

Creating a bootable USB from a Windows ISO

The reason for needing this could be e.g. reinstalling Windows but it could also be to update your system firmware - because the vendor only provided Windows binaries - you need a Windows system.

Don't reinstall Windows - use an ISO with a Windows PE environment like Hiren's BootCD

<https://www.hirensbootcd.org/>

Only the manual approach described below was viable - until a few years ago when the github user [slacka](#) forked the WinUSB project. Thanks to his work the Linux community have an app to do abstract the CLI work.

WoeUSB

Use the package woeusb available from [AUR](#)

```
pamac build woeusb
```

Manual using CLI

Remove all removable devices (USB), open a terminal and list known disk devices

```
lsblk -la
```

Insert your USB stick and list your devices one more time

```
lsblk -la
```

Make a note of the extra device listed. If you only have one disk then it probably will be `/dev/sdb`.

Please do double check the device id

In the terminal clear the disk of any partition info, using this command (replace X with device letter from above).

```
sudo dd if=/dev/zero of=/dev/sdX bs=1M count=10 oflag=sync
```

Then use fdisk to create the filesystem needed for the Windows ISO (replace X with device letter from above).

```
sudo fdisk /dev/sdX
```

The commands in fdisk is as follows

1. - create a new empty DOS partition table
2. - add a new partition
3. - accept default partition type primary
4. - accept default partition number 1
5. - accept default first sector 2048
6. - accept default last sector
7. - change partition type
8. - select W95 FAT32 (LBA)
9. - set bootable flag for partition 1
10. - write changes to disk

Newer versions of Windows 10 ISO contains a file bigger than 4G.

Format the device using **exfat** (replace X with device letter from above) to overcome the size limitation of FAT32.

```
sudo mkfs.exfat /dev/sdX1
```

Create a folder to mount your ISO

```
mkdir ~/winiso
```

Mount your ISO

```
sudo mount -o loop /path/to/windows/iso/filename.iso ~/winiso
```

Create a folder to mount your USB

```
mkdir ~/winusb
```

Mount the partition (replace X with device letter from above)

```
sudo mount /dev/sdX1 ~/winusb
```

Copy all files from ISO to USB

```
cd ~/winiso  
cp -r * ~/winusb
```

The copy operation is going to take a long time depending on your USB port speed and your USB device.

When the copy is done ensure all data is flushed to the device using the sync command

```
sync
```

When all data is flushed to the device you will be returned to the prompt.

Next thing is to move away from the winiso folder

```
cd ~
```

Then unmount the devices

```
sudo umount ~/winiso ~/winusb
```

Remove the folders

```
rm -rf ~/winiso ~/winusb
```

You should now be able to boot to your Windows install media.

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Edit [date=2019-11-01 time=17:19:00 timezone="Europe/Copenhagen"]:

- Fixed recursive flag on cleanup command
- Newer Windows media includes a wim file larger than 4GB
 - suggest to change format to exfat to be able to use with WoeUSB