Identify and Mount a Drive

THIS SECTION IS NOT FINISHED

first we need to identify the disk(s):

```
sudo blkid
```

This will list any recognised devices:

```
/dev/mmcblk0p1: LABEL="RECOVERY" UUID="0403-0201" TYPE="vfat" PARTUUID="0006dd3f-01"
/dev/mmcblk0p5: LABEL="SETTINGS" UUID="705f6e2b-fac6-4f33-8611-d57a9c9f04e1" TYPE="ext4"
PARTUUID="0006dd3f-05"
/dev/mmcblk0p6: SEC_TYPE="msdos" LABEL="boot" UUID="1495-189B" TYPE="vfat" PARTUUID="0006dd3f-06"
/dev/mmcblk0p7: LABEL="root0" UUID="759bca6b-5766-4941-b830-cdbfcd861107" TYPE="ext4"
PARTUUID="0006dd3f-07"
/dev/mmcblk0p8: LABEL="boot-rbp2" UUID="200C-EA5B" TYPE="vfat" PARTUUID="0006dd3f-08"
/dev/mmcblk0p9: LABEL="root-rbp2" UUID="26d10fa3-fe0a-4044-b24a-9b85c2079122" TYPE="ext4"
PARTUUID="0006dd3f-09"
/dev/mmcblk0: PTUUID="0006dd3f" PTTYPE="dos"
/dev/sda: PTUUID="279bf5b4" PTTYPE="dos"
```

In this example, the first 6 items are the SD card that Raspbian booted from **/dev/mmcblk0px**. The last device **/dev/sda** is a USB Hard Disk. This is the disk I want to add to Raspbian.
Now that we know the disk we wish to work on is /dev/sda we can use:

```
sudo fdisk /dev/sda
```

```
enter p to display partition information
Disk /dev/sda: 298.1 GiB, 320072933376 bytes, 625142448 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x279bf5b4
```

We can see the size is 298.1 GB.

```
Use the d command to delete existing partition
No partition is defined yet!
Could not delete partition 81165
```

In this case, there are no partitions to delete
To create a new partition, use:

```
n - This creates a new partition
p - This is for a primary partition
Enter - To default to partition 1
Enter - To select first sector
Enter - To select last sector.
```

You should now have a new partition.

```
p - To display the new partition
Device    Boot Start      End   Sectors   Size Id Type
```

```
/dev/sda1          2048 625142447 625140400 298.1G 83 Linux
```

The changes need to be written to the partition table:

```
w - To commit changes
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```

Now run the following command to see your disk, which will now include /dev/sda1

```
sudo fdisk -l
```

There will be a large output, but the important part is at the end:

```
Device     Boot Start       End   Sectors   Size Id Type
/dev/sda1          2048 625142447 625140400 298.1G 83 Linux
```

/dev/sda1 is the partition we have just created on device /dev/sda
Now we need to create the file system:

```
sudo mkfs /dev/sda1
mke2fs 1.42.12 (29-Aug-2014)
/dev/sda1 contains a ntfs file system labelled '300gb'
Proceed anyway? (y,n)    <-------------------------------You have to say 'Y' Here.
Depending on drive size, this will take a minute or two
Creating filesystem with 78142550 4k blocks and 19537920 inodes
Filesystem UUID: 6af40af7-759f-4ee5-afea-882e9f58f17e
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
        4096000, 7962624, 11239424, 20480000, 23887872, 71663616
Allocating group tables: done
Writing inode tables: done
Writing superblocks and filesystem accounting information: done
```

After the superblocks are created and you get a command prompt, Now you are ready to mount your disk.
Lets create a mount point and call it NewDisk

```
sudo mkdir /mydisk     <-- This creates a mount point (a folder) to mount our disk, the folder is
called mydisk
```

To Mount the Disk

```
sudo mount /dev/sda1 /NewDisk     <--- bear in mind that your disk might not be sda1
```

Use df to verify disk is mounted. If you reboot you will need to remount it (you might want to add it to /etc/fstab)

```
df
Filesystem        1K-blocks      Used Available Use% Mounted on
/dev/root          7928236   3577848   3924612  48% /
devtmpfs            469544         0    469544   0% /dev
tmpfs               473880         0    473880   0% /dev/shm
tmpfs               473880      6520    467360   2% /run
tmpfs                 5120         4      5116   1% /run/lock
tmpfs               473880         0    473880   0% /sys/fs/cgroup
/dev/mmcblk0p6       64366     20436     43930  32% /boot
tmpfs                94776         0     94776   0% /run/user/1000
/dev/sda1         307665360     64344 291972508   1% /NewDisk     <---- here is our new disk
```

try writing a file to the disk

touch /diskname/test was the file created or did you get an err?

From:
http://cameraangle.co.uk/ - **WalkerWiki - wiki.alanwalker.uk**

Permanent link:
http://cameraangle.co.uk/doku.php?id=identify_and_mount_a_drive&rev=1469737530

Last update: **2023/03/09 22:35**