

# Simple script to create persistent Live USB drive

Will create a live usb drive with persistence and a mass storage area useable by windows OSs.

## Installation

Clone this repository, or download the 'disk\_creator.sh' file.

## Dependencies

- bash
- sfdisk
- losetup
- ntfs3g
- dosfstools
- awk
- bc
- grub with efi support

The linux kernel must be compiled with support for iso9660 file systems.

On debian based distributions most of these will be installed already, just in case here is how to install them:

```
$ sudo apt update
$ sudo apt install ntfs-3g util-linux dosfstools bash gawk bc grub-efi-amd64-bin
```

## Usage

### Identify USB device

List all currently plugged in block devices, you might see something like this:

```
$ lsblk
loop0          7:0    0  54.4M  1 loop  /snap/core18/1055
loop1          7:1    0    4M    1 loop  /snap/gnome-calculator/352
loop2          7:2    0 1008K  1 loop  /snap/gnome-logs/57
loop3          7:3    0 140.7M 1 loop  /snap/gnome-3-26-1604/90
loop4          7:4    0  35.3M 1 loop  /snap/gtk-common-themes/1198
loop5          7:5    0  14.8M 1 loop  /snap/gnome-characters/292
loop6          7:6    0  88.4M 1 loop  /snap/core/7169
loop7          7:7    0  54.4M 1 loop  /snap/core18/1049
loop8          7:8    0 149.9M 1 loop  /snap/gnome-3-28-1804/67
loop9          7:9    0 149.9M 1 loop  /snap/gnome-3-28-1804/63
loop10         7:10   0   3.7M  1 loop  /snap/gnome-system-monitor/100
loop11         7:11   0  14.8M 1 loop  /snap/gnome-characters/296
loop12         7:12   0   3.7M 1 loop  /snap/gnome-system-monitor/95
loop13         7:13   0   2.3M 1 loop  /snap/gnome-calculator/260
loop14         7:14   0 1008K  1 loop  /snap/gnome-logs/61
loop15         7:15   0  88.5M 1 loop  /snap/core/7270
```

```

loop16          7:16    0  14.5M  1 loop  /snap/gnome-logs/45
loop17          7:17    0    4M   1 loop  /snap/gnome-calculator/406
loop18          7:18    0  42.8M  1 loop  /snap/gtk-common-themes/1313
loop19          7:19    0 140.7M  1 loop  /snap/gnome-3-26-1604/88
sda             8:0     0   7.3T  0 disk
■■■sda1         8:1     0   128M  0 part
■■■sda2         8:2     0   7.3T  0 part
sdb            8:16    0   9.1T  0 disk
■■■sdb1         8:17    0   9.1T  0 part
  ■■■mass-swap  253:0   0   128G  0 lvm  [SWAP]
  ■■■mass-storage 253:1   0    8T   0 lvm  /mnt/mass/storage
sdc            8:32    0   9.1T  0 disk
■■■sdc1         8:33    0   9.1T  0 part
  ■■■mass-scratch 253:2   0    2T   0 lvm  /mnt/mass/scratch
nvme0n1        259:0   0 238.5G  0 disk
■■■nvme0n1p1   259:1   0   512M  0 part /boot/efi
■■■nvme0n1p2   259:2   0   238G  0 part /

```

Plug in your usb drive and list all block devices again:

```

$ lsblk
.
.
.
nvme0n1        259:0   0 238.5G  0 disk
■■■nvme0n1p1   259:1   0   512M  0 part /boot/efi
■■■nvme0n1p2   259:2   0   238G  0 part /
sdd            8:48    1    7.5G  0 disk

```

Notice the new device, *sdd*. It may be called differently on your machine, but will likely be named *sdX* where *X* is a letter. The full name of your usb device is */dev/sdX*.

Be absolutely certain that you have correctly identified the USB device at this point. If you have misidentified it, you will cause irreparable loss of data.

Once identified, make sure you unmount or eject all partitions on the usb device. You can do this via the command line using the *mount* and *umount* commands, or from the graphical file manager that is included with your linux environment. Normally there will be symbol that looks like the eject button on a CD player or tape deck.

## Linux install image

Find the installer image for your favourite debian based distribution. You can typically find these things by searching 'get <distribution\_name>', 'download <distribution\_name>' or 'install <distribution\_name>' with your favourite search engine. You can also look for tutorials about how to install that distribution. They will likely include instructions about getting the installer image. Download the image and make a note of it's location.

## Running disk\_creator

Run 'disk\_creator.sh' with root privileges:

```

$ sudo /bin/bash /path/to/disk_creator.sh /path/to/installer/image.iso /dev/sdX

```

For instance, if your usb device is */dev/sdd* and your installer image is located at */home/user/Downloads/ubuntu-18.04-amd64.iso* run:

```
$ sudo /bin/bash /path/to/disk_creator.sh \  
> /home/user/Downloads/ubuntu-18.04-amd64.iso \  
> /dev/sdd
```

The `disk_creator` will now run for some time while it copies things to the usb drive. Once it is done, read through the output it produced. If there are no obvious error messages, it should have completed successfully.

## Testing it worked

The USB drive should now have three partitions. One each of NTFS, ext4 and FAT32. When plugged into a windows machine, one of them should appear as a large empty partition labeled 'usbdata'.

You should be able to boot from the USB drive, into whatever installer image you provided. If it does so, test that a test file created on the desktop remains there after a reboot.

If all these tests are successful, everything should have worked.

If not, read the contents of the '`disk_creator.sh`' script and try to understand what it is doing. It is heavily commented.