How to access a usb flash drive from the terminal?

I only have access to the command line.
I need to backup my data (on the user folder) to a pen (USB DOK).

- How can I mount a flash drive manually?
- What should be the copy command?

command-line mount usb-drive

edited Jul 25 at 11:21
Yaron
4,922 2 11 31

asked Apr 29 '11 at 0:26
MEM
3,788 9 27 40

7 Answers

1. Find what the drive is called

You'll need to know what the drive is called to mount it. To do that fire off one of the following (ranked in order of my preference):

```
lsblk
sudo blkid
sudo fdisk -l
```

You're looking for a partition that should look something like: `/dev/sdb1` . The more disks you have the higher the letter this is likely to be. Anyway, find it and remember what it's called.

2. Create a mount point (optional)

This needs to be mounted into the filesystem *somewhere*. You can usually use /mnt/ if you're being lazy and nothing else is mounted there but otherwise you'll want to create a new directory:

```
sudo  mkdir /media/usb
```

3. Mount!

```
sudo mount /dev/sdb1 /media/usb
```

When you're done, just fire off:

```
sudo umount /media/usb
```

This answer is almost 6 years old and while the core of it still works, things like `fdisk -l` aren't the most user-friendly options. There are also new mechanisms in higher stacks for mounting devices in a sane and standard way which might not always be available.

So I've added some polish from the other answers. While you're reading this footnote and you're doing this on a desktop system, there definitely are arguments for using `udisksctl`, per wecac's answer. This mounts in the same way the desktop does —creating your own `/media/$USER/device` directory— but I think there are still arguments for a static mountpoint, especially when you don't want the path to change.

Udisks also relies on D-Bus, so might not be available everywhere.

edited Jul 25 at 12:58

answered Apr 29 '11 at 0:43

Oli ♦
195k 70 492 707

2 I can't vote up. :(Sorry. I missed my normal user. :(Can I please ask if cp -r * /media/usb will copy ALL files and folders ? – MEM Apr 29 '11 at 0:56

1 I'd use `rsync` -- something like: `rsync -avh ~/directory/ /media/usb/` – Oli ♦ Apr 29 '11 at 1:13

Thank you. Then I can perhaps burn a reconvery cd or somehting? – MEM Apr 29 '11 at 1:31

@user15301 I don't know for that. Sounds like something for another question! – Oli ♦ Apr 29 '11 at 1:44

10 `mount: you must specify the filesystem type` – Cyle May 5 '14 at 17:41

|

Install `pmount` . Mounts disks in /media/

```
pmount /dev/sdb1
pumount /dev/sdb1
```

No sudo needed. Replace "sdb1" with your specific device path. For more information see the manpage:

```
pmount  ("policy mount") is a wrapper around the standard mount program
which permits normal users to mount removable devices without a  match-
ing /etc/fstab entry.

pmount is invoked like this:

pmount device [ label ]

This  will  mount  device  to a directory below /media if policy is met
(see below). If label is given, the mount point will  be  /media/label,
otherwise it will be /media/device.
```

edited Oct 4 '15 at 11:08

answered Nov 6 '13 at 1:39

Sepero
2,907 2 21 44

2 This is the best method here. Simple, doesn't need root. – Dan Ross Feb 11 '14 at 3:38

1 I'll second that, I also like that it mounted my flash stick's files and folders with my regular user's name/group, and not root, meaning I didn't have to prefix 'sudo' to every command targeting the drive. – Big Rich Apr 15 '15 at 0:41

In addition to using the standard `mount` command (which requires root) you can mount drives using `udisks` and `dbus` with your standard user.

To do this it is useful (but not required) to know a few things about the drive first:

1. What device it is (i.e. `/dev/sdb1`)
2. what filesystem it uses.

Knowing these you can use a simple command to mount a drive from the command line.

```
gdbus call --system --dest org.freedesktop.UDisks --object-path
/org/freedesktop/UDisks/devices/<device> --method
org.freedesktop.UDisks.Device.FilesystemMount "<filesystem>" []
```

this call should echo the path it is mounted at if the mount succeeds.

To unmount drives mounted in this way you can run:

```
gdbus call --system --dest org.freedesktop.UDisks --object-path
/org/freedesktop/UDisks/devices/<device> --method
org.freedesktop.UDisks.Device.FilesystemUnmount []
```

N.B. the `<device>` is simply the end of the path to it. So for example if what you want to mount is at `/dev/sdb2` then you would put `sdb2` in place of `<device>` .

If you do not know which device it is or what filesystem it uses do not fear. You can easily print out all that information with this little command:

```
gdbus introspect --system --dest org.freedesktop.UDisks --object-path
/org/freedesktop/UDisks/devices --recurse --only-properties | grep -E "(readonly .+
(IdLabel|IdType|Device(IsMounted|IsDrive|File) ).*|\}|.*\{)"
```

This will print out something like this:

```
node /org/freedesktop/UDisks/devices {
  node /org/freedesktop/UDisks/devices/sda {
    interface org.freedesktop.UDisks.Device {
        readonly s IdLabel = '';
        readonly s IdType = '';
        readonly s IdUsage = '';
        readonly b DeviceIsMounted = false;
        readonly s DeviceFile = '/dev/sda';
    };
  };
  node /org/freedesktop/UDisks/devices/sda1 {
    interface org.freedesktop.UDisks.Device {
        readonly s IdLabel = 'SYSTEM';
```

```
          readonly s IdType = 'ntfs';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sda1';
      };
    };
    node /org/freedesktop/UDisks/devices/sda2 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = 'Windows7';
          readonly s IdType = 'ntfs';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = true;
          readonly s DeviceFile = '/dev/sda2';
      };
    };
    node /org/freedesktop/UDisks/devices/sda3 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = 'Recovery';
          readonly s IdType = 'ntfs';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sda3';
      };
    };
    node /org/freedesktop/UDisks/devices/sda4 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = '';
          readonly s IdUsage = '';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sda4';
      };
    };
    node /org/freedesktop/UDisks/devices/sda5 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = 'ext4';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = true;
          readonly s DeviceFile = '/dev/sda5';
      };
    };
    node /org/freedesktop/UDisks/devices/sda6 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = 'swap';
          readonly s IdUsage = 'other';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sda6';
      };
```

```
    };
    node /org/freedesktop/UDisks/devices/sda7 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = 'ext4';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = true;
          readonly s DeviceFile = '/dev/sda7';
      };
    };
    node /org/freedesktop/UDisks/devices/sdb {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = '';
          readonly s IdUsage = '';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sdb';
      };
    };
    node /org/freedesktop/UDisks/devices/sdb1 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = 'USB DRIVE';
          readonly s IdType = 'vfat';
          readonly s IdUsage = 'filesystem';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sdb1';
      };
    };
    node /org/freedesktop/UDisks/devices/sr0 {
      interface org.freedesktop.UDisks.Device {
          readonly s IdLabel = '';
          readonly s IdType = '';
          readonly s IdUsage = '';
          readonly b DeviceIsMounted = false;
          readonly s DeviceFile = '/dev/sr0';
      };
    };
};
```

Those that have `IdUsage = 'filesystem'` may be mounted using the above command.

This means that, for example, if i wanted to mount the device 'USB DRIVE' i would run the command

```
gdbus call --system --dest org.freedesktop.UDisks --object-path
/org/freedesktop/UDisks/devices/sdb1 --method
org.freedesktop.UDisks.Device.FilesystemMount "vfat" []
```

These commands all work using the `dbus` messaging system, the same way that `Nautilus` and other file managers auto-mount things. In these commands we are sending various objects (i.e. `/org/freedesktop/...` messages asking them to mount and unmount certain devices. They might or might not do this depending on the permissions one has been given in `PolicyKit`.

Using similar commands one can control almost every aspect of ones experience in Ubuntu and simulate most system programs and functions (i.e. shutdown, volume change, etc.).

edited Aug 29 '12 at 15:54

answered Aug 29 '12 at 15:42

Alex L.
2,409 11 18

5 how is this simpler? I got confused mid reading it – mojo706 Aug 27 '14 at 14:31

The 2015 way is `gdbus introspect --system --dest org.freedesktop.UDisks2 --object-path /org/freedesktop/UDisks2/drives --recurse --only-properties` – Nick Sandor Jun 10 '15 at 22:09

For Ubuntu 14.04 you can use `udisksctl`

1.Find out the block device

```
user@machine:~$ lsblk
NAME   MAJ:MIN RM   SIZE RO TYPE MOUNTPOINT
sda      8:0    0   1.8T  0 disk
├─sda1   8:1    0  19.1M  0 part /boot/efi
├─sda2   8:2    0   1.8T  0 part
└─sda3   8:3    0    16G  0 part [SWAP]
sdb      8:16   0 931.5G  0 disk
├─sdb1   8:17   0    37M  0 part
├─sdb2   8:18   0  15.9G  0 part [SWAP]
└─sdb3   8:19   0 915.7G  0 part /
sdc      8:32   1  14.4G  0 disk
└─sdc1   8:33   1  14.4G  0 part
sdd      8:48   0   1.8T  0 disk
└─sdd1   8:49   0   1.8T  0 part
```

2.Going by the size `/dev/sdc1` seems to be the usb device I am looking to mount.

```
user@machine:~$ udisksctl mount -b /dev/sdc1
==== AUTHENTICATING FOR org.freedesktop.udisks2.filesystem-mount ===
Authentication is required to mount Kingston DT microDuo 3C (/dev/sdc1)
Multiple identities can be used for authentication:
 1.  XXXXX,,, (user)
 2.  ,,, (YYYYY)
Choose identity to authenticate as (1-2): 1
Password:
==== AUTHENTICATION COMPLETE ===
Mounted /dev/sdc1 at /media/user/USBDRIVELABEL.
```

edited Jul 25 at 12:47

Oli ♦
195k 70 492 707

answered Dec 28 '16 at 15:34

wecac
151 2

> This is the only solution that mounts the drive exactly the same way it would be if mounted using the GUI (via Nautilus for example). It mounts the drive under the user's name and uses the drive label for the final directory. The only caveat is that it requires to give the user's password and the user must know of the device. What would be great is to have a command that mounts any USB devices without questions. – Hans Deragon Jul 2 at 11:43

You can also automatically mount USB devices on Ubuntu Server with the help of USBmount.

Make sure you run apt-get update/upgrade before starting the installation:

```
sudo apt-get update && sudo apt-get upgrade
```

Now install USBmount from the repositories:

```
sudo apt-get install usbmount
```

USBmount mounts all USB drives in `/media/usb*` (usb0, usb1, usb2 ...)

Now plug a USB drive and wait for it to be detected and mounted. As long as the host OS supports the File System it should be mounted.

To verify whether the USB drive was mounted correctly you can use `df -h` to view all available drives and their respective mount points

To un-mount a drive you can use umount.

```
sudo umount /media/usb0
```

answered May 14 '16 at 16:35

Sandro

31 2

That's simple. When I want to use a usb drive in terminal I do this:

Create a folder in `/media` with:

```
mkdir /media/mountDrive
```

This folder will be used for the mount point. Use this command:

```
sudo mount /dev/sdd1 /media/mountDrive
```

`sdd1` is the first partition of my USB. Then you can navigate to folder you already mounted with

```
cd /media/mountDrive
```

If you want to list the files in drive you can use the `ls` command.

To unmount the drive you can use

```
sudo umount /dev/sdd1
```

Note that in my system the usb drive is `/dev/sdd1` , but in your system it may be something different. To find out what it is use the `df` command to see all disks connected at the present time.

edited Aug 27 '13 at 19:22

Braiam

44.9k 17 115 184

answered Aug 29 '12 at 14:08

Deivid Vale

52 3

I followed ur instructions and I mounted USB but the thing is that when i navigate to my USB through Terminal and do LS it shows nothing. Mount Drive name = MD – OmiPenguin Sep 1 '12 at 8:14

1 Well I found a way. I just simply navigate to /Media folder and USB Folder was already available. My named my USB as a PENDRIVE so the complete path is /media/PENDRIVE And then I did ls and files appeared in Terminal. – OmiPenguin Sep 2 '12 at 19:36

I've found that the mount command (listed as first response/answer above) is great to have the system make the USB drive available for use. If I want to copy bunches of files and/or folders from the USB drive to my internal drive, I love to use the **MC** (*Midnight Commander*) interface! MC lets you work in two side-by-side panes, tab between each pane, use the different menus or "buttons" to copy/move/delete, etc bunches of files/folders, use filtering to only select certain files (with wild cards, etc.) Really great tool that take the sting out of console work. Should be available in your favorite repository!

answered Dec 4 '15 at 1:50

Beely
11 1

protected by Community ♦ Feb 9 '15 at 18:25

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