

How to Display a Partition That is Not Visible in Linux?

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I installed dual-boot Windows 11 with Linux Mint on my laptop and allocated almost 110 GB of hard disk size for Linux Mint. However, after Linux Mint is installed, only 49 GB of hard disk size is displayed.

Problem

How to display a partition that is not visible in Linux?

Solution

I have a hard disk of almost 500GB and I installed dual-boot Linux Mint alongside Windows Boot Manager where the last two partitions are used as Linux partitions like in the image below:

```
sysadmin@LinuxMint:~$ lsblk
NAME          MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda             8:0    1   233G  0 disk
└─sda1          8:1    1   233G  0 part
nvme0n1        259:0    0 476,9G  0 disk
├─nvme0n1p1    259:1    0   260M  0 part /boot/efi
├─nvme0n1p2    259:2    0    16M  0 part
├─nvme0n1p3    259:3    0 365,9G  0 part
├─nvme0n1p4    259:4    0    1,1G  0 part
└─nvme0n1p5    259:5    0  60,3G  0 part
   nvme0n1p6    259:6    0  49,4G  0 part /
```

sysadmin@LinuxMint:~\$
Display the partitions

From the image above you can see that 2 partitions in Linux have a hard disk size of 60 GB and 49 GB respectively. But when I display the hard disk size using **df -h** command, I just see only one partition like in the image below:

```

sysadmin@LinuxMint:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
tmpfs           1,6G  2,1M  1,6G   1% /run
efivarfs        246K  173K   69K  72% /sys/firmware/efi/efivars
/dev/nvme0n1p6  49G   13G   34G  28% /
tmpfs           7,7G   98M   7,6G   2% /dev/shm
tmpfs           5,0M   12K   5,0M   1% /run/lock
/dev/nvme0n1p1  256M   41M  216M  16% /boot/efi
tmpfs           1,6G  152K   1,6G   1% /run/user/1000

```

Only one partition appears

After I searched on the internet, the root cause of the invisible partition was not mounted. Here are the steps to display an invisible Linux partition and I want to mount it to my **/home** folder:

1. Backup the folder

Backup first the folder you want and in this case the **/home** folder I will backup first:

```
sudo cp -a /home /home_backup
```

2. Check the filesystem

Check the filesystem of the partition using the command below:

```
sudo lsblk -f
```

```

sysadmin@LinuxMint:~$ sudo lsblk -f
NAME        FSTYPE FSVER LABEL  UUID                                  FSAVAIL FSUSE% MOUNTPOINTS
nvme0n1
├─nvme0n1p1 vfat    FAT32 SYSTEM  9880-7480                             215,3M   16% /boot/efi
├─nvme0n1p2
├─nvme0n1p3 ntfs                    Windows 01DBD5689C080D10
├─nvme0n1p4 ntfs                    C2B09422B0941ECB
├─nvme0n1p5 ext4     1.0     3416fa98-d574-42f7-b9f3-8f1980fc8c43
└─nvme0n1p6 ext4     1.0     a7ddf674-e331-41fb-94ca-1e5084b156f9  30,6G   32% /

```

Check the filesystem

From the image above, the “invisible” partition has an ext4 format type. If the partition is not formatted, format it using the command below if you want an ext4 format for the

partition and adjust it to the name of your Linux partition:

```
sudo mkfs.ext4 /dev/nvme0n1p5
```

3. Create a temporary mount

Now, create a temporary mount and move existing home data using the commands below:

```
sudo mkdir /mnt/new_home  
sudo mount /dev/nvme0n1p5 /mnt/new_home  
sudo cp -a /home/. /mnt/new_home/
```

4. Unmount the temporary mount

Use the command below to unmount the temporary mount:

```
sudo umount /mnt/new_home
```

5. Update the fstab file

Now, update the **/etc/fstab** file to it at /home on boot so the folder remains after the device restarts. Copy the script below and paste to the file:

```
/dev/nvme0n1p5 /home ext4 defaults 0 2
```

6. Mount the folder

Now, mount the /home folder using the commands below:

```
sudo mount /home  
sudo systemctl daemon-reload  
df -h
```

For more details see the image below:

```

sysadmin@LinuxMint:~$ sudo mkdir /mnt/new_home
sysadmin@LinuxMint:~$ sudo mount /dev/nvme0n1p5 /mnt/new_home
sysadmin@LinuxMint:~$ sudo cp -a /home/. /mnt/new_home/
sysadmin@LinuxMint:~$ sudo umount /mnt/new_home
sysadmin@LinuxMint:~$ df -h

```

Filesystem	Size	Used	Avail	Use%	Mounted on
tmpfs	1,6G	2,1M	1,6G	1%	/run
efivarfs	246K	173K	69K	72%	/sys/firmware/efi/efivars
/dev/nvme0n1p6	49G	16G	31G	34%	/
tmpfs	7,7G	118M	7,6G	2%	/dev/shm
tmpfs	5,0M	12K	5,0M	1%	/run/lock
/dev/nvme0n1p1	256M	41M	216M	16%	/boot/efi
tmpfs	1,6G	160K	1,6G	1%	/run/user/1000

```

sysadmin@LinuxMint:~$ sudo vi /etc/fstab
sysadmin@LinuxMint:~$ sudo mount /home
mount: (hint) your fstab has been modified, but systemd still uses
the old version; use 'systemctl daemon-reload' to reload.
sysadmin@LinuxMint:~$ sudo systemctl daemon-reload
sysadmin@LinuxMint:~$ df -h

```

Filesystem	Size	Used	Avail	Use%	Mounted on
tmpfs	1,6G	2,1M	1,6G	1%	/run
efivarfs	246K	173K	69K	72%	/sys/firmware/efi/efivars
/dev/nvme0n1p6	49G	16G	31G	34%	/
tmpfs	7,7G	118M	7,6G	2%	/dev/shm
tmpfs	5,0M	12K	5,0M	1%	/run/lock
/dev/nvme0n1p1	256M	41M	216M	16%	/boot/efi
tmpfs	1,6G	160K	1,6G	1%	/run/user/1000
/dev/nvme0n1p5	59G	3,3G	53G	6%	/home

The commands to mount /home

From the image above, you see that the invisible partition is already mounted to the /home folder.

Note

Try to reboot the device to make sure the folder remains after the device reboots and the /home folder should be mounted from /dev/nvme0n1p5. If something goes wrong, you can restore the old home with the command below:

```
sudo mv /home_backup /home
```

And then remove the fstab entry to boot normally. Once you have restarted the appliance and you see that there is no error so that you can access the folder you just created (in this case the /home folder), you can delete the **/home_backup** folder by using the command below:

```
rm -rf /home_backup
```

References

[geeksforgeeks.org](https://www.geeksforgeeks.org/)

hivelocity.net

forums.linuxmint.com