

Laptop: Alienware 15 with Windows 8 pre-installed

1. Create USB bootable sticker with Rufus, remember to choose target system type as UEFI!!

2.

Root \ 100G

SWAP: 128G

Boot: 200M

Home: The rest free space

3. In Chinese Region:

Source: bjtu

```
sudoedit /etc/apt/sources.list
```

Disable (Comment)

```
deb http://extras.ubuntu.com/ubuntu precise main
```

```
deb-src http://extras.ubuntu.com/ubuntu precise main
```

Then

```
sudo apt-get update
```

Otherwise, there will be problem for packages lists.

4. CUDA Installation

Don't use .deb file, it will cause problem when you reboot Ubuntu 14.04 twice and cannot boot into system, even cannot access TTY. Not sure why, but it seems it has problem to load newly installed Nvidia Driver.

Successed with .run file

5. To be continued...

Tried re-installing Ubuntu several times and now the problem is CUDA 7.0 .run file is successfully installed, pass all tests, but I lost my Ubuntu GUI. A potential solution is as follows:

Post of final script and solution

0) Download your relevant CUDA.run file: mine was: cuda_7.0.28_linux.run

Note, that once again this install is if you purely want to use your graphics card (Titan X) for GPU/CUDA purposes and not for rendering.

Also run: `$sudo apt-get install build-essential`

1) I start off with the regular GUI and Ubuntu working with no login problems.

2) No need to create an xorg.conf file. If you have one, remove it (assuming you have a fresh OS install). `$ sudo rm /etc/X11/xorg.conf`

3) Create the /etc/modprobe.d/blacklist-nouveau.conf file with :

blacklist nouveau

option nouveau modeset=0

Then `$sudo update-initramfs -u`

4) Reboot computer. Nothing should have changed in loading up menu. You should be taken to the login screen. Once there type: Ctrl + Alt + F1, and login to your user.

5) Go to the directory where you have the CUDA driver, and run

```
$chmod a+x .
```

7) Now, run `$ sudo service lightdm stop`

The top line is a necessary step for installing the driver.

8) I run the CUDA driver run file. *Notice that I explicitly don't want the OpenGL flags to be installed:

```
$ sudo bash cuda-7.0.28_linux.run --no-opengl-libs
```

9) During the install:

Accept EULA conditions

Say YES to installing the NVIDIA driver

SAY YES to installing CUDA Toolkit + Driver

Say YES to installing CUDA Samples

Say NO rebuilding any Xserver configurations with Nvidia.

10) Installation should be complete. Now check if device nodes are present:

Check if `/dev/nvidia*` files exist. If they don't, do :

```
$ sudo modprobe nvidia
```

11) Set Environment path variables:

```
$ export PATH=/usr/local/cuda-7.0/bin:$PATH
```

```
$ export LD_LIBRARY_PATH=/usr/local/cuda-7.0/lib64:$LD_LIBRARY_PATH
```

*Change depending on your cuda version.

12) Verify the driver version:

```
$ cat /proc/driver/nvidia/version
```

13) Check CUDA driver version:

```
$ nvcc -V
```

[Optional] At this point you can switch the lightdm back on again by doing:

```
$ sudo service lightdm start.
```

You should be able to login to your session through the GUI without any problems or login-loops.

14) Create CUDA Samples. Go to your `NVIDIA_CUDA-7.5_Samples` folder and type `$make`.

15) Go to `NVIDIA_CUDA-7.5_Samples/bin/x86_64/linux/release/` for the demos, and do the two standard checks:

```
./deviceQuery
```

to see your graphics card specs and

```
./bandwidthTest
```

to check if its operating correctly.

Both tests should ultimately output a 'PASS' in your terminal.

16) Reboot. Everything should be ok.