

Keywords for google search: **Persistent memory bootable ubuntu USB in Windows**

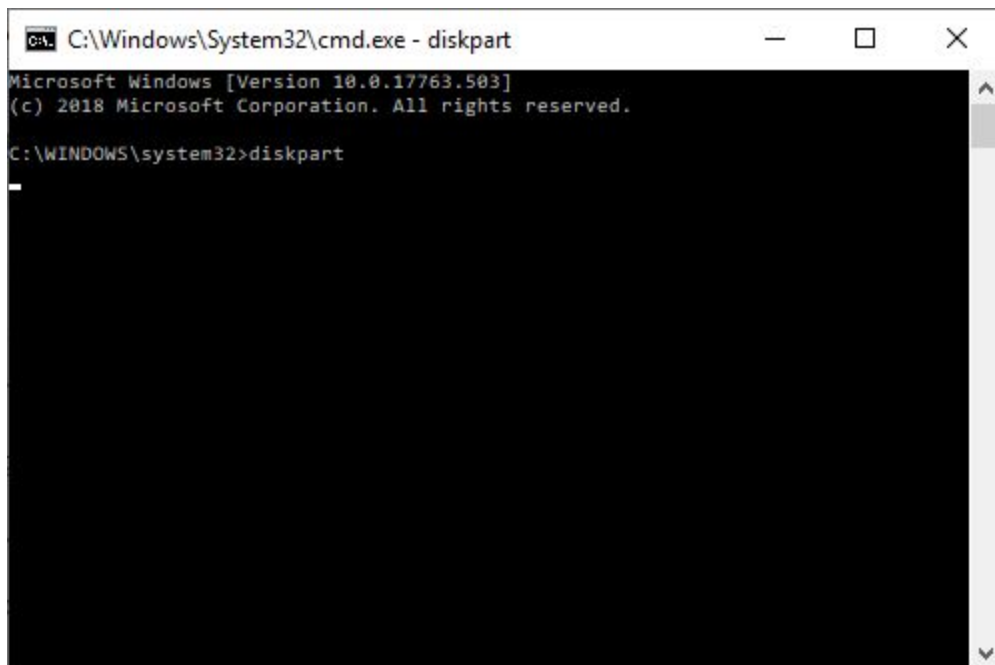
My system properties:

- 8GB RAM
- 32 GB USB pendrive
- Windows 10 HP laptop
- intel i5-5200 processor
- Will use Ubuntu 16.04
- Will use Kinetic Kame ROS

Formatting a USB

In Windows 10

1. Take a Pendrive with a large enough space (>4GB) [I used 32 GB.]
2. Open command by typing **cmd** in Windows search bar.
3. Type **diskpart**

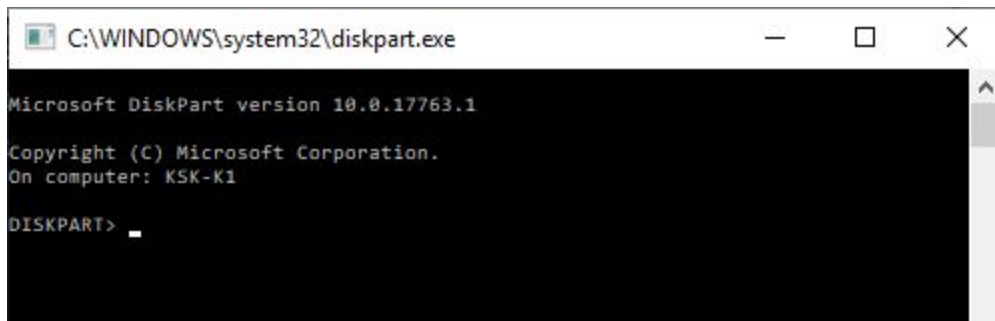


```
C:\Windows\System32\cmd.exe - diskpart
Microsoft Windows [Version 10.0.17763.503]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>diskpart
-
```

- a. If a prompt asks for permission Click **allow**

4. A new window opens. It is diskpart.



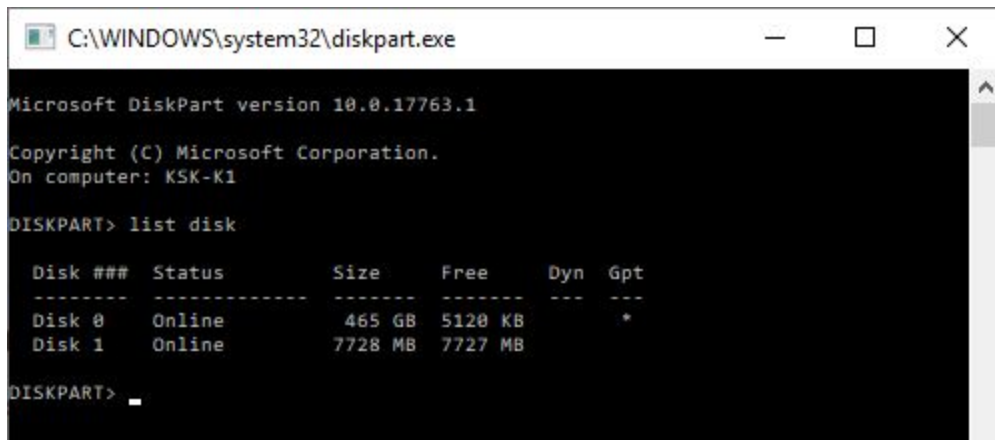
```
C:\WINDOWS\system32\diskpart.exe

Microsoft DiskPart version 10.0.17763.1

Copyright (C) Microsoft Corporation.
On computer: KSK-K1

DISKPART> _
```

5. Type *list disk*



```
C:\WINDOWS\system32\diskpart.exe

Microsoft DiskPart version 10.0.17763.1

Copyright (C) Microsoft Corporation.
On computer: KSK-K1

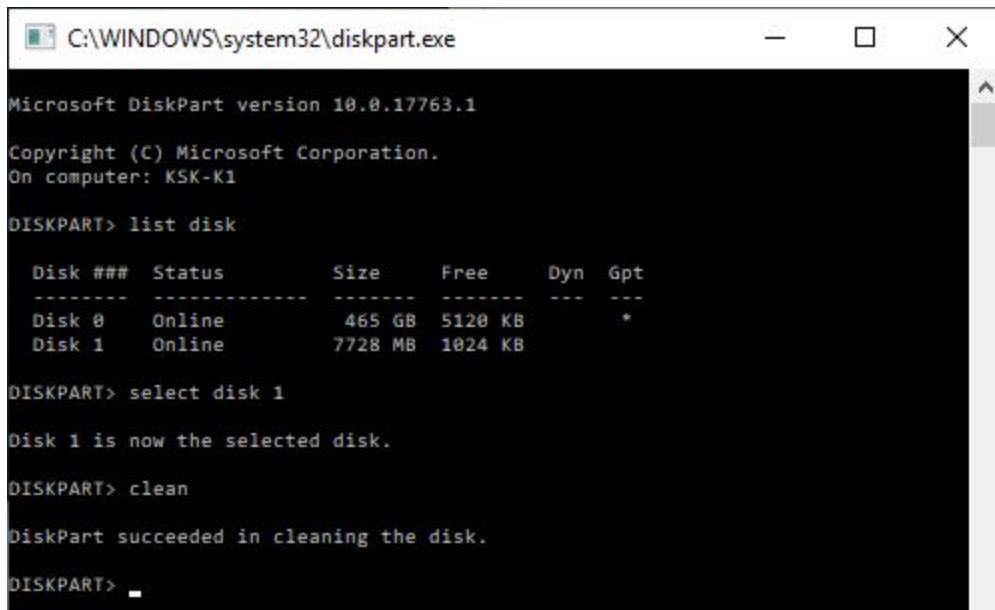
DISKPART> list disk

Disk ###  Status       Size       Free       Dyn  Gpt
-----  -
Disk 0    Online      465 GB     5120 KB
Disk 1    Online      7728 MB    7727 MB

DISKPART> _
```

You can see the USB as the 7728MB disk: Disk 1

6. Type *select disk 1*
7. Type *clean*



```
C:\WINDOWS\system32\diskpart.exe

Microsoft DiskPart version 10.0.17763.1

Copyright (C) Microsoft Corporation.
On computer: KSK-K1

DISKPART> list disk

Disk ###  Status       Size       Free       Dyn  Gpt
-----  -
Disk 0    Online      465 GB     5120 KB
Disk 1    Online      7728 MB    1024 KB

DISKPART> select disk 1

Disk 1 is now the selected disk.

DISKPART> clean

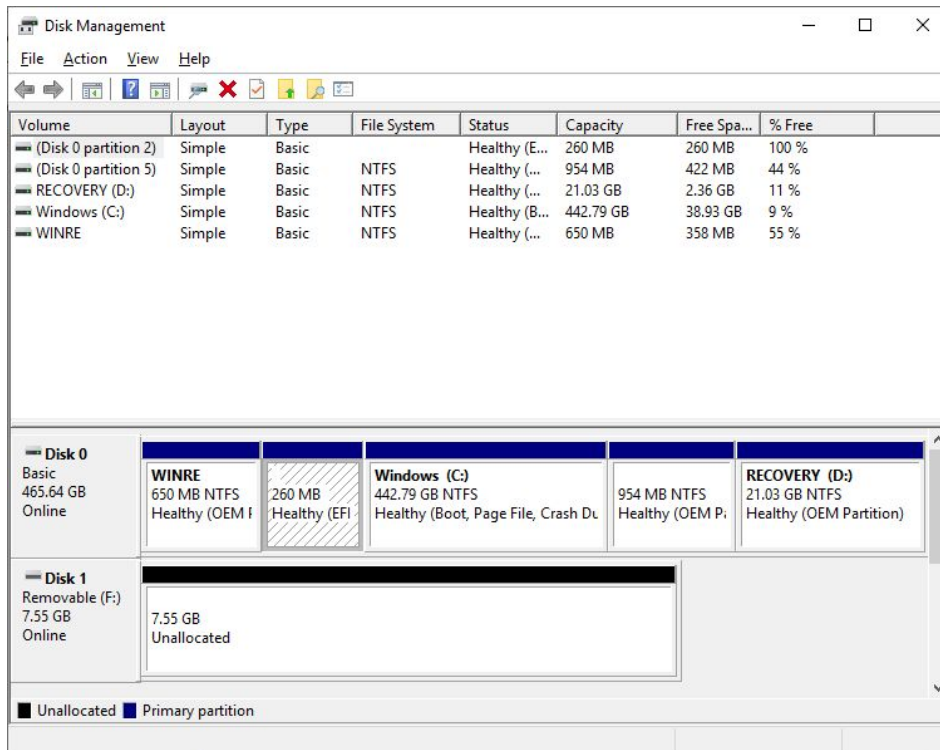
DiskPart succeeded in cleaning the disk.

DISKPART> _
```

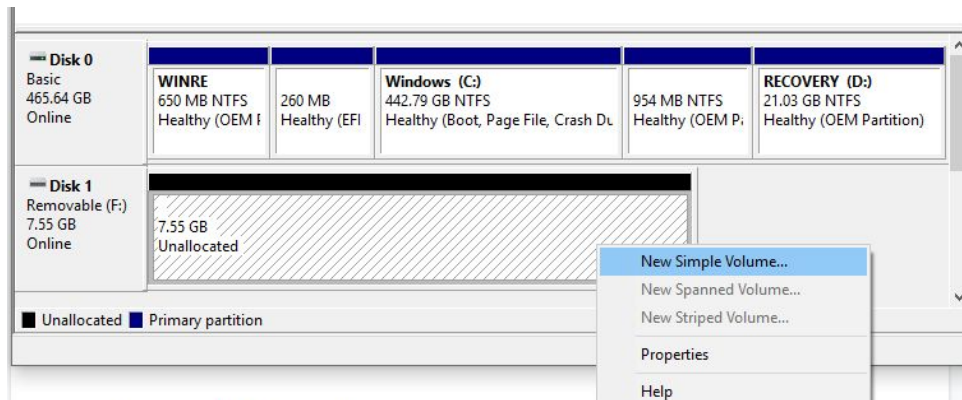
8. The USB is now formatted and clean
9. Close *diskpart* and *cmd*

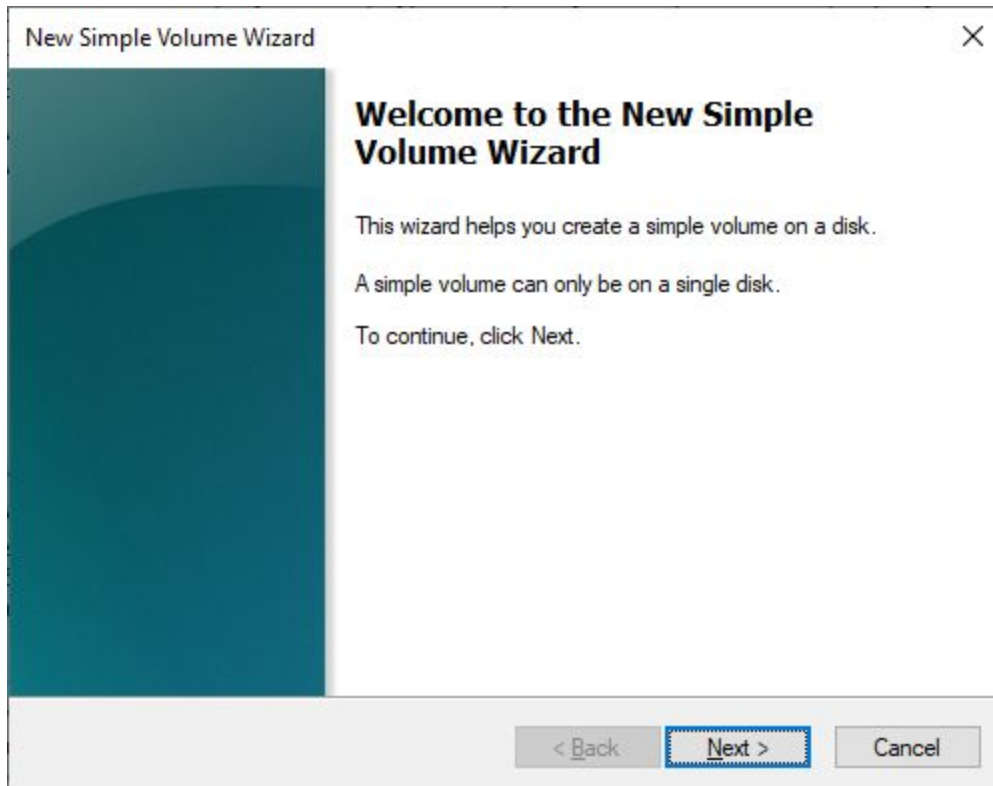
10. To setup USB for NTFS architecture

11. Open Disk partition manager

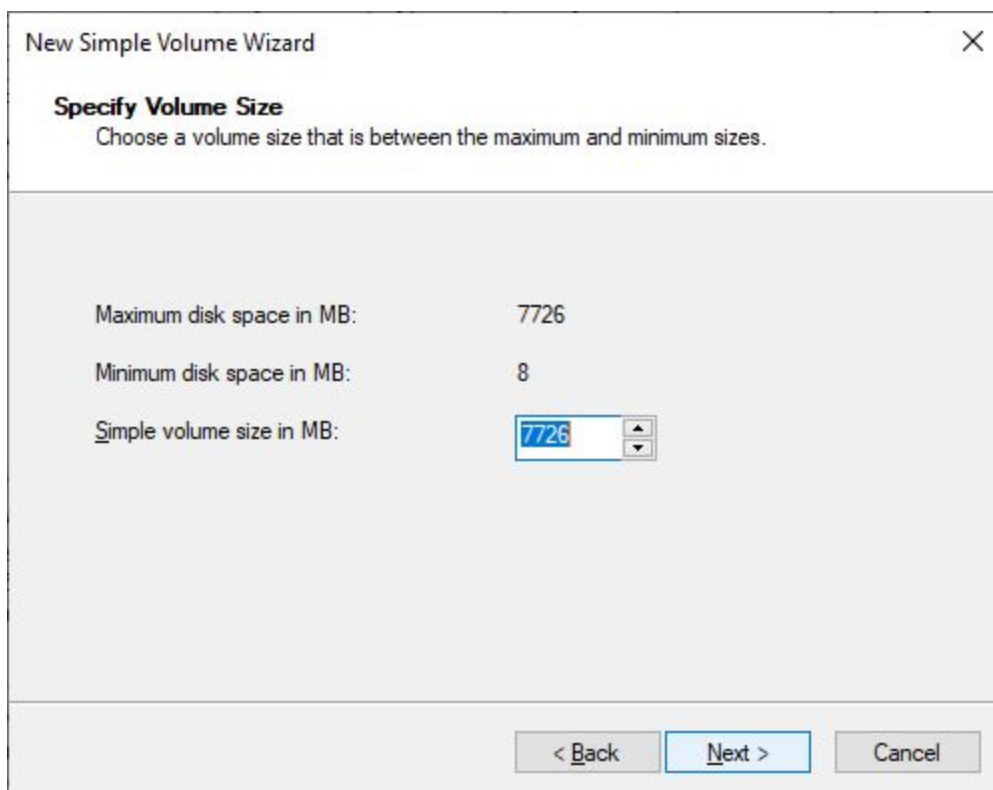


12. Right click the 7.55GB Unallocated part and click 'New Simple Volume'





13.



14.

New Simple Volume Wizard

Assign Drive Letter or Path
For easier access, you can assign a drive letter or drive path to your partition.

☒ Assign the following drive letter: G

☐ Mount in the following empty NTFS folder:
Browse...

☐ Do not assign a drive letter or drive path

< Back Next > Cancel

15.

New Simple Volume Wizard

Format Partition
To store data on this partition, you must format it first.

Choose whether you want to format this volume, and if so, which settings you want to use.

☐ Do not format this volume

☒ Format this volume with the following settings:

File system: NTFS

Allocation unit size: Default

Volume label: New Volume

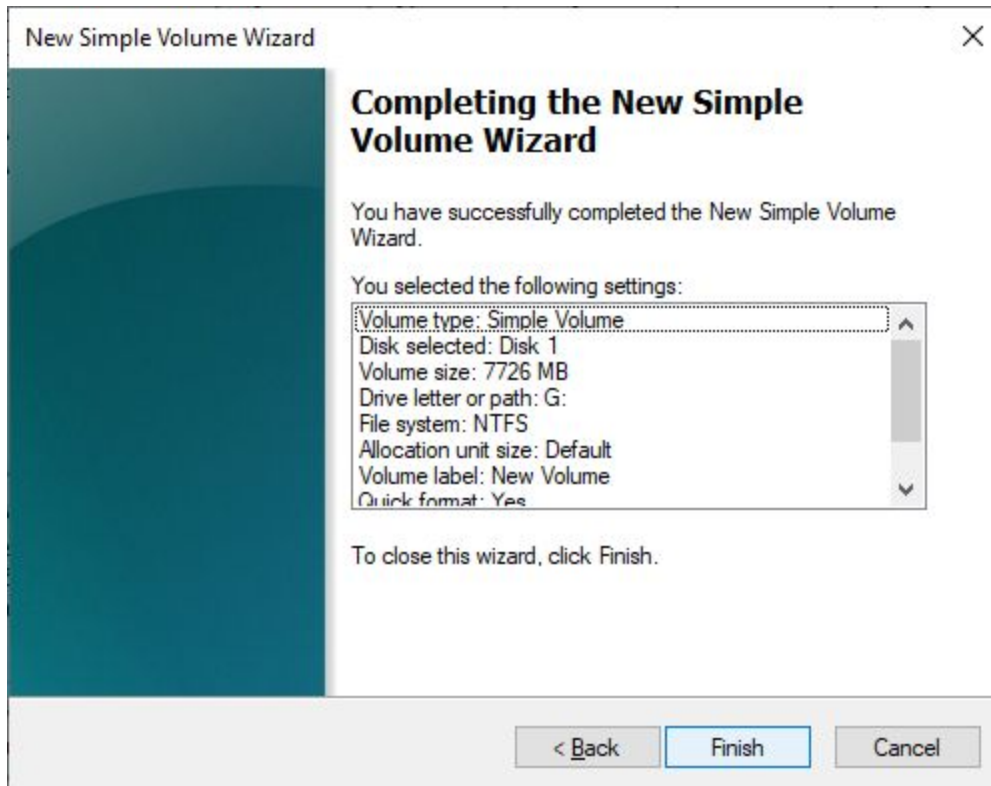
☒ Perform a quick format

☐ Enable file and folder compression

< Back Next > Cancel

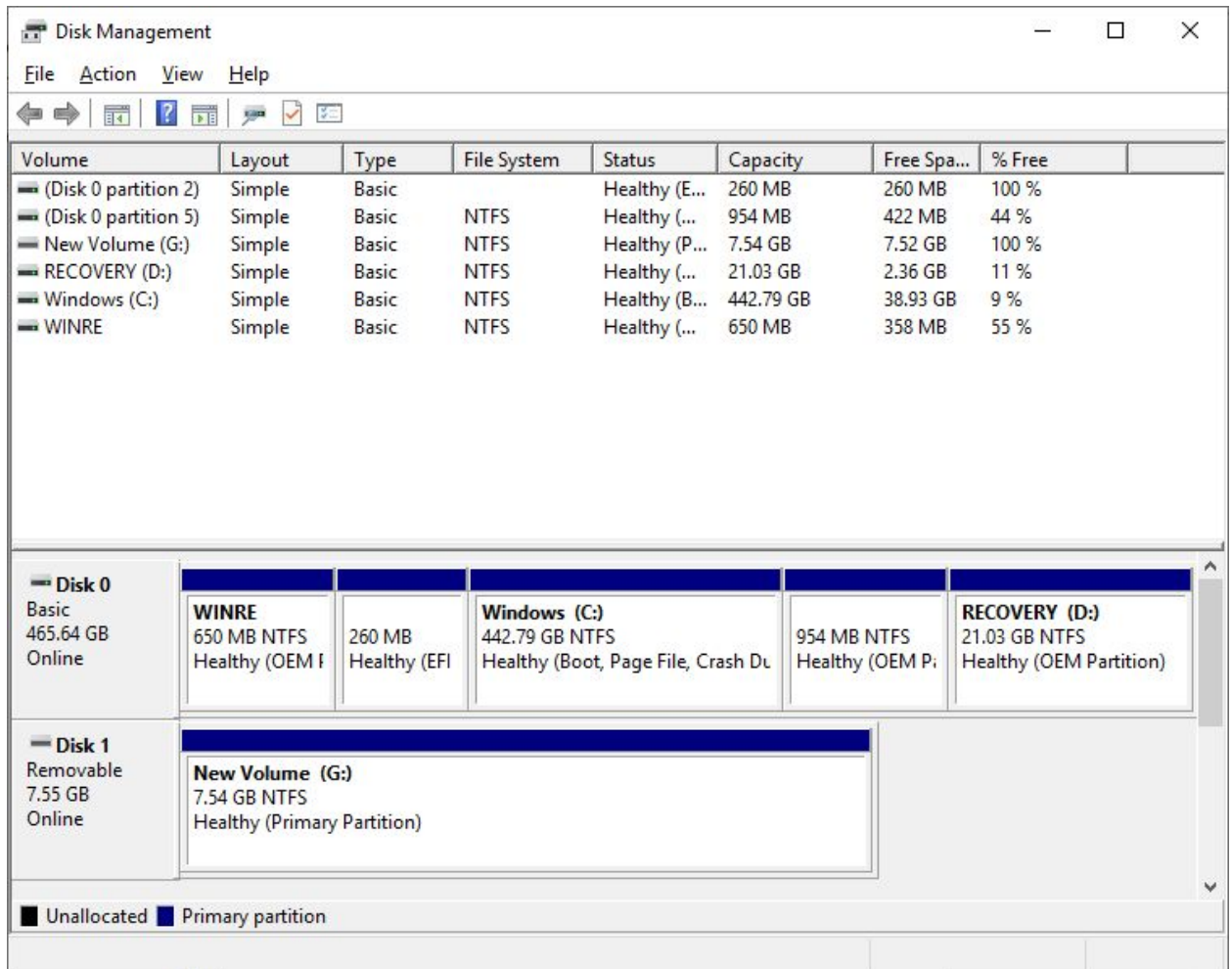
16.

Ensure that the File system is chosen as **NTFS**



17.

18. Click finish

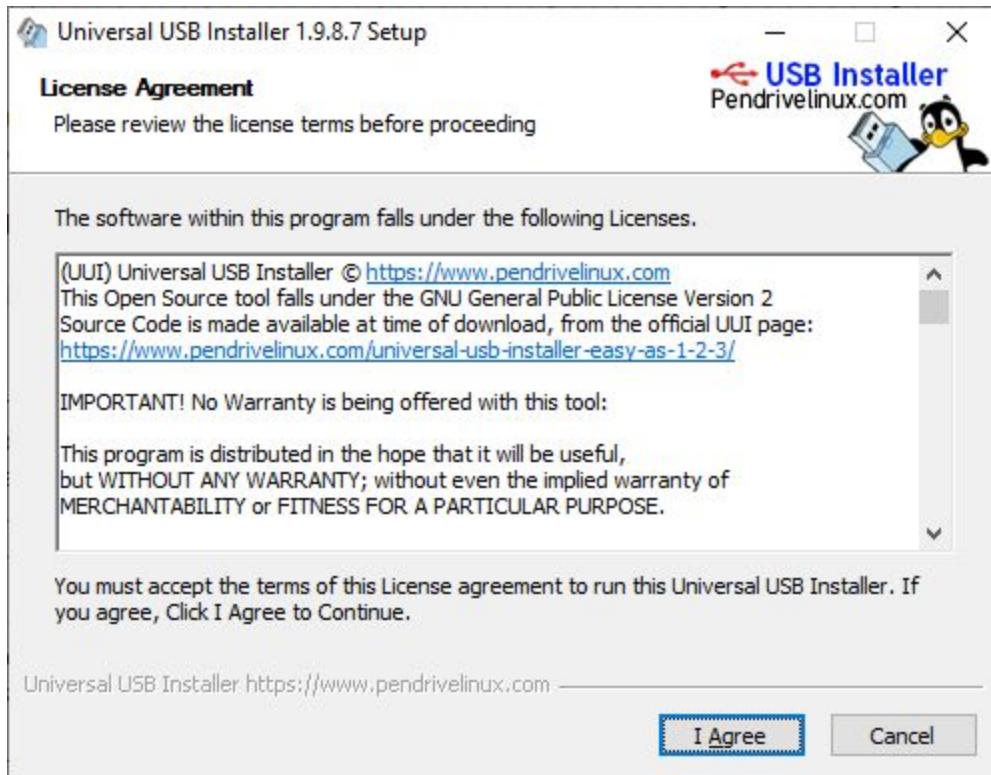


19.

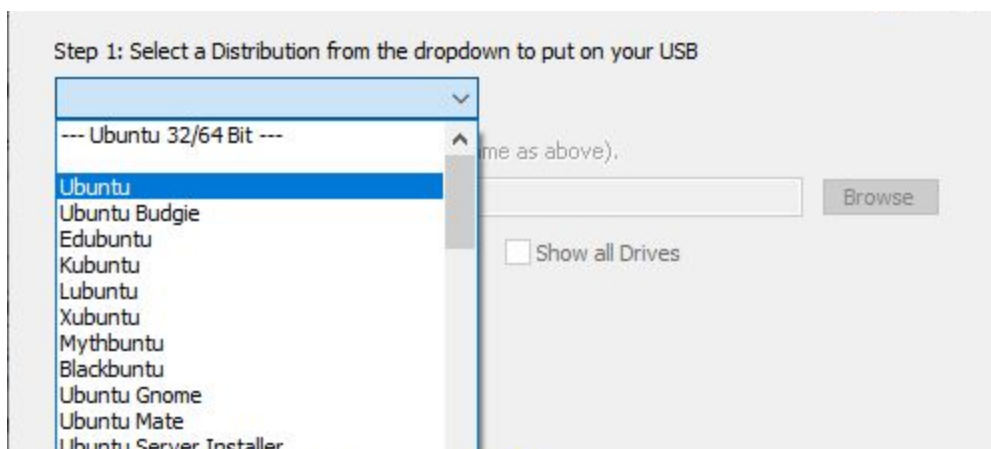
Now the USB is in NTFS architecture

Universal USB Installer

1. Download Ubuntu 16.04 .iso file from Ubuntu website.
2. Go to pendrive linux website and download the their software: universal USB installer.
Some links with instuctions
 - a. <https://tecadmin.net/create-ubuntu-bootable-usb-in-windows/>
 - b.
3. Click I Agree



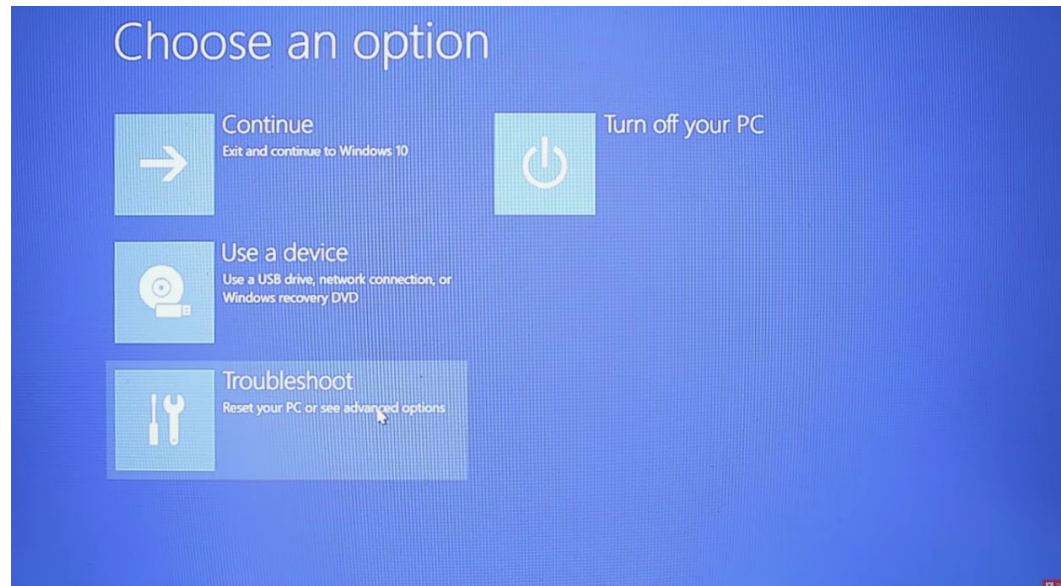
4. Choose Ubuntu



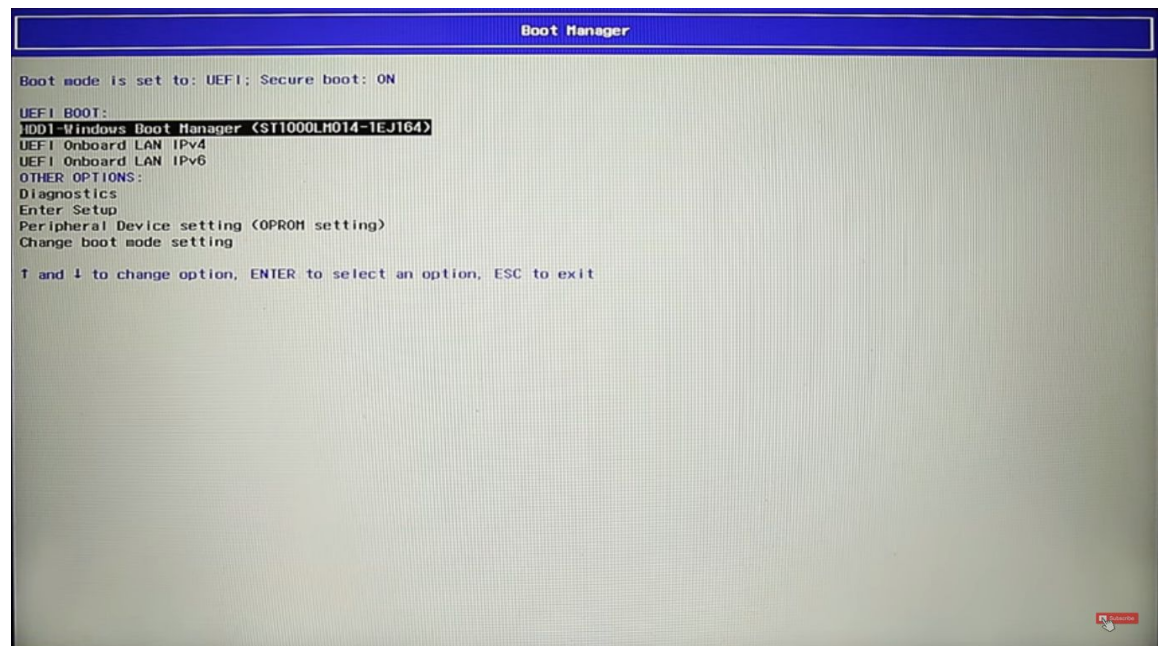
5. Next, Click **Browse** and choose the Ubuntu 16.04 / 18.04 **.iso file**.
- 6.
7. FAT32 architecture will make casper-rw files of **only upto 4GB**. (casper-rw is the place where the memory is stored- persistent memory)
8. I took NTFS architecture in universal USB installer (this allows bigger casper-rw file size **upto 16 exabytes!**)
9. Wait for it to complete.
10. NTFS will normally work very slowly as compared to FAT32 in a bootable Ubuntu USB.

Solution to increase speed of NTFS

1. Go to Boot Manager.
 - a. In my HP laptop, clicking restart while pressing the shift button will take me to this page



- i. Click troubleshoot and choose advanced options.
 - ii. Choose UEFI firmware settings and finally click restart.
 - b. This is the Boot manager



- c. F10 goes to BIOS settings in my HP laptop.

- d. Go to BIOS settings and change the **Secure Boot to disabled** and **Legacy Mode to Disabled**.
- e. Press F10 to save and exit.
- f. Restart computer.