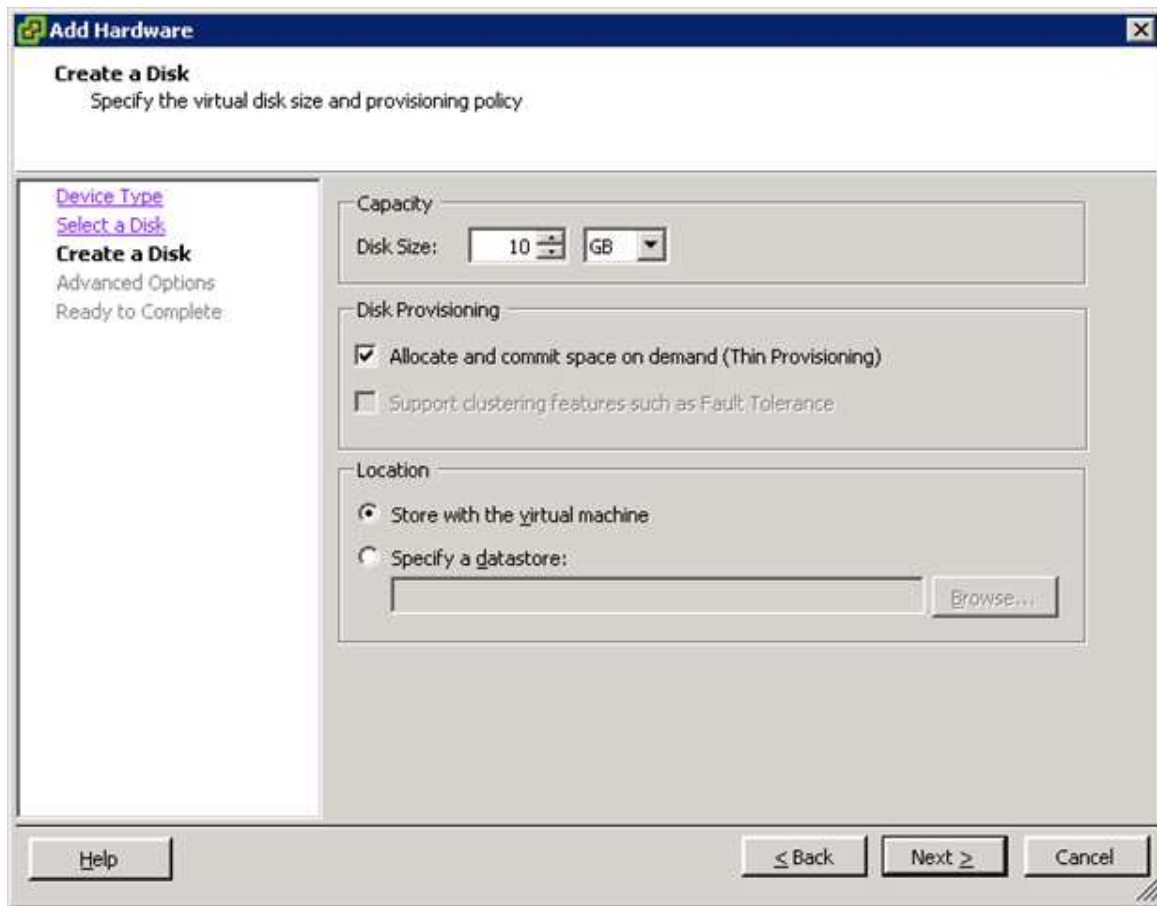
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In this post I will show you how to hot add a new VMDK to a Linux VM. I will also post how to remove a VMDK if necessary.

Hot Add a new VMDK

Add the new VMDK:



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```
Disk /dev/sda: 21.4 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

```
Device Boot Start End Blocks Id System
/dev/sda1 * 1 13 104391 83 Linux
/dev/sda2 14 2610 20860402+ 8e Linux LVM
```

The new disk isn't available yet so we have to do a SCSI bus rescan. You can run the following command to do a rescan:

```
echo "- - -">/sys/class/scsi_host/host0/scan
```

When you run the **fdisk -l** command after the rescan, you will see the new disk.

```
[root@nagios ~]# fdisk -l
```

```
Disk /dev/sda: 21.4 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

```
Device Boot Start End Blocks Id System
/dev/sda1 * 1 13 104391 83 Linux
/dev/sda2 14 2610 20860402+ 8e Linux LVM
```

```
Disk /dev/sdb: 10.7 GB, 10737418240 bytes
255 heads, 63 sectors/track, 1305 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

```
Disk /dev/sdb doesn't contain a valid partition table
```

The new disk doesn't contain a valid partition table. This can be fixed with running the **fdisk /dev/sdb** command:

```
fdisk -l /dev/sdb n p 1 1 {enter} x b 1 128 w q
```

The options **x b 1 128** will align the new partition. For more info about, see Bob Plankers his post here: <http://lonesysadmin.net/2010/03/30/i-will-keep-saying-it-align-your-partitions/>

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```
[root@nagios ~]# mkfs.ext3 /dev/sdb1
mke2fs 1.39 (29-May-2006)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
1310720 inodes, 2620595 blocks
131029 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2684354560
80 block groups
32768 blocks per group, 32768 fragments per group
16384 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632
```

```
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done
```

This filesystem will be automatically checked every 39 mounts or 180 days, whichever comes first. Use tune2fs -c or -i to override.

Run the `fdisk -l` command to verify the new configuration:

```
[root@nagios ~]# fdisk -l
```

```
Disk /dev/sda: 21.4 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	13	104391	83	Linux
/dev/sda2		14	2610	20860402+	8e	Linux LVM

```
Disk /dev/sdb: 10.7 GB, 10737418240 bytes
255 heads, 63 sectors/track, 1305 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		1	1305	10482381	83	Linux

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```
mkdir /disk2  
nano or vi /etc/fstab
```

add the following line:

```
/dev/sdb1      /disk2          ext2 defaults    1 2
```

Now you are ready to mount the new disk.

```
mount /dev/sdb1 /disk2/
```

These are all the steps.

Hot Remove a VMDK

If you want to remove an extra VMDK from a Linux VM, you need to follow these steps.

First you need to unmount the /dev/sdb1:

```
umount /dev/sdb1
```

Remove the /disk2 folder:

```
rmdir /disk2/
```

Remove the entry from the /etc/fstab:

```
nano or vi /etc/fstab
```

remove the following line:

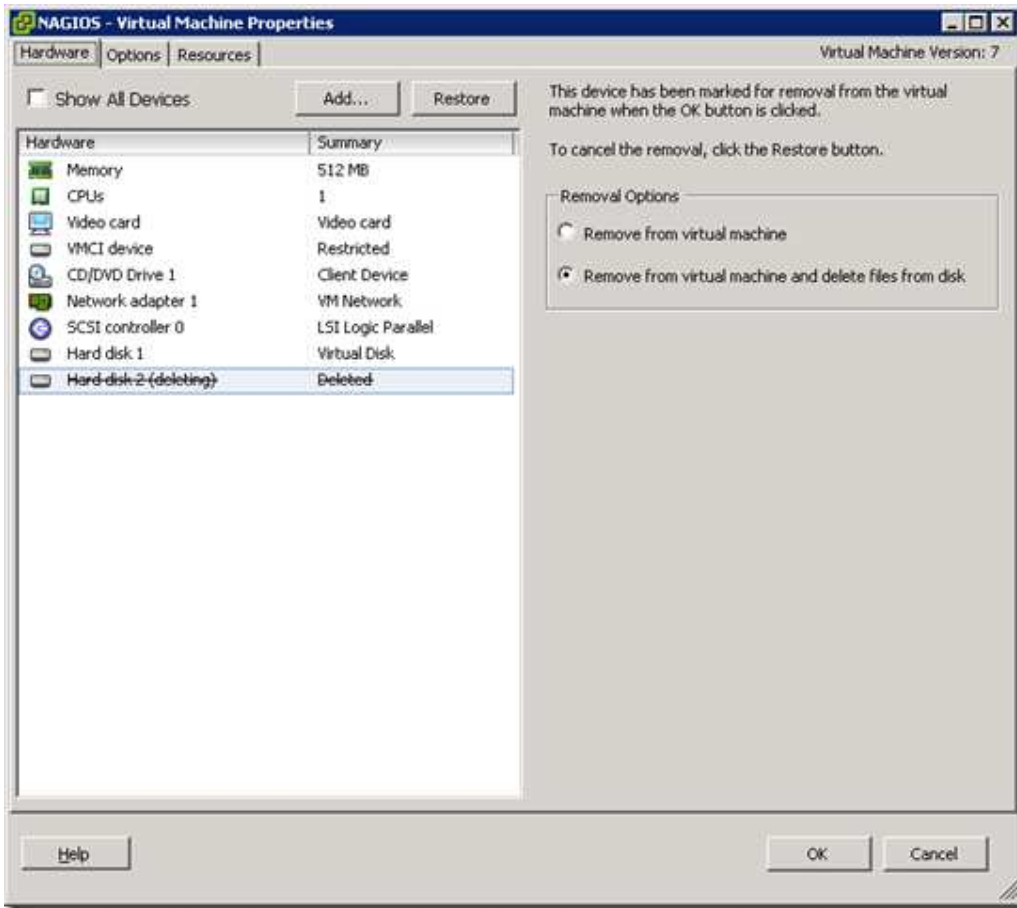
```
/dev/sdb1      /disk2          ext2 defaults    1 2
```

Delete the device:

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Remove the VMDK:



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This entry was posted in VMware and tagged Linux, vSphere on March 30, 2010 [<https://ict-freak.nl/2010/03/30/vsphere-hot-add-or-remove-a-vmdk-with-a-linux-vm/>].

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March 30, 2010 at 19:21

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If you wish to use whole VMDK as one file system then you can skip partition creation part and format the device eg. `mkfs.ext3 /dev/sdb`. If you need to create partition remember to align it with underlying RAID device using `fdisk` expert commands to move partition start position.

Pingback: [I Will Keep Saying It: Align Your Partitions : Bob Plankers, The Lone Sysadmin](#)

Pingback: [links for 2010-03-31 : Bob Plankers, The Lone Sysadmin](#)



Neil

April 1, 2010 at 16:47

1 0 Rate This

Handy tip. On SLES you can use `/usr/bin/rescan-scsi-bus.sh` instead of the `echo` command to rescan the scsi bus.



Eugene

April 18, 2010 at 02:07

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What's the alignment status of a device which is a whole-disk LVM label (no partitioning) and part of an ext3 formatted filesystem?



Arek

May 23, 2016 at 10:30

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Delete the device: `echo 1 > /sys/block/sdb1/device/delete`

I think it should be: `echo 1 > /sys/block/sdb/device/delete`

?

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