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How to add an extra hard disk to a SME server Author:

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How to add an extra hard disk to an existing SME server

Step 1: Switch to single-user mode

First you need to switch to single-user mode. Logon as root and type:

[root@hogwarts /]# **telinit 1**

Step 2: Partition the disk

Now you need to identify the *device name* of the new disk:

	IDE controller	Device name
Master	1	/dev/hda
Slave	1	/dev/hdb
Master	2	/dev/hdc
Slave	2	/dev/hdd

Let's assume you installed the disk as master on the second IDE controller. This means you have to partition /dev/hdc

[root@hogwarts /]# **fdisk /dev/hdc**

and when prompted:

n (to add a new partition)

p (to make a primary partion)

1 (that's the number one, the number you want to assign to the partition)

(accept the suggested first & last cylinder values)

w (write and exit)

This will create the primary partition /dev/hdc1, using the entire disk space.

Step 3: Format the new partition

Next you want to format the new partition:

[root@hogwarts /]# **mkfs -t ext2 /dev/hdc1**

If you are using SME 5.6 or newer, it is recommended to convert the partition to the ext3 format:

```
[root@hogwarts /]# tune2fs -j /dev/hdc1
```

Step 4: Create a mounting point for the new disk

A mounting point is just an empty directory that will link to your new disk. This can be any valid directory on your server, but it is recommended **not to use** **/home** or one of its subdirectories. In step 6 you will see a much better method to link your /home directory to the second disk.

For now just create a directory underneath /mnt

```
[root@hogwarts /]# mkdir /mnt/bigdisk
```

Step 5: Automount at boot time

To automatically mount the partition at boot time, you need to add the following line to /etc/fstab:

```
[root@hogwarts /]# pico /etc/fstab
/dev/hdc1 /mnt/bigdisk    ext3  usrquota,grpquota 1 2
```

Make sure you end this line with a newline. Hit **<ctrl-x>** to exit the editor

Check if everything works as expected:

```
[root@hogwarts /]# mount -a
[root@hogwarts /]# df -T
Filesystem          Type    1k-blocks          Used     Available Use%  Mounted on
/dev/hda3           ext3    39151724      28441348      8721532  77%  /
/dev/hda1           ext3      101089          8953        86917  10%  /boot
/dev/hdc1           ext3    38474956         27948     38447008   0%  /mnt/bigdisk
```

If you don't see a line for /dev/hdc1, something went wrong. Go back to step 2 and check if you followed all instructions correctly.

Step 6 (Optional): Use /home to mount the new disk

On standard Linux machines, the */home* directory contains the user's directories and is therefore a populr place to mount a bigger disk. However, on a SME server **this is not a good idea:**

1. SME stores all its configuration files in */home/e-smith*. If for whatever reason your disk doesn't mount, the configuration files will no longer be accessible, causing all kinds of nasty problems.
2. Mounting your second disk to */home* or even */home/e-smith/files* effectively means that your first disk will no longer be used to store user files. In some cases that might be a good idea, but in most cases you are just wasting the remaining space of your first disk.

A much **better approach** is to leave the second disk mounted at /mnt/bigdisk and to create symlinks for specific ibays or user folders. The following example shows you how to place the *mp3 ibay* on the second disk.

1/ Create the necessary subdirectories on your second disk

```
[root@hogwarts /]# mkdir -p /mnt/bigdisk/ibays/mp3
```

2/ Apply the ownerships and permissions from the original directory

```
[root@hogwarts /]# ls -l /home/e-smith/ibays
drwxrwxr-x 18 admin allstaff 4096 Sep 23 14:48 mp3

[root@hogwarts /]# chown admin:allstaff /mnt/bigdisk/ibays/mp3
[root@hogwarts /]# chmod 775 /mnt/bigdisk/ibays/mp3
```

3/ Copy the content to your new disk

```
[root@hogwarts /]# cp -rip /home/e-smith/files/ibays/mp3/* /mnt/bigdisk/ibays/mp3
```

4/ Check if all files have been copied correctly

```
[root@hogwarts /]# diff -r /mnt/bigdisk/ibays/mp3 /home/e-smith/files/ibays/mp3
```

5/ Remove the original files

```
[root@hogwarts /]# rm -rf /home/e-smith/files/ibays/mp3
```

6/ Create a symlink to the new location

```
[root@hogwarts /]# ln -s /mnt/bigdisk/ibays/mp3 /home/e-smith/files/mp3
```

7/ Test the new location

```
[root@hogwarts /]# ls /home/e-smith/files/ibays/mp3
```

Step 7(Optional): Activate the quota

Next you might want to activate the quota on the disk. This will only work if you activated quota management for at least one user (Server Manager > Collaboration > Quota Management).

```
[root@hogwarts /]# quotacheck -vugc /dev/hdc1
```

If quotachecks comes back to the command prompt without errors, you're ready.

Step 8: Final check

Reboot your machine and check if the drive was mounted correctly. If that's the case, relax and tell the world about it:

```
[root@hogwarts /]# wall "I did it! I did it!  ;-) "
```