Ubuntu 22.04 Linux Setup Guide

For ThinkStation P360 Tower, Tiny, Ultra

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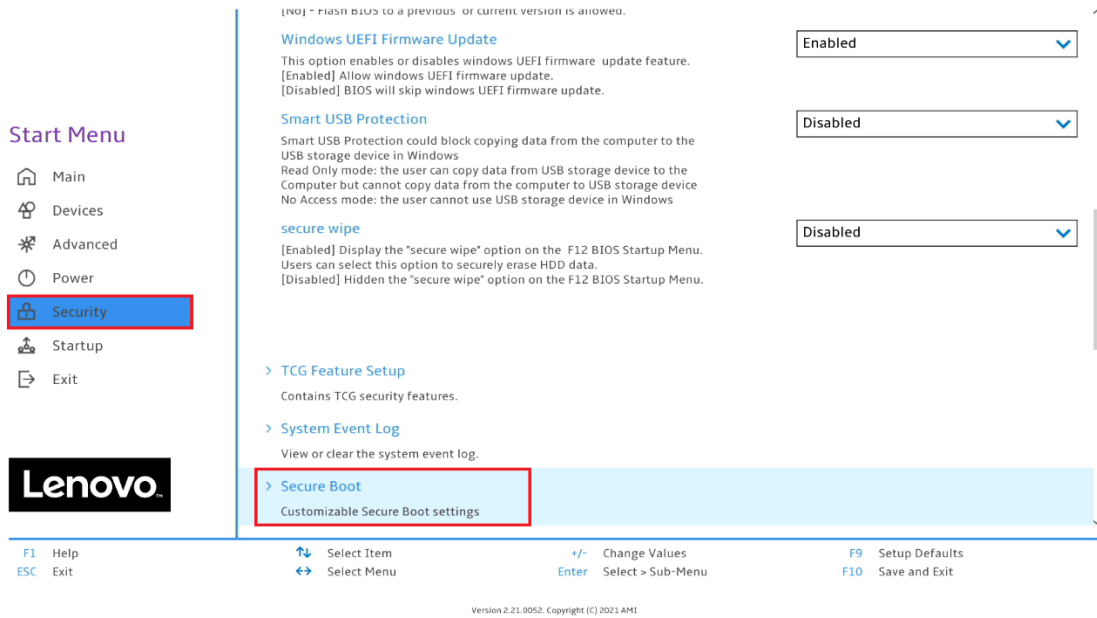
Section 1 – BIOS Configuration

The first step before installing Linux is to make sure the system BIOS is setup correctly.

- Boot into BIOS by pressing the function F1 key at the "Lenovo" splash screen.
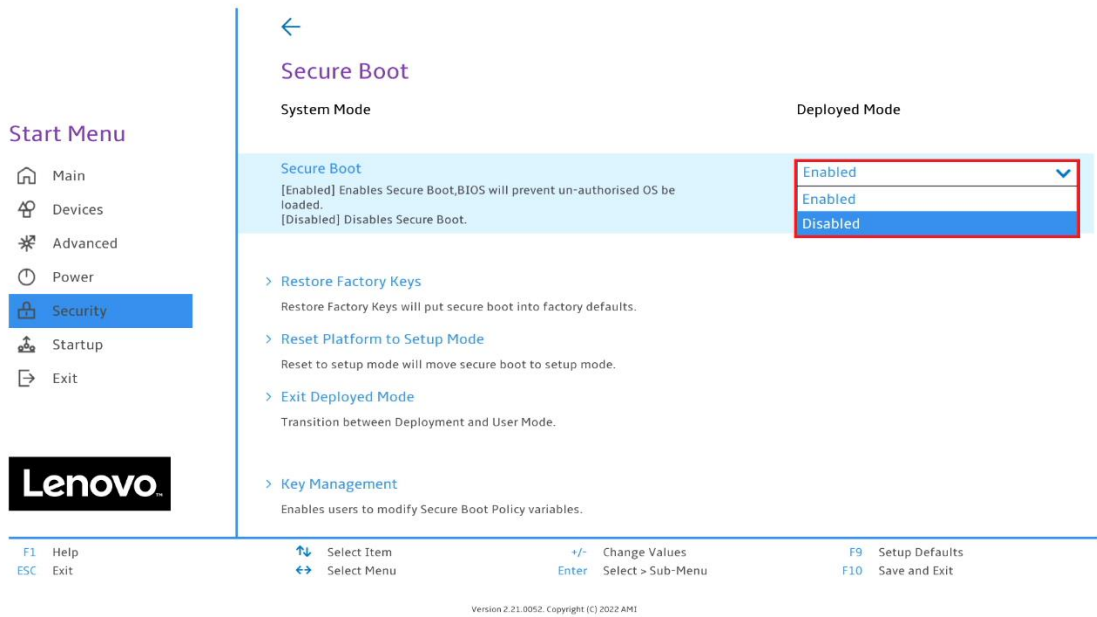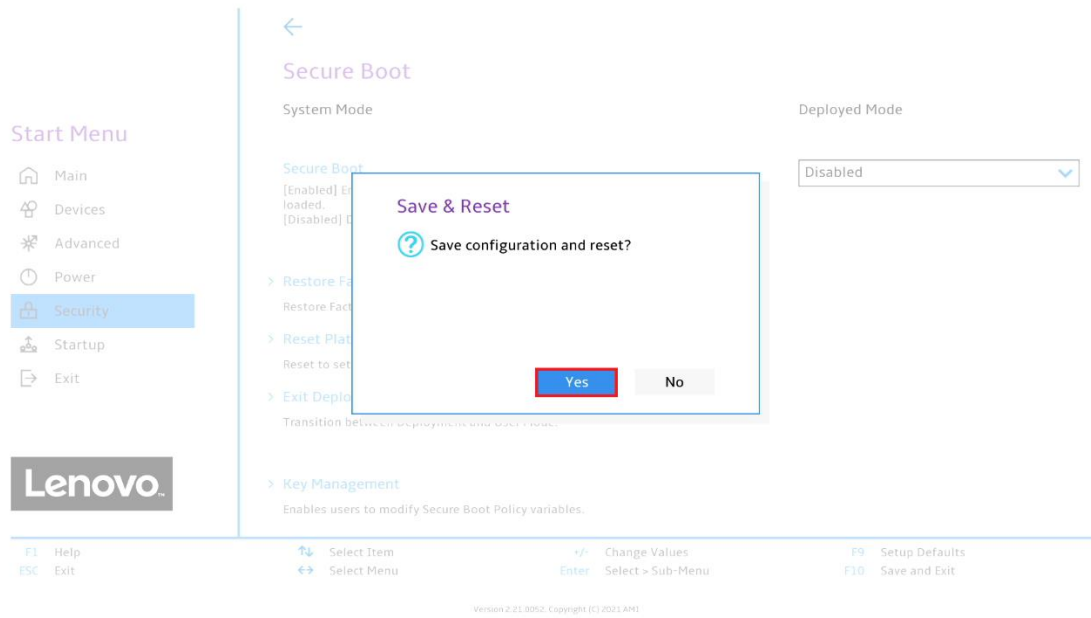
- Tab over to the Security tab and select "Secure Boot".

- Check whether Secure Boot is disabled. If found enabled, disable it.

- Save changes by pressing F10 function key.

Section 2 – Installing Ubuntu Linux 22.04 LTS

Please refer to the following instructions and screenshots on how to install Ubuntu 22.04 LTS on the Lenovo ThinkStation P360.

- Insert the Ubuntu 22.04 LTS installation media (either through USB or CD/DVD)
- Power on the system and press the F12 function key whenever the following Lenovo splash screen appears.
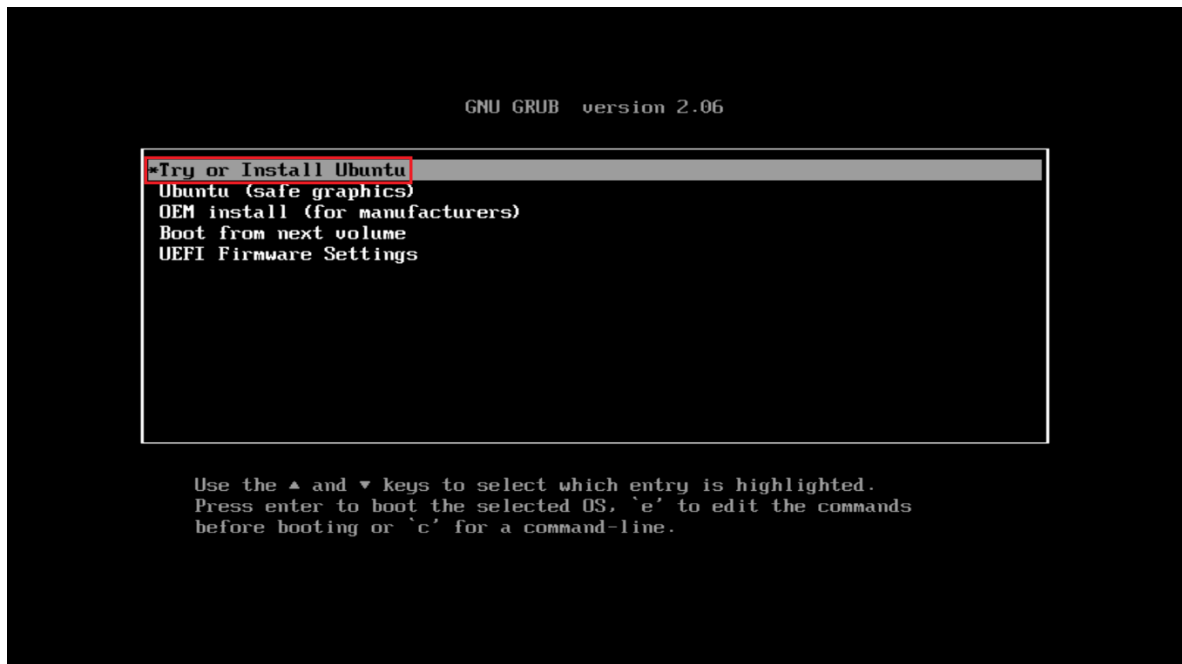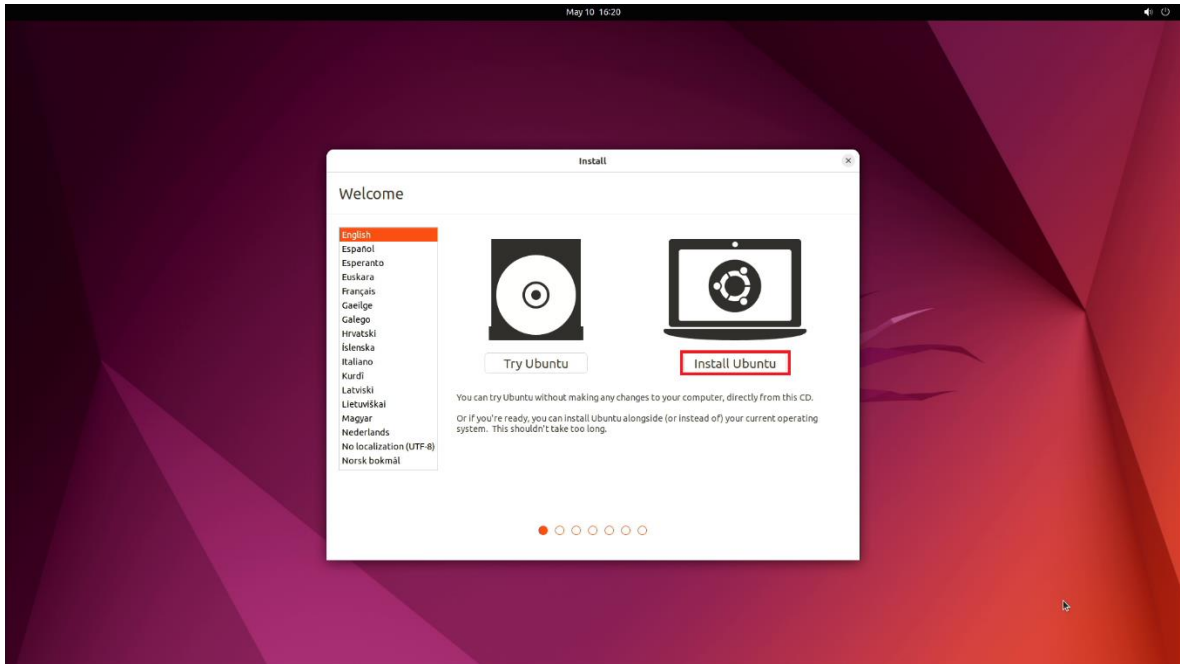
- Select the Linux bootable installation media from the F12 boot menu list.
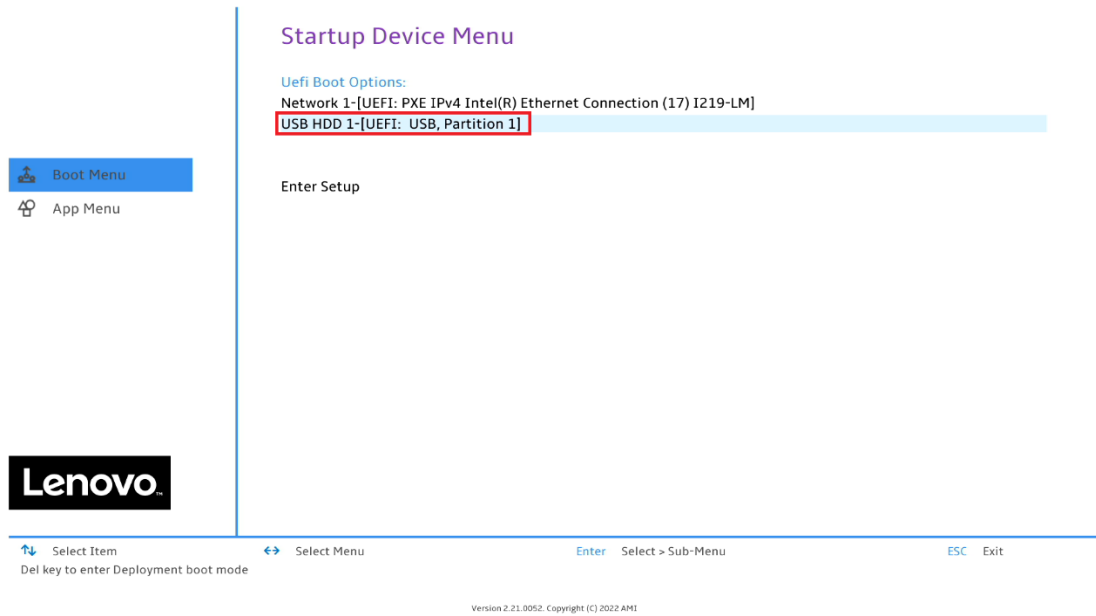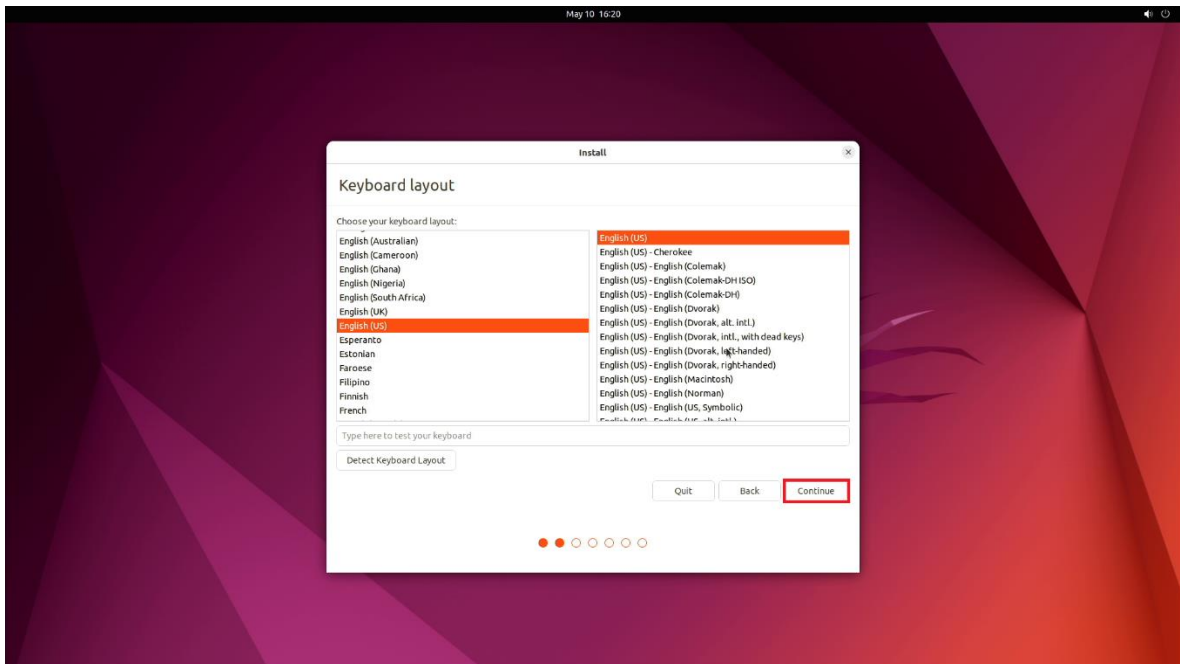

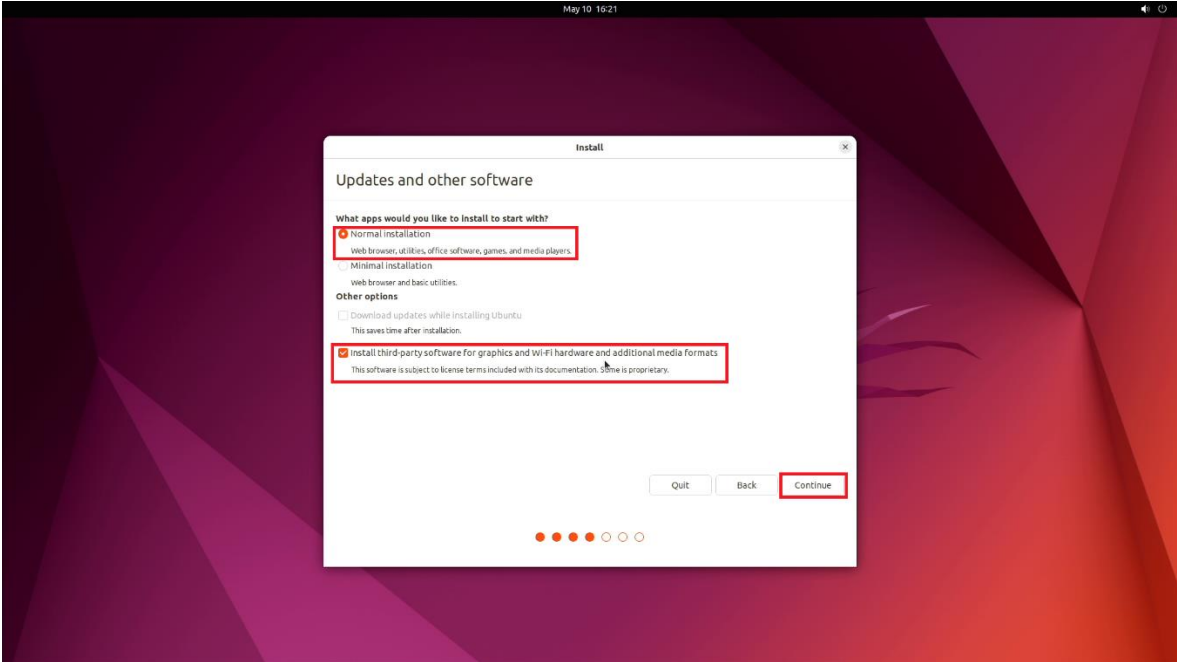- Select "Ubuntu" from the GRUB boot menu and press enter.

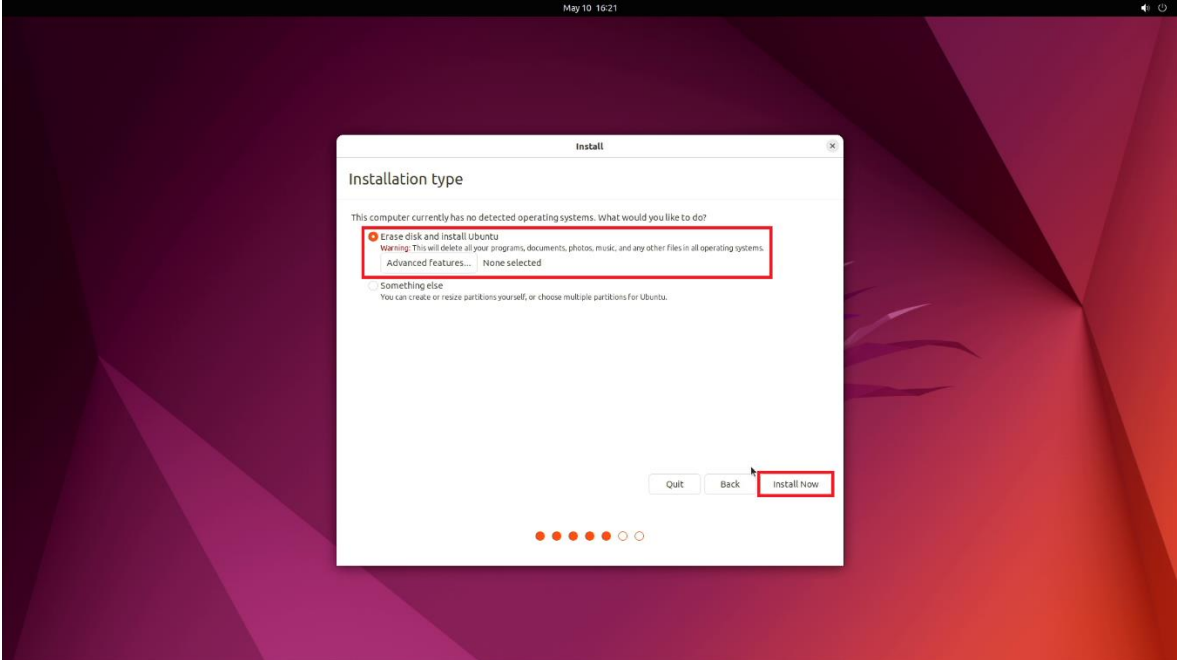- Select the "Install Ubuntu" option on the welcome screen.

- Select the appropriate keyboard layout and language and press "Continue".
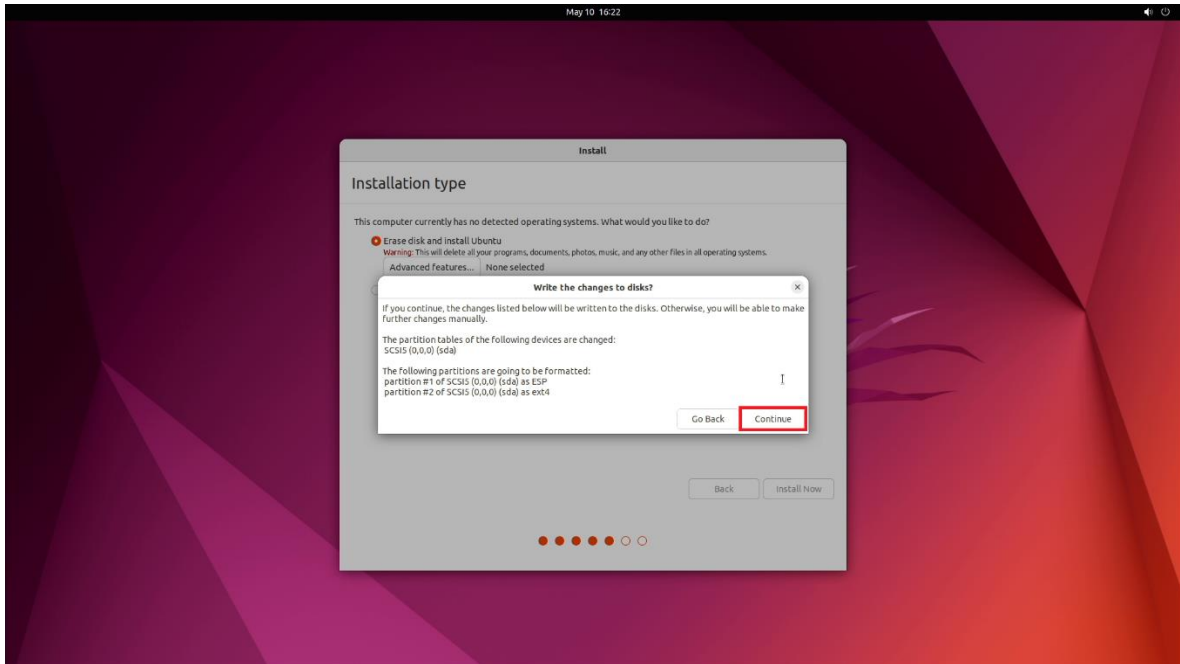
- Select "Normal Installation" and press "Continue".
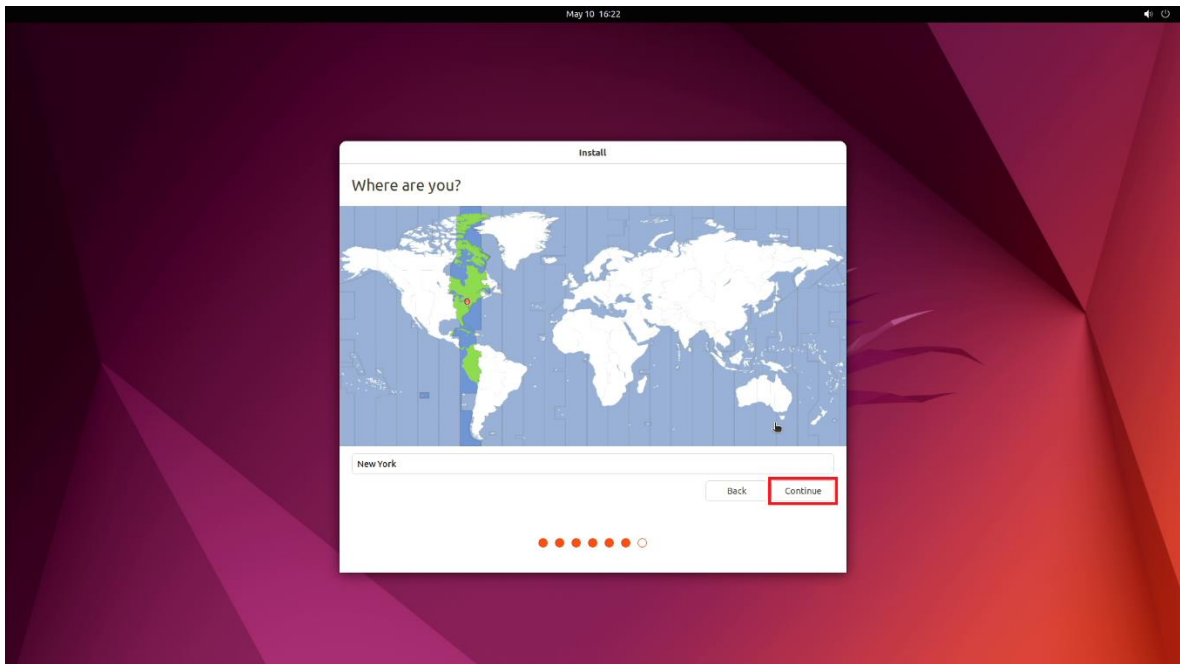 Optional: "Install third-part software…"

- Choose the installation type. For simplicity, this guide was done using "Erase disk and install Ubuntu"
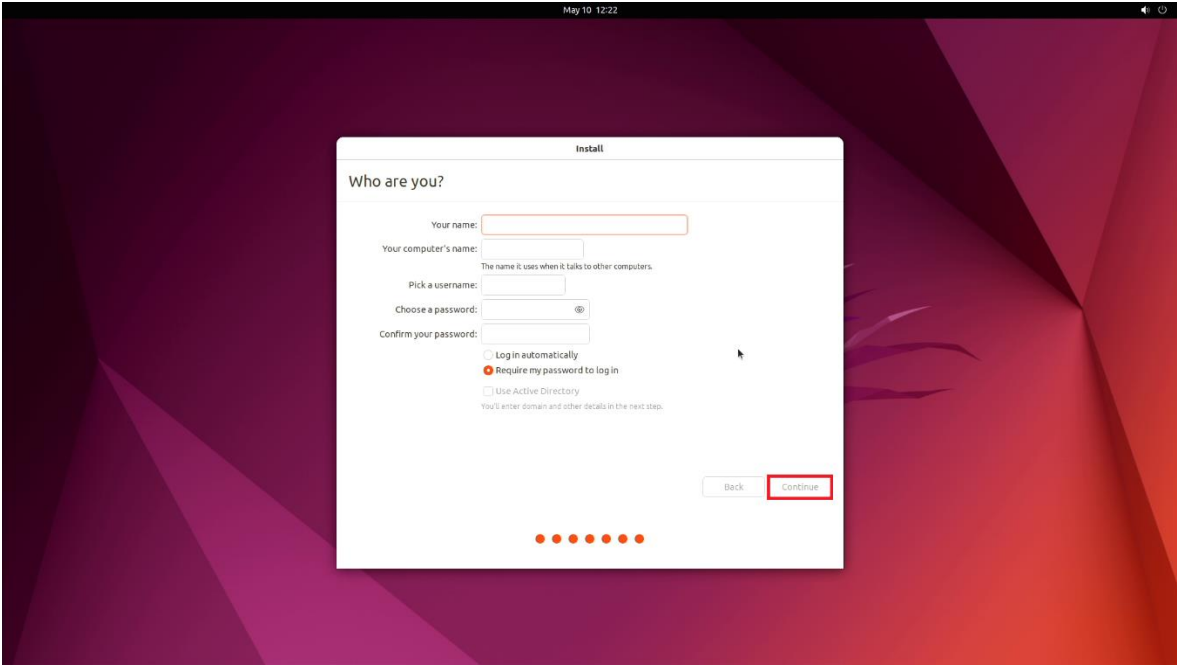
- Select "Continue" to confirm changes will be made to the disk.
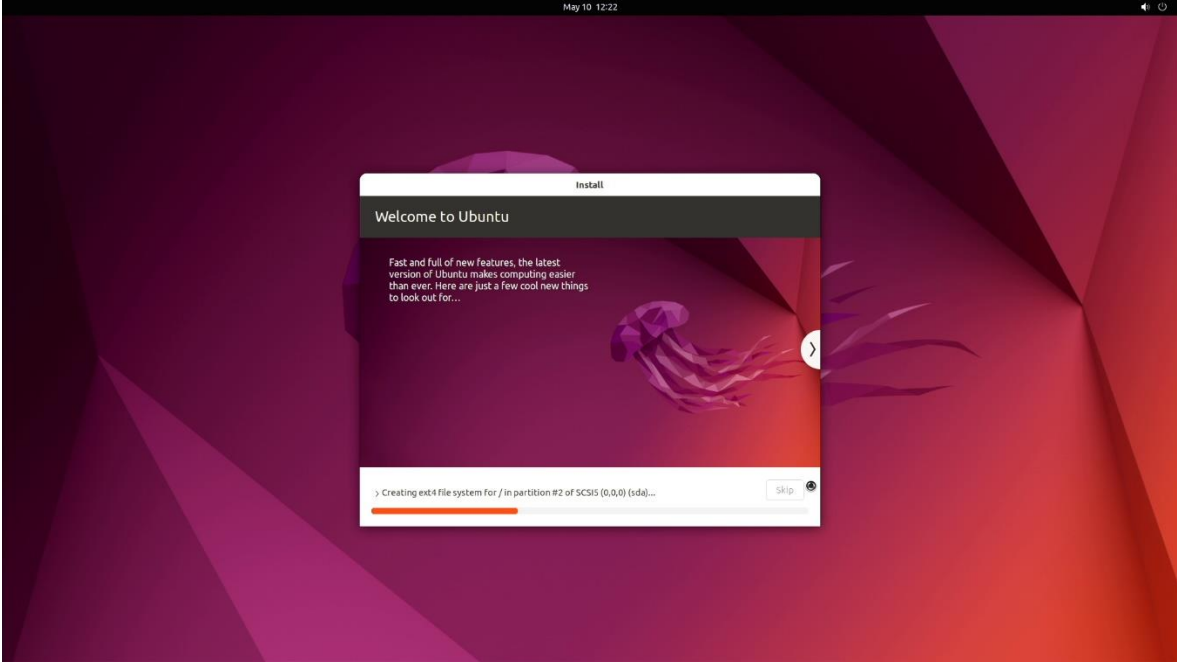

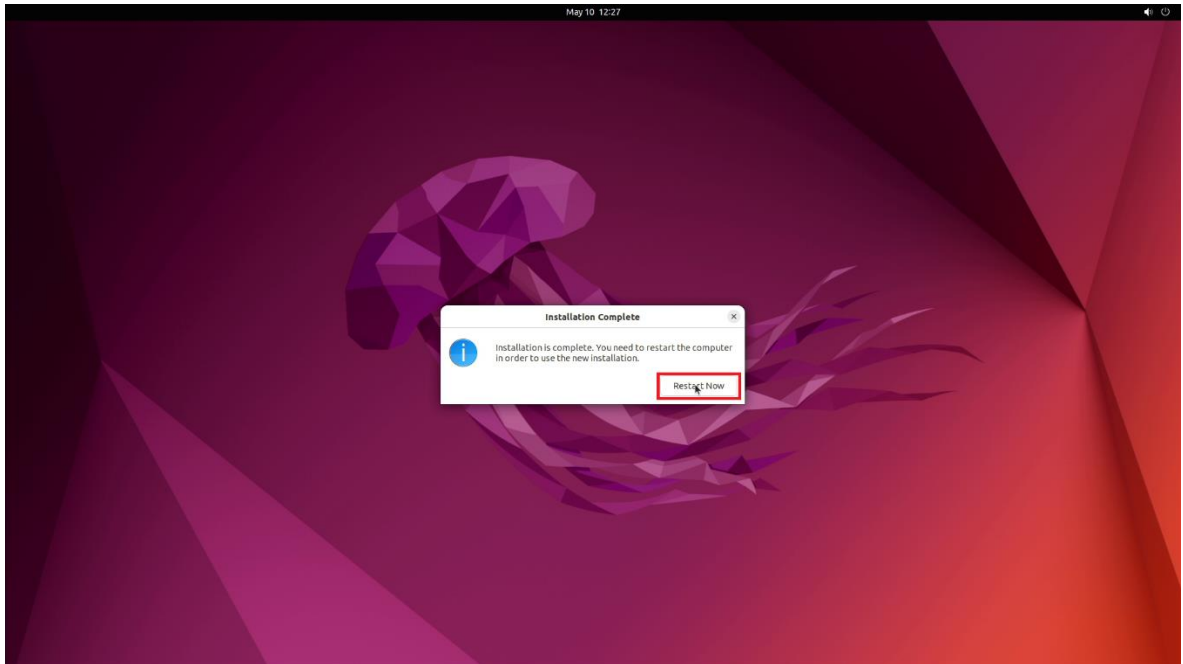- Choose the appropriate geographical location and select "Continue".

- Fill out the appropriate information and select "Continue".

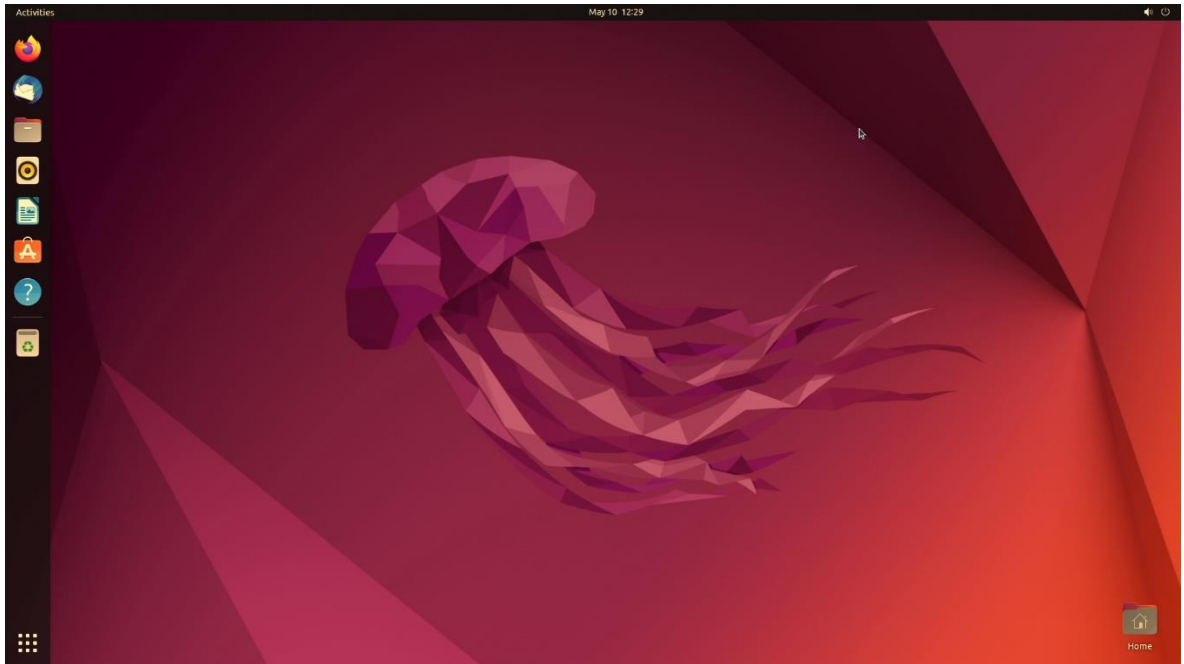- Ubuntu installation progress bar will be shown.

- Once the installation completes, select "Restart now".

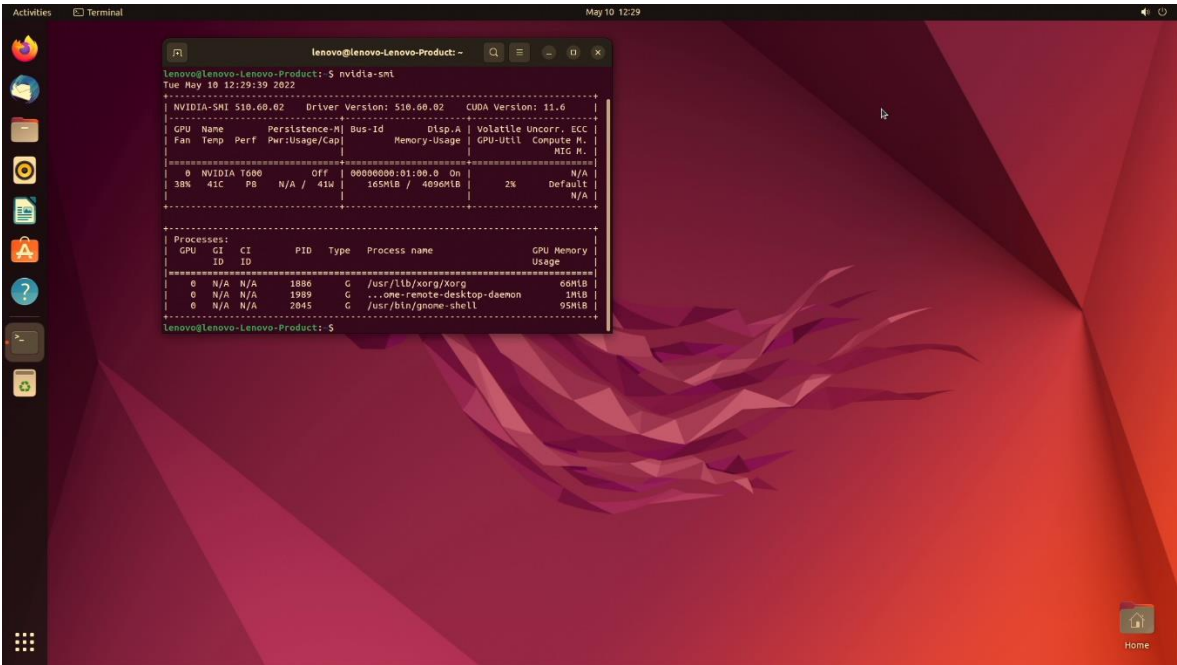
- Remove the installation media and press enter.

- User will land on the Ubuntu Desktop Screen.

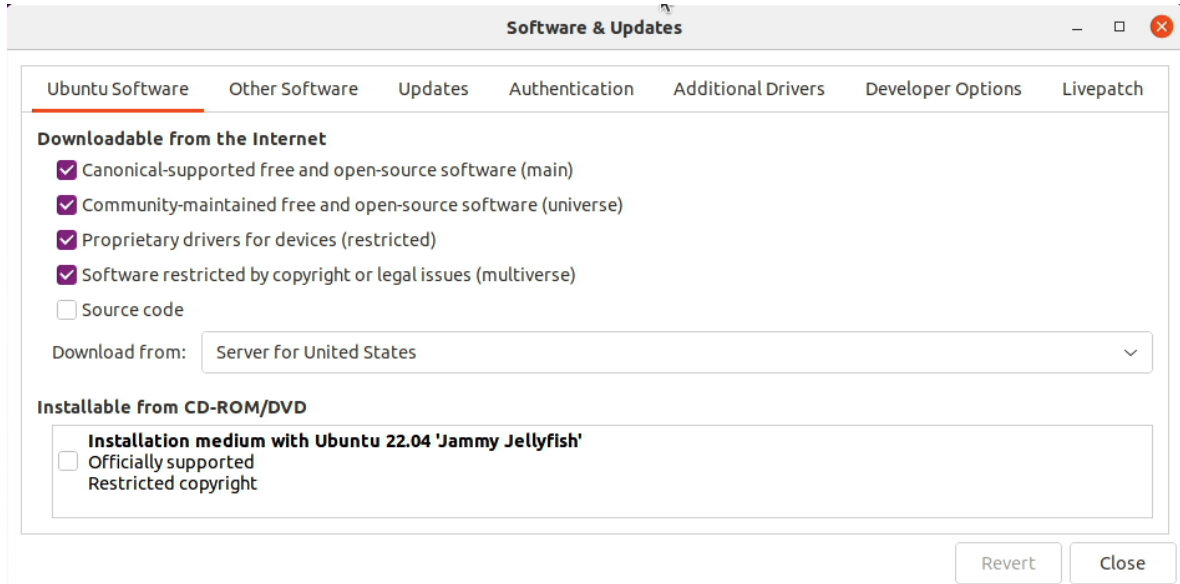# Section 3 – Installing the Nvidia Graphics Driver

To get optimal performance out of the Nvidia GPU, it is a good idea to install the Nvidia graphics driver.

- To make sure the Nvidia GPU is working, open the terminal and write the command nvidia-smi.
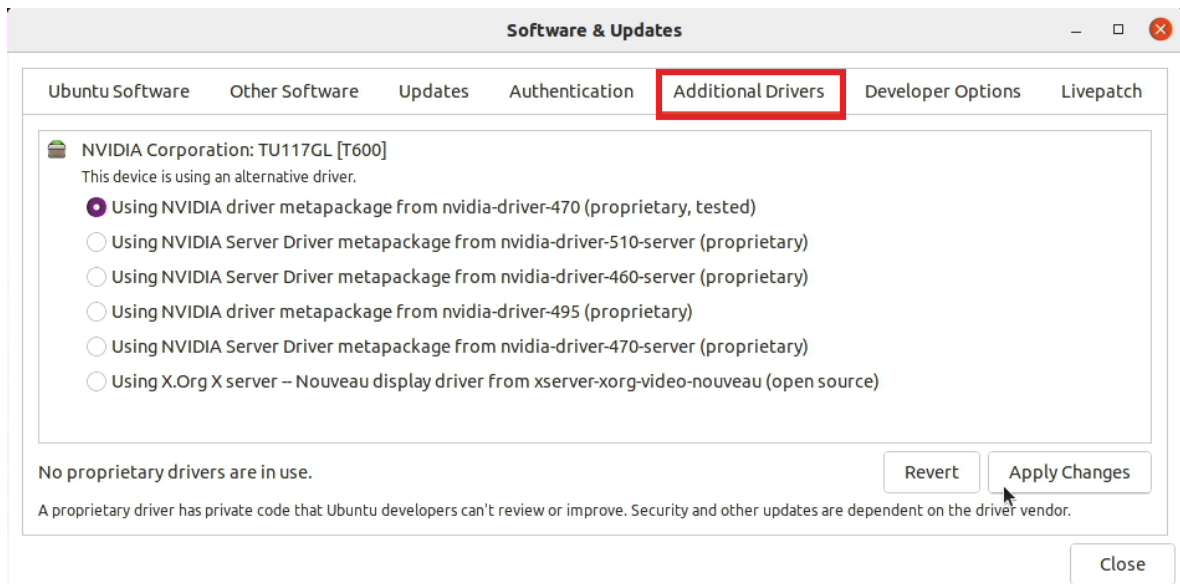

In case Nvidia GPU is not native, follow the steps below to install the GPU driver:
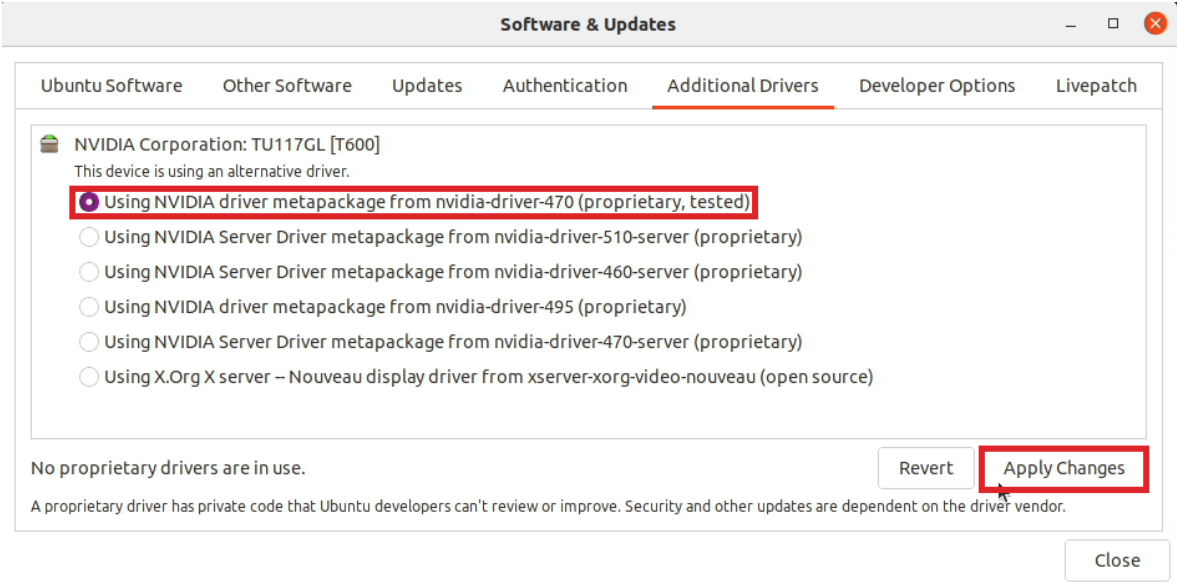
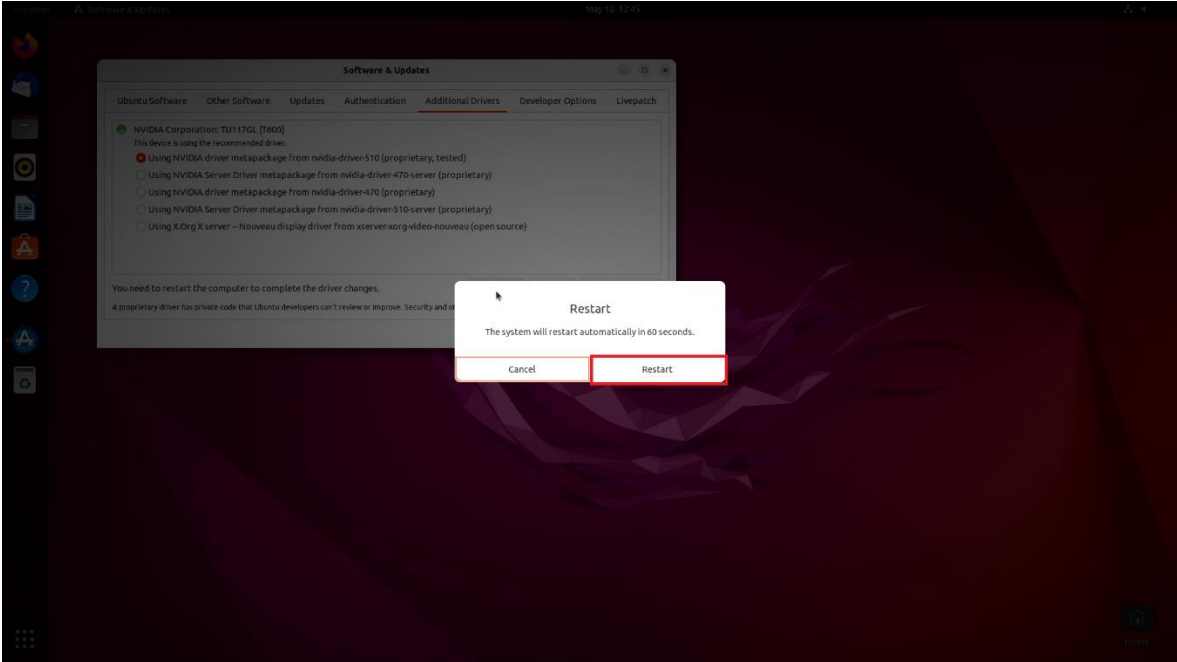- Open Software & Updates.

- Click on Additional Drivers

- Select the driver you would like to install and click Apply Changes

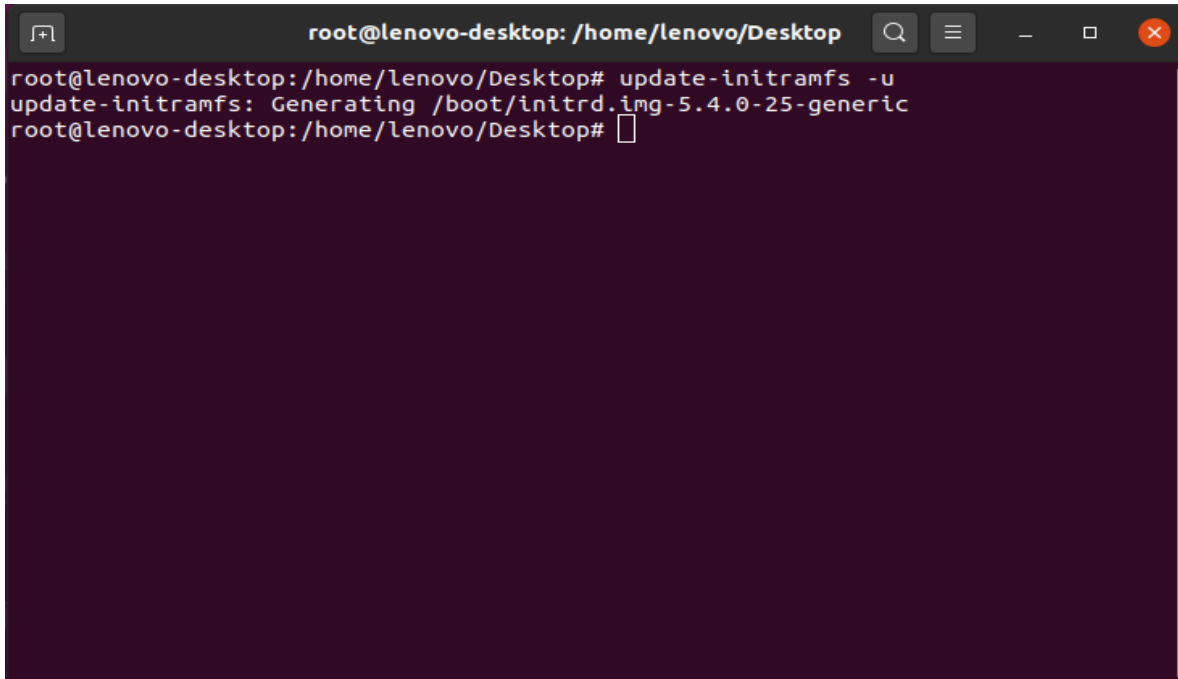- After that system will ask to restart, click Restart.

In case you desire to install a specific Nvidia driver please follow the next steps:

- Download the latest Nvidia graphics driver for the appropriate Nvidia GPU from www.nvidia.com/download
- To get the Nvidia driver running, we will need to blacklist the nouveau driver. Follow the steps below:
    - Log in as root: sudo su
    - Open blacklist.conf file: gedit /etc/modprobe.d/blacklist.conf
    - Blacklist nouveau driver by writing: blacklist nouveau
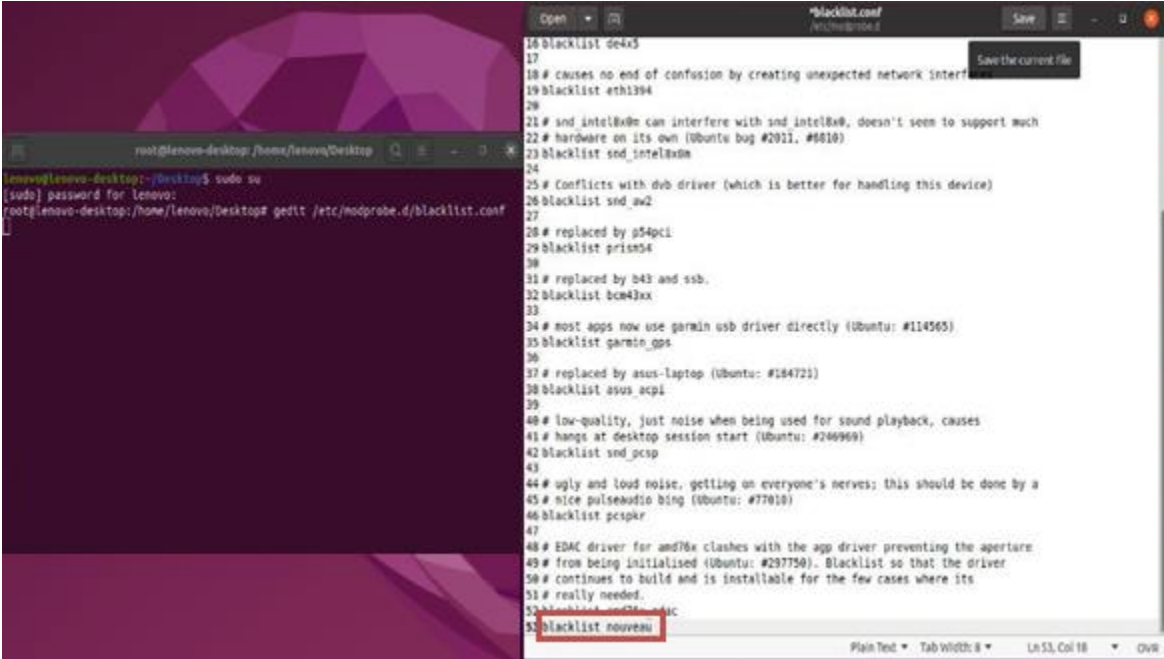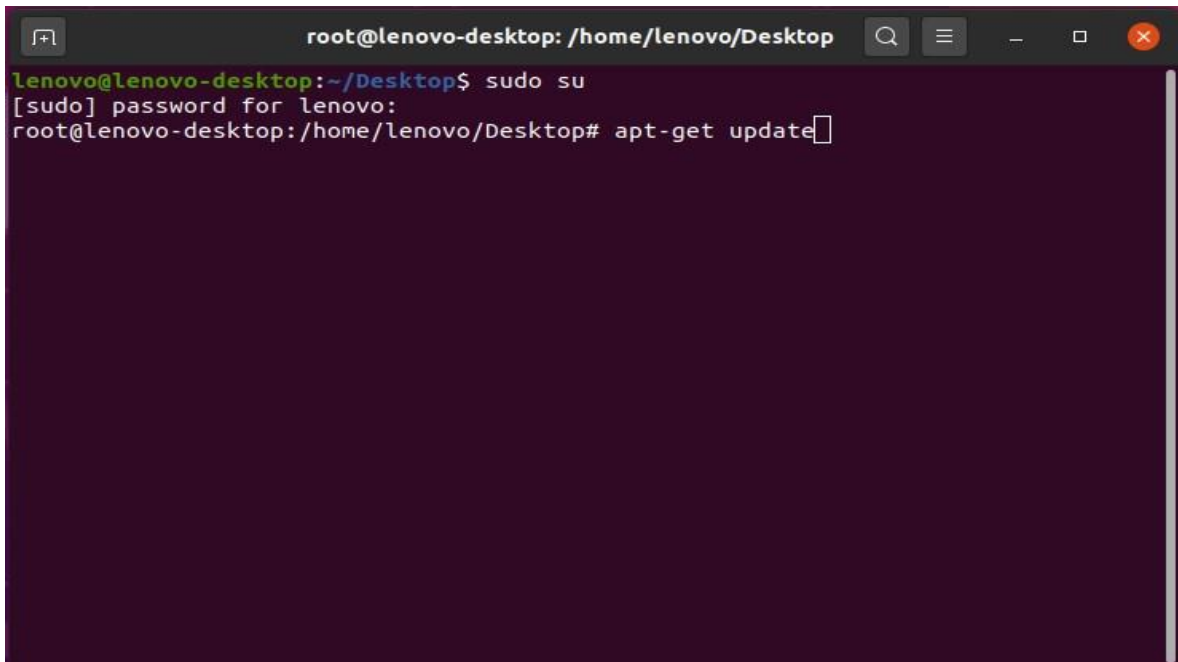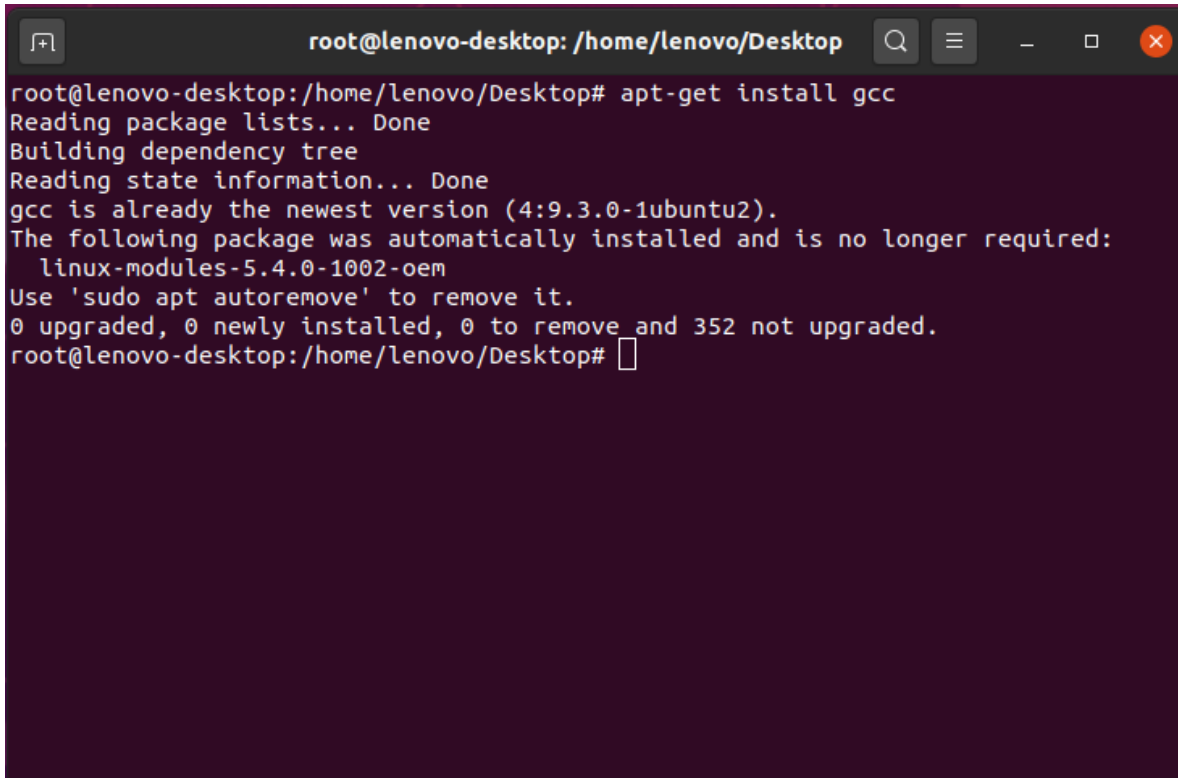
- Run the command: update-initramfs -u

- Reboot the system: reboot
  - o Once your system reboots, open a terminal window and:
  - o Log in as root: sudo su
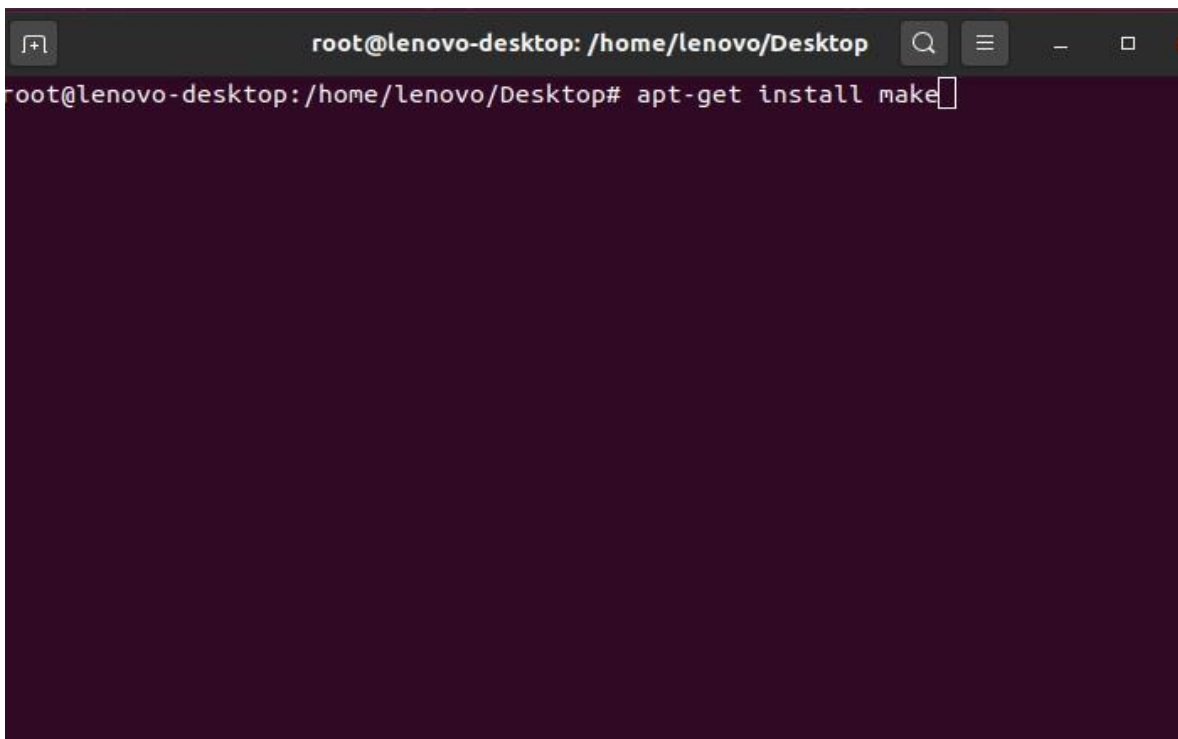 - o Run the command: apt-get update

- Install gcc: apt-get install gcc
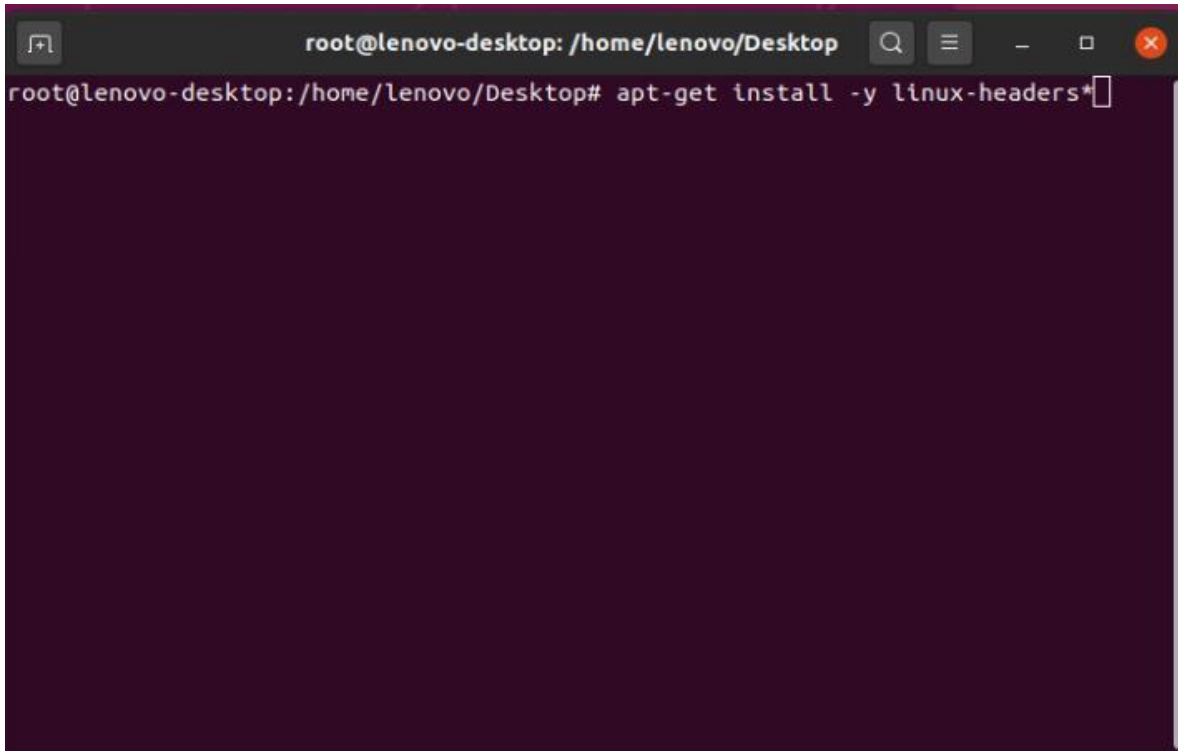
- Install make: apt-get install make
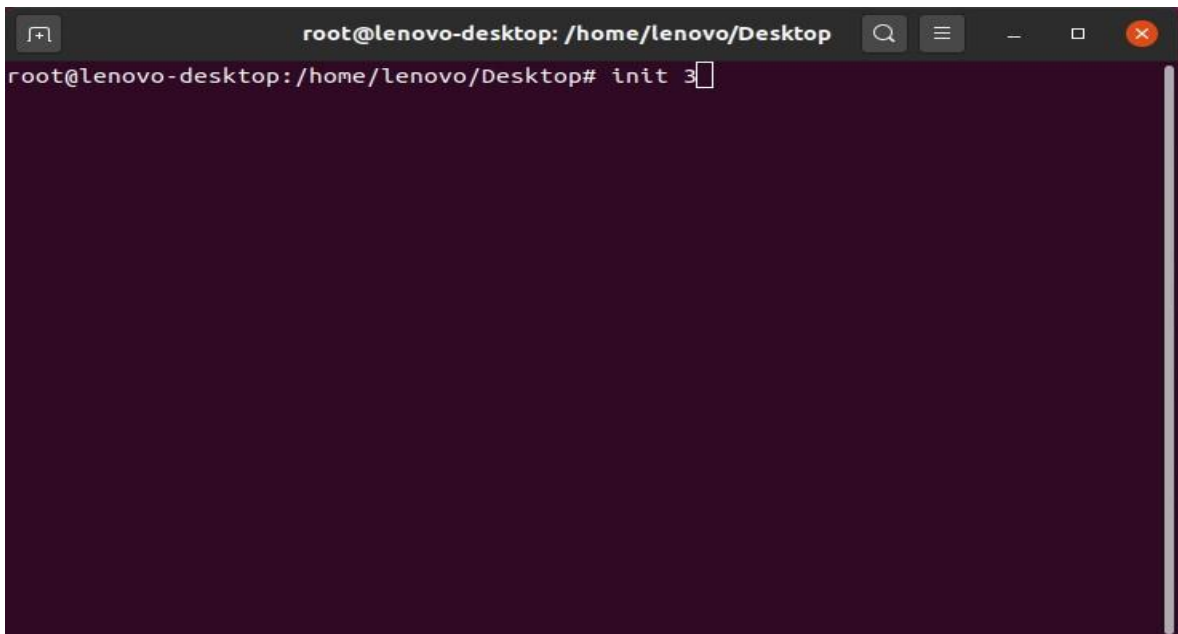
- Install linux-headers: apt-get install -y linux-headers*

- Stop x-windows by using the command: init 3

- Log in as root and redirect to the directory where the Nvidia driver is located.

- Make the Nvidia installer an executable by the command- chmod +x NVIDIA-Linux-x86-64-* And run the Nvidia driver by- ./NVIDIA-Linux-x86_64-430.50.run

- Select Continue installation.

-
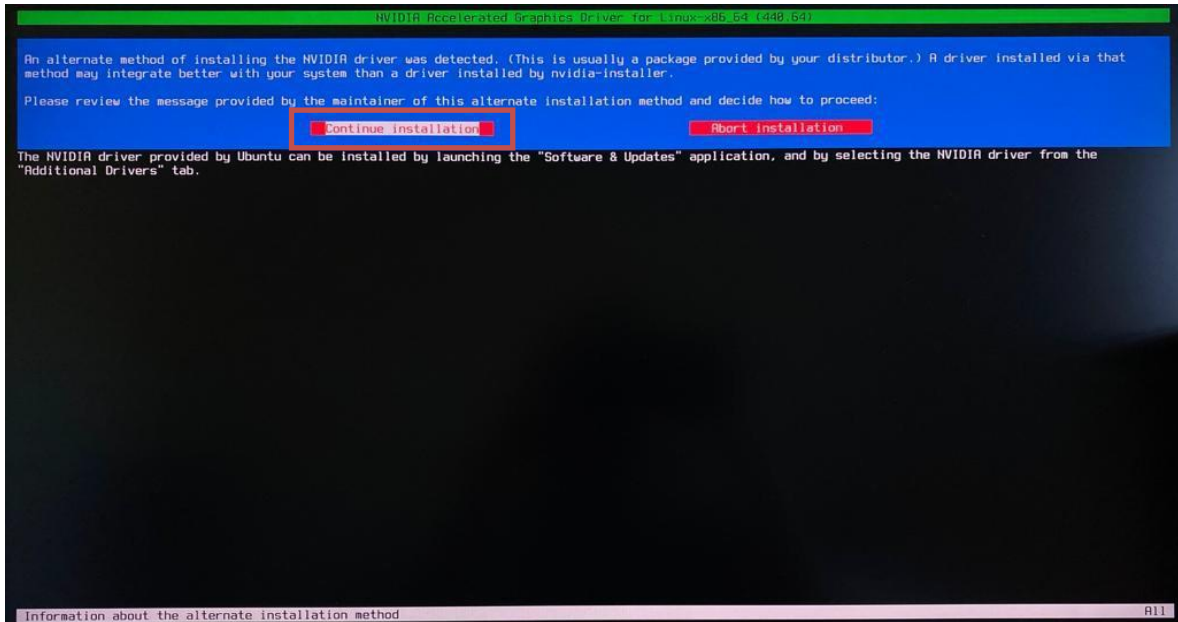
- Wait until the kernel modules are completely built.
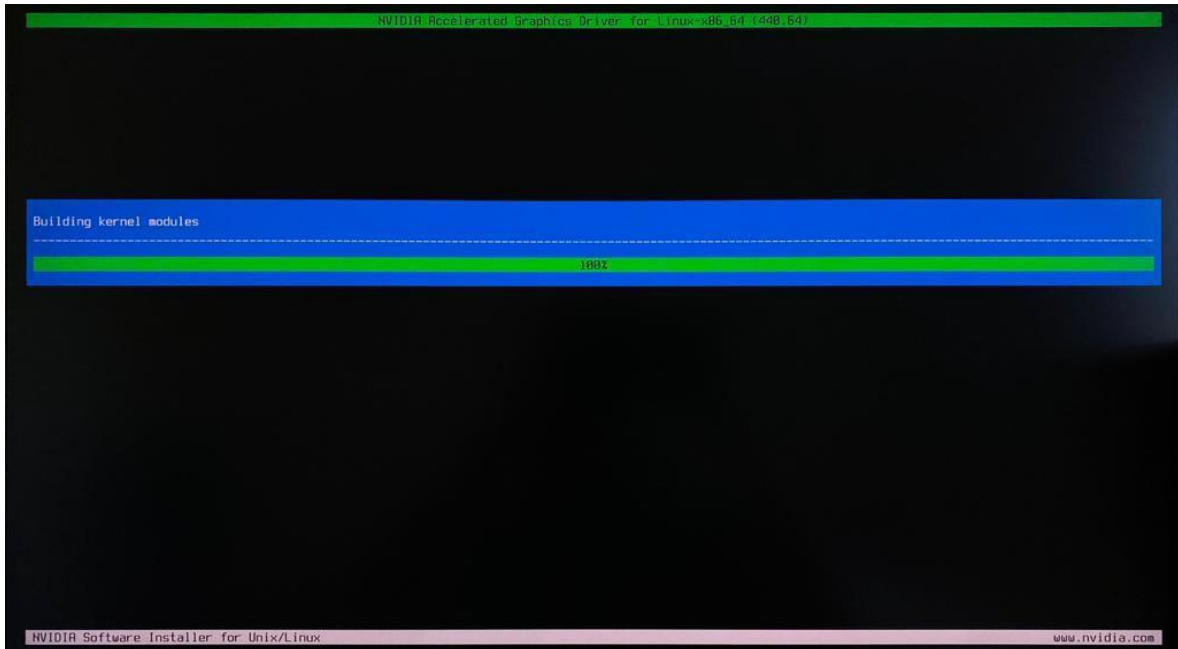
- Select Yes for installing 32-bit compatibility libraries.
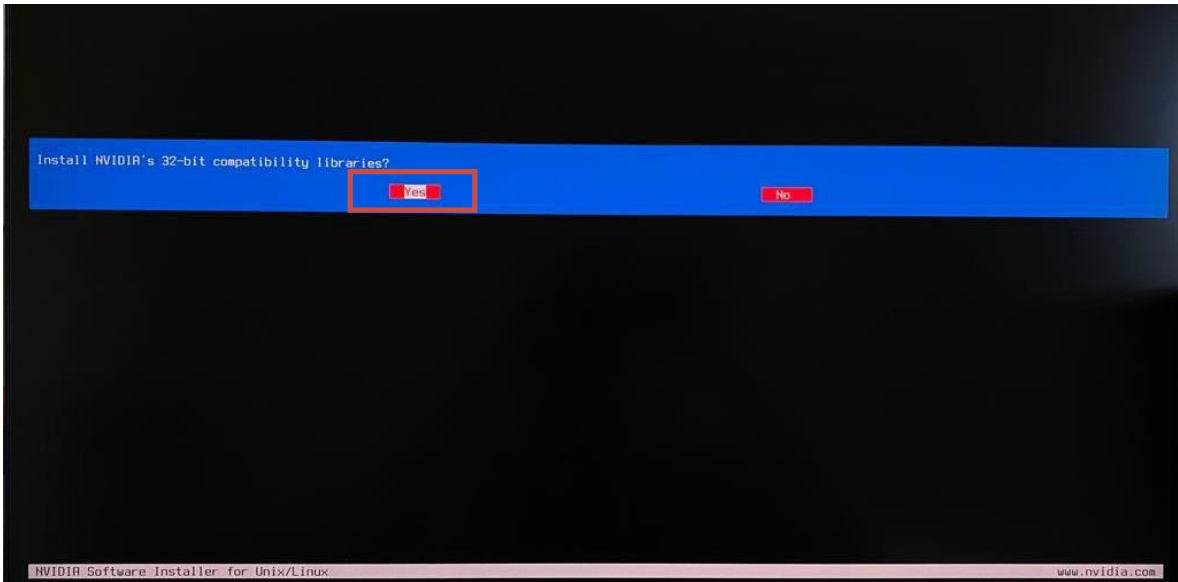
- Wait until the installation is complete.
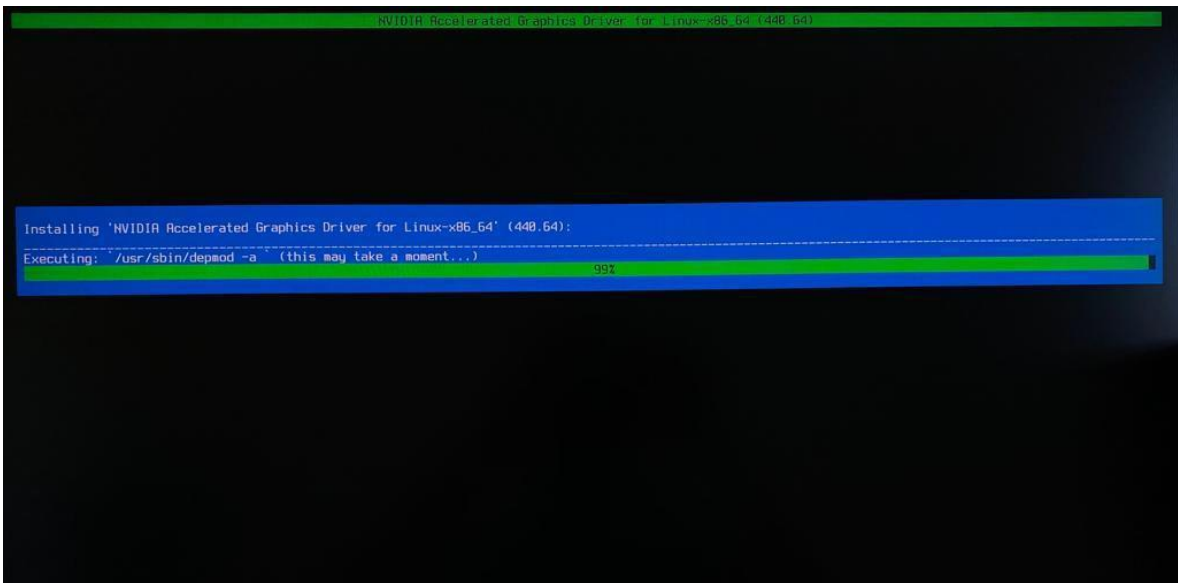
- Select Yes to run nvidia-xconfig utility to automatically update your X configuration file.
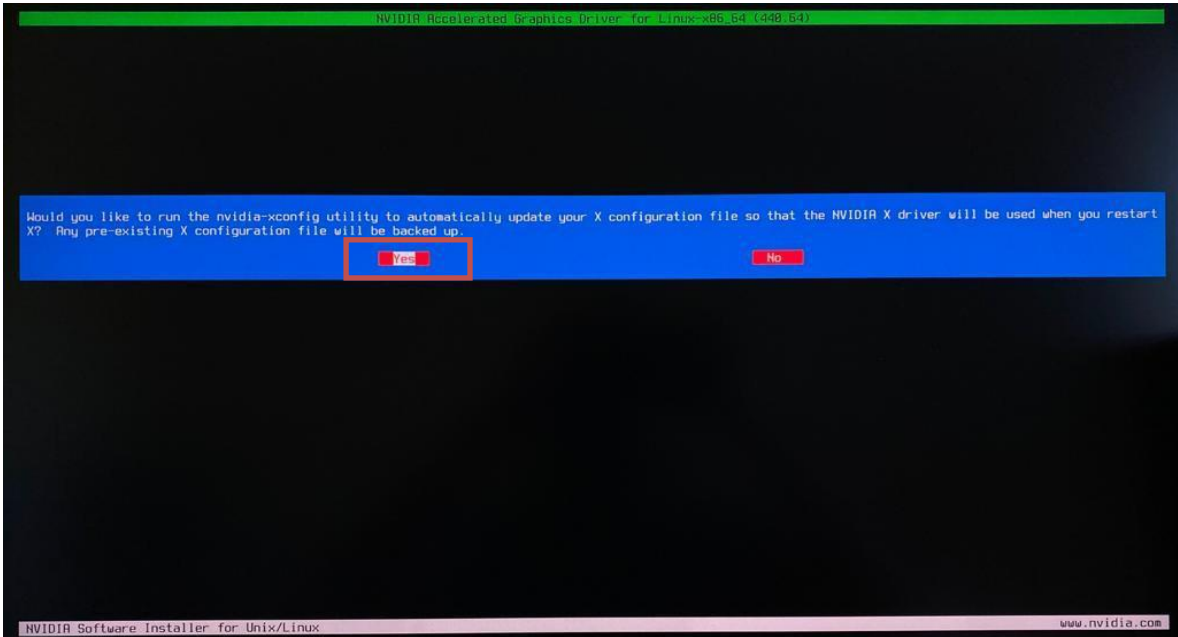
- Select OK once the X configuration file gets updated successfully.
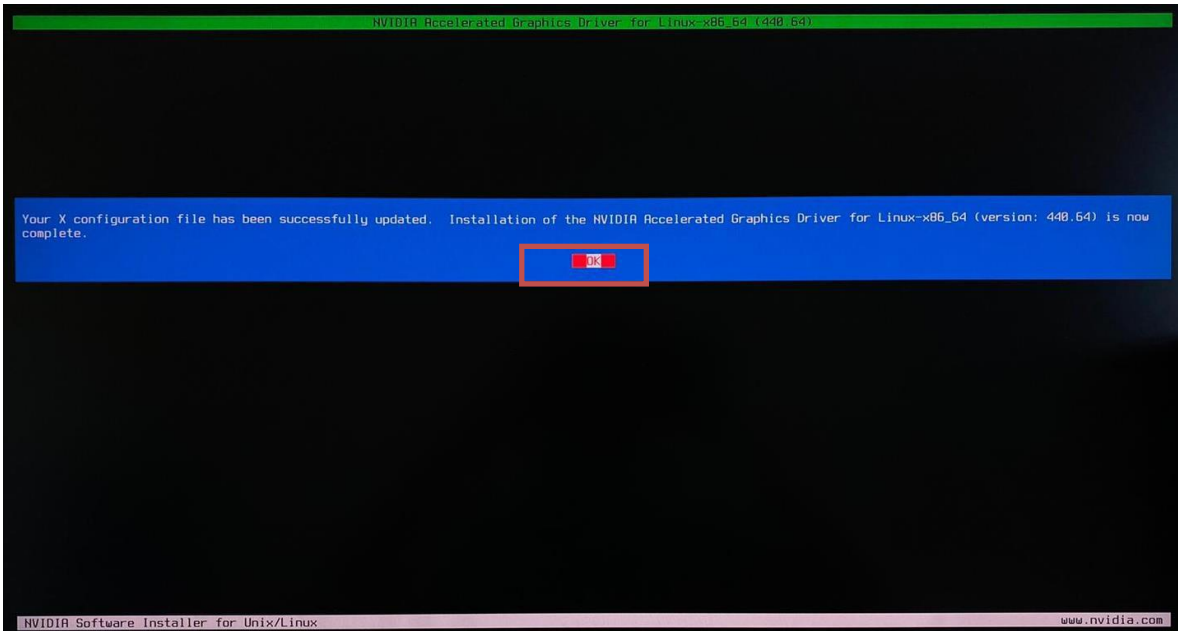
- Execute the following command to verify the Nvidia driver is loaded: nvidia-smi

```
root@lenovo-ThinkPad-P1-Gen2:/home/lenovo/Desktop# nvidia-smi
Wed Nov  6 16:39:08 2019
+-----------------------------------------------------------------------------+
| NVIDIA-SMI 440.31       Driver Version: 440.31       CUDA Version: 10.2      |
|-------------------------------+----------------------+----------------------+
| GPU  Name        Persistence-M| Bus-Id        Disp.A | Volatile Uncorr. ECC |
| Fan  Temp  Perf  Pwr:Usage/Cap|         Memory-Usage | GPU-Util  Compute M. |
|===============================+======================+======================|
|   0  Quadro T1000        Off  | 00000000:01:00.0 Off |                  N/A |
| N/A   49C    P0     7W /  N/A |     0MiB /  3908MiB |      0%      Default |
+-------------------------------+----------------------+----------------------+

+-----------------------------------------------------------------------------+
| Processes:                                                       GPU Memory |
|  GPU        PID    Type    Process name                          Usage      |
|=============================================================================|
|  No running processes found                                                 |
+-----------------------------------------------------------------------------+
root@lenovo-ThinkPad-P1-Gen2:/home/lenovo/Desktop# _
```

- Reboot the system.

Revision History

Version	Date	Author	Changes/Updates
1.1	7/12/2022	Aleksandr Panteleev	Added support for P360 Ultra
1.0	5/17/2022	Aleksandr Panteleev	Initial launch release