

CentOS

How to mount USB drive in CentOS

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A **USB drive**, also known as a **USB flash drive** or a **pen drive**, is a widely used external storage device that can be utilized to back up or transfer data from one system to another. As the file system is supported in a GUI Operating System such as Windows and GNOME Desktop in **CentOS**, which helps you to immediately mount a USB and access its data. However, most **CentOS** users prefer to mount the USB drive using the command-line method as they are used to working around the terminal. If you are one of them, you have to manually mount the USB drive in your CentOS terminal to access the USB data.

This post will demonstrate to you **how to mount a USB drive in CentOS**. So, let's start!

How to mount USB drive in CentOS

First of all, plug in the USB drive into any of the available ports of your system:



How to detect USB drive in CentOS

CentOS automatically creates a new block device when an external USB storage device is connected to a system in the **“/dev/”** directory. Still, you cannot access the data present in the USB before mounting it. To mount the USB drive, you have to know the name of the block device created on your system. For this, we will utilize the **“fdisk”** command.

For Linux-based systems such as **CentOS**, **“fdisk”** is the widely used command-line-based disk manipulation utility. **“fdisk”** is an acronym for **“format disk”** or **“fixed disk”**. You can utilize the **fdisk** command for creating, copying, resizing, altering, resizing, and transferring partitions on a hard drive. In our case, we will execute the **fdisk** command to get the details about the device block created for the plugged in USB drive:

```
$ sudo fdisk -l
```

In the above-given **fdisk** command, the **“-l”** parameter is added to list all system partitions. The device names are used to display the partitions. For instance, **/dev/sda**, **/dev/sdb**, and **/dev/sdc**:

```

linuxhint@localhost: ~
linuxhint@localhost:~$ sudo fdisk -l
Disk /dev/sda: 16 GiB, 17179869184 bytes, 33554432 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: 0x31284fe9

Device      Boot    Start        End    Sectors    Size Id Type
/dev/sda1   *         2048    2099199    2097152     1G 83 Linux
/dev/sda2             2099200 33554431 31455232    15G 8e Linux LVM

Disk /dev/mapper/cl-root: 13.4 GiB, 14382268416 bytes, 28090368 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

Disk /dev/mapper/cl-swap: 1.6 GiB, 1719664640 bytes, 3358720 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

Disk /dev/sdc: 3.8 GiB, 4027580416 bytes, 7866368 sectors
Units: sectors of 1 * 512 = 512 bytes

```

From the output, you can see that CentOS created the “/dev/sdc” for our USB drive having **3.8 GB** storage:

```

linuxhint@localhost: ~
Device      Boot    Start        End    Sectors    Size Id Type
/dev/sda1   *         2048    2099199    2097152     1G 83 Linux
/dev/sda2             2099200 33554431 31455232    15G 8e Linux LVM

Disk /dev/mapper/cl-root: 13.4 GiB, 14382268416 bytes, 28090368 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

Disk /dev/mapper/cl-swap: 1.6 GiB, 1719664640 bytes, 3358720 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

Disk /dev/sdc: 3.8 GiB, 4027580416 bytes, 7866368 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: 0x003d843a

Device      Boot    Start        End    Sectors    Size Id Type
/dev/sdc1   *         2048 7866367 7864320     3.8G  c W95 FAT32 (LBA)
linuxhint@localhost:~$

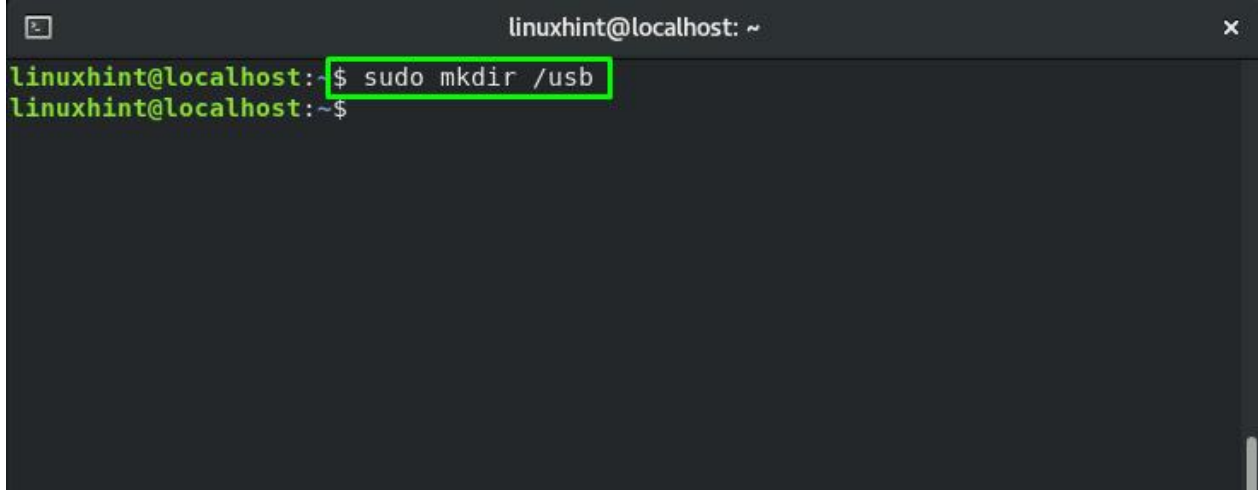
```

How to create a mount point in CentOS

Now, we know about the name of the device block of our USB drive. Before moving towards the mounting procedure, we will create a mount point for the plugged USB drive. In our root filesystem, we will create a “**usb**” Directory as a mount point.

For this purpose, we will utilize the “**mkdir**” command in the CentOS terminal. The “**mkdir**” command permits a user to create single or multiple directories in their filesystem. To create a “**usb**” directory, we will execute the below-given command in our terminal:

```
$ sudo mkdir /usb
```

A terminal window titled 'linuxhint@localhost: ~' with a dark background. The prompt is 'linuxhint@localhost:~\$'. The command '\$ sudo mkdir /usb' is entered and highlighted with a green box. The next line shows the prompt 'linuxhint@localhost:~\$' again, indicating the command was executed successfully.

```
linuxhint@localhost:~$ sudo mkdir /usb
linuxhint@localhost:~$
```

How to mount USB drive in CentOS

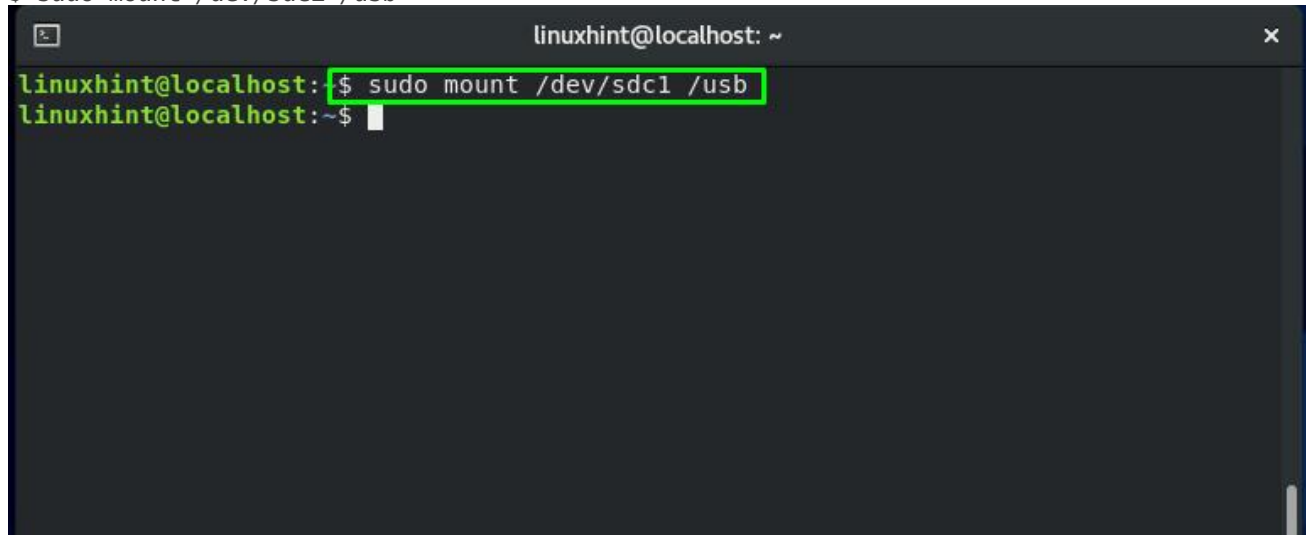
After successfully creating the mount point, we can now easily mount the USB drive. According to the “**fdisk**” command, the name of the device block for our USB drive is “**/dev/sdc1**”. The “**mount**” command is utilized in the **CentOS** terminal for mounting the filesystems and removable devices such as external hard drives or USB drives.

Here is the syntax of the **mount** command:

```
$ sudo mount [Device_Block_Name] [Mount_Point_Path]
```

For our USB drive, the name of the device block is “**/dev/sdc1**” and its mount point is “**/usb**”:

```
$ sudo mount /dev/sdc1 /usb
```

A terminal window titled 'linuxhint@localhost: ~' with a dark background. The prompt is 'linuxhint@localhost:~\$'. The command '\$ sudo mount /dev/sdc1 /usb' is entered and highlighted with a green box. The next line shows the prompt 'linuxhint@localhost:~\$' again, indicating the command was executed successfully.

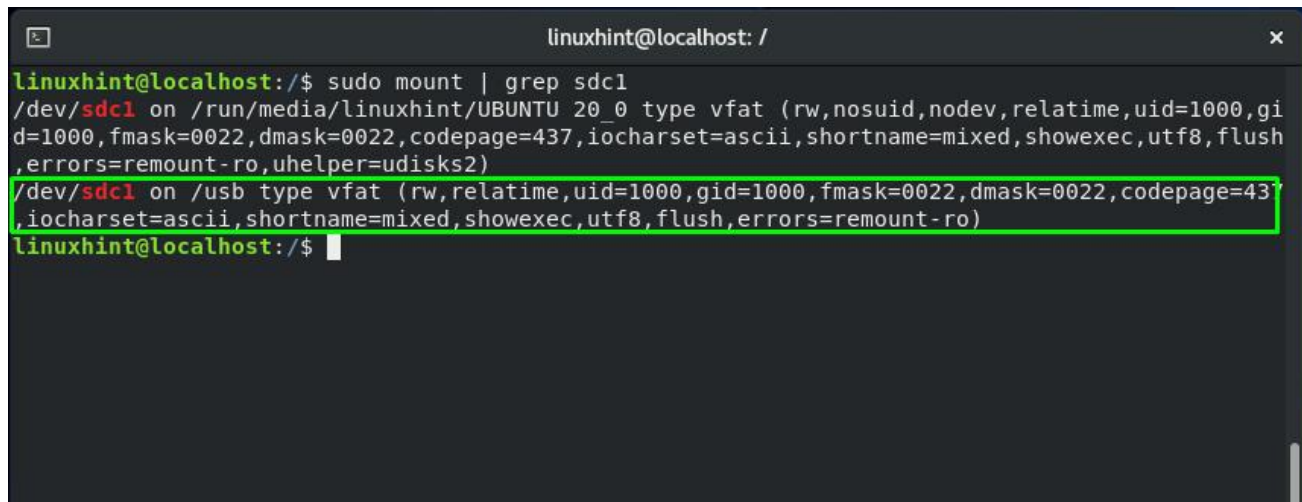
```
linuxhint@localhost:~$ sudo mount /dev/sdc1 /usb
linuxhint@localhost:~$
```

How to verify mounted USB drive in CentOS

The “**grep**” command is used to search for a specific string or pattern. The “**grep**” command will take the output of the “**mount**” command as input, by utilizing the pipe operator “**|**”. In between the whole filesystem related to the external plugged-in devices, the **grep** will look for the “**sdcl**” device block:

```
$ sudo mount | grep sdcl
```

The execution of the above-given command will verify if the USB drive is mounted or not:



```
linuxhint@localhost: /  
linuxhint@localhost:/$ sudo mount | grep sdcl  
/dev/sdcl on /run/media/linuxhint/UBUNTU 20_0 type vfat (rw,nosuid,nodev,relatime,uid=1000,gid=1000,fmask=0022,dmask=0022,codepage=437,iocharset=ascii,shortname=mixed,showexec,utf8,flush,errors=remount-ro,uhelper=udisks2)  
/dev/sdcl on /usb type vfat (rw,relatime,uid=1000,gid=1000,fmask=0022,dmask=0022,codepage=437,iocharset=ascii,shortname=mixed,showexec,utf8,flush,errors=remount-ro)  
linuxhint@localhost:/$
```

Another method to verify the mounted USB on your CentOS system is to use the “**df**” command. The “**df**” is an acronym for “**disk filesystem**”. It is utilized for getting the summary of used and available disk space of the filesystem.

You can add the combination of the “**-HT**” options in the “**df**” command to display the size and type of the filesystem:

```
$ sudo df -HT
```

```
linuxhint@localhost: ~  
linuxhint@localhost:~$ sudo df -HT  
Filesystem                Type      Size  Used Avail Use% Mounted on  
devtmpfs                  devtmpfs  625M   0  625M   0% /dev  
tmpfs                     tmpfs     656M   0  656M   0% /dev/shm  
tmpfs                     tmpfs     656M  9.8M  646M   2% /run  
tmpfs                     tmpfs     656M   0  656M   0% /sys/fs/cgroup  
/dev/mapper/cl-root       xfs       15G   6.2G   8.3G  43% /  
/dev/sda1                 xfs       1.1G  340M   725M  32% /boot  
tmpfs                     tmpfs     132M   1.3M  130M   1% /run/user/42  
tmpfs                     tmpfs     132M   4.8M  127M   4% /run/user/1000  
/dev/sr0                  iso9660    62M   62M    0 100% /run/media/linuxhint/VBox_GAs_6  
.1.26  
/dev/sdb1                 fuseblk    62G   54G   8.0G  88% /USB  
/dev/sdc1                 vfat      4.1G   634M   3.4G  16% /usb ←  
linuxhint@localhost:~$
```

How to access data of USB drive in CentOS

After successfully mounting the USB drive in the mount point, you can now access the USB drive. In this section, we will demonstrate to you the procedure of accessing data from the mounted drive. Firstly, execute the “**cd**” command to navigate into the “**mount point**” or “**mount directory**,” which is “**/usb**” in our case:

```
$ cd /usb
```

```
linuxhint@localhost: /usb  
linuxhint@localhost:~$ cd /usb  
linuxhint@localhost:usb$
```

For viewing the content of the mounted USB drive, execute the “**ls**” command in your **CentOS** terminal:

```
$ ls
```

The output will list the names of all files and directories present inside the USB drive:


```
linuxhint@localhost: /usb  
linuxhint@localhost:usb$ ls  
boot  casper  ldlinux.sys  'System Volume Information'  
linuxhint@localhost:usb$
```

How to delete a directory from the mounted USB drive in CentOS

As the mounted directory “/usb” is our current working directory. So now, we will utilize the “**rmdir**” command for deleting a directory from our USB drive:

```
$ sudo rmdir casper
```

```
linuxhint@localhost: /usb  
linuxhint@localhost:usb$ sudo rmdir casper  
linuxhint@localhost:usb$
```

Again, execute the “**ls**” command to check if the directory is deleted or not:

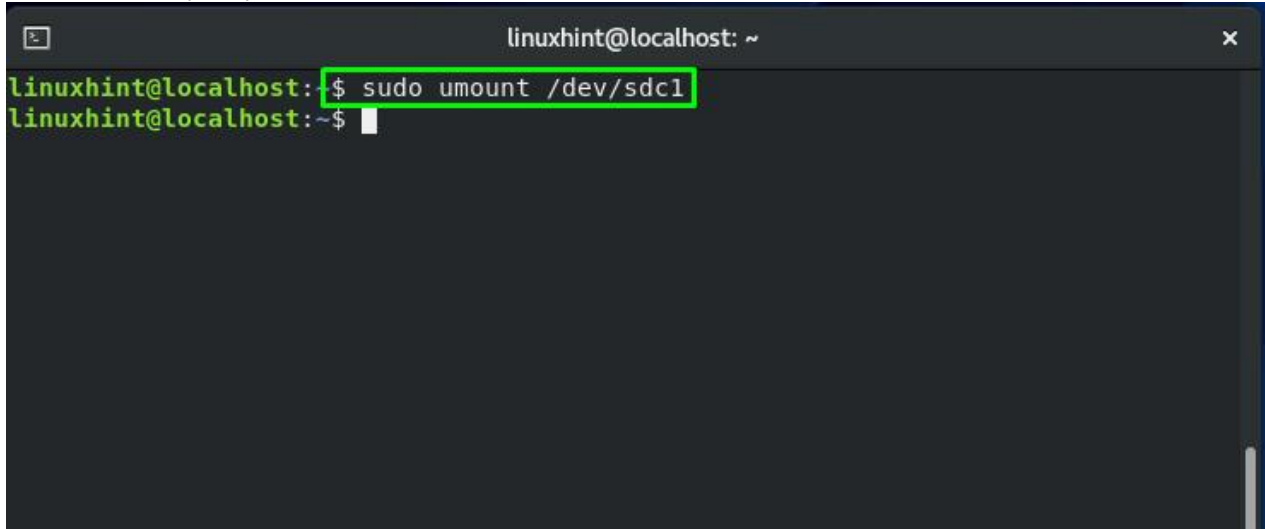
```
$ ls
```

```
linuxhint@localhost: /usb  
linuxhint@localhost:usb$ ls  
boot  ldlinux.sys  'System Volume Information'  
linuxhint@localhost:usb$
```

How to unmount USB drive in CentOS

The “**umount**” command is used for unmounting any filesystem. For instance, to unmount a USB drive, we will add the device block name of the mounted drive in the “**umount**” command:

```
$ sudo umount /dev/sdc1
```

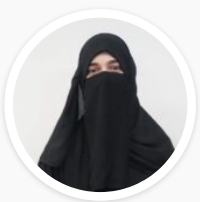
A terminal window titled 'linuxhint@localhost: ~' with a dark background. The prompt 'linuxhint@localhost:' is shown twice. The first time, the command '\$ sudo umount /dev/sdc1' is entered and highlighted with a green box. The second time, the prompt is followed by a tilde '~' and a dollar sign '\$', indicating the command was executed successfully.

```
linuxhint@localhost:~$ sudo umount /dev/sdc1
linuxhint@localhost:~$
```

Conclusion

When you plug in a USB drive in your CentOS system, it normally mounts automatically. After that, you can utilize the file manager on your system to access its data. Unfortunately, in some cases, you may need to mount the USB through the CentOS terminal manually. This post demonstrated how to mount a USB drive, access USB data, and delete any directory from the mounted USB drive. Moreover, the procedure for unmounting the USB drive is also provided to you.

ABOUT THE AUTHOR



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I am a Linux enthusiast, I love to read Every Linux blog on the internet. I hold masters degree in computer science and am passionate about learning and teaching.

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