Mobiliya

Jetson Flashing Guide.

April, 2018

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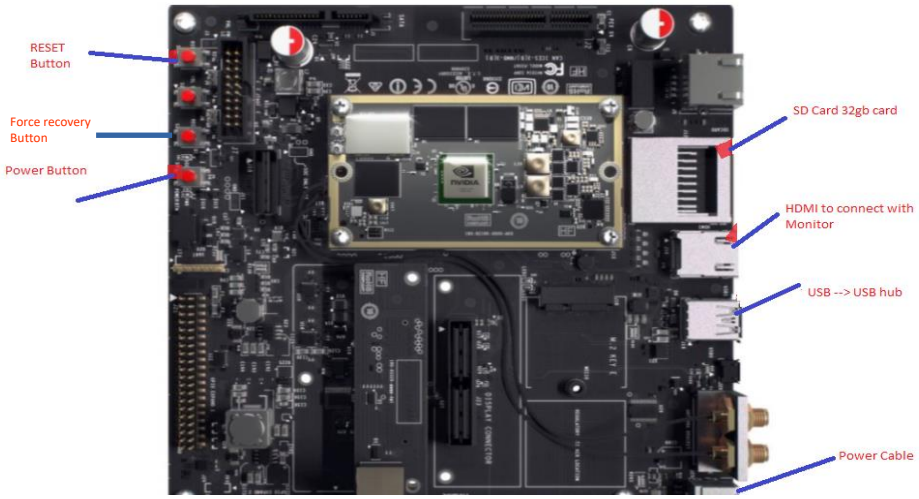
Introduction

We will flash Nvidia jetson board with Linux based OS.

Please refer following image for Jetson board layout.



Prerequisite

1. Host Ubuntu 16.04 machine with at least 10 GB available disk space
2. Jetson board
3. Micro B USB cable
4. Router
5. 3 LAN cables

Steps

Please follow following steps on host machine.

1. Download Nvidia Jetson **Jetpack** for flashing:

https://github.com/MobiliyaTechnologies/SecurityAndSurveillance/blob/master/Setup/installation/JetPack-L4T-3.1-linux-x64.run

2. Create a folder named **jetson_jetpack** for installation of Jetpack libraries.

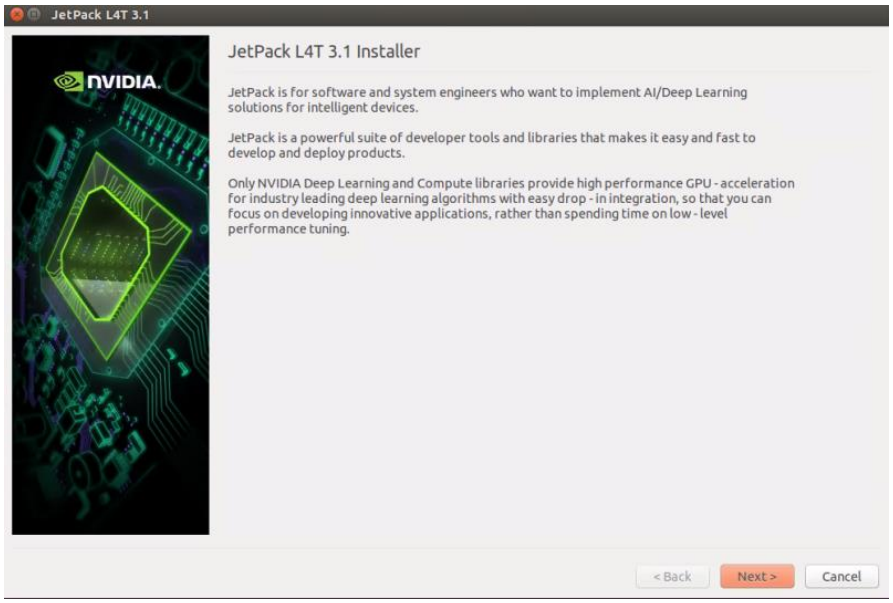
3. Place the downloaded JetPack-${VERSION}.run (Eg: **JetPack-L4T-3.1-linux-x64.run**) file in above folder

4. Add exec permission for the JetPack-L4T-3.1-linux-x64.run -

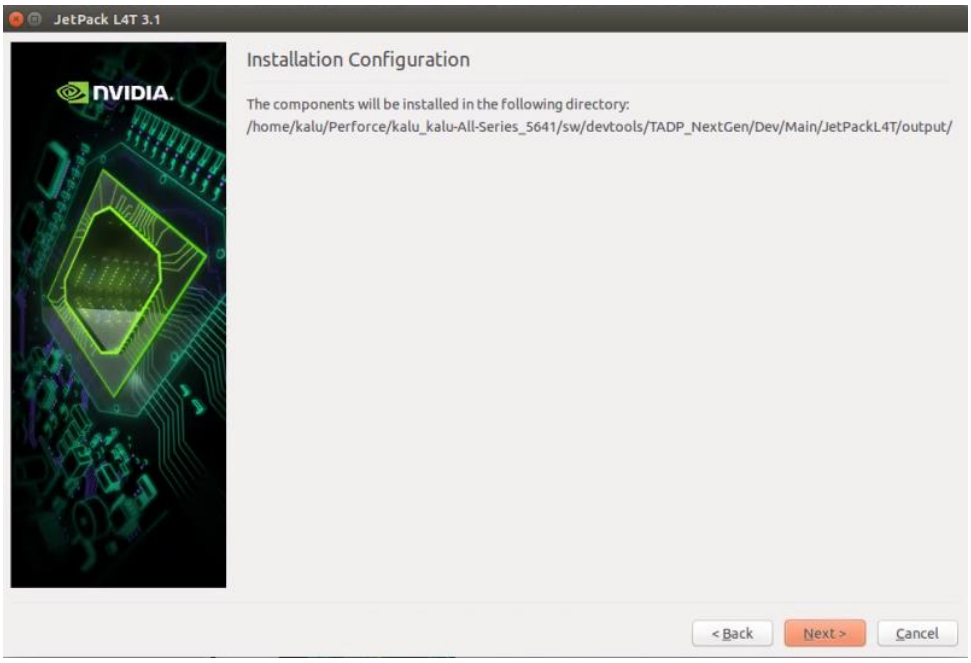
chmod +x JetPack-L4T-3.1-linux-x64.run

5. Run JetPack-L4T-3.1-linux-x64.run in terminal on your host Ubuntu machine.

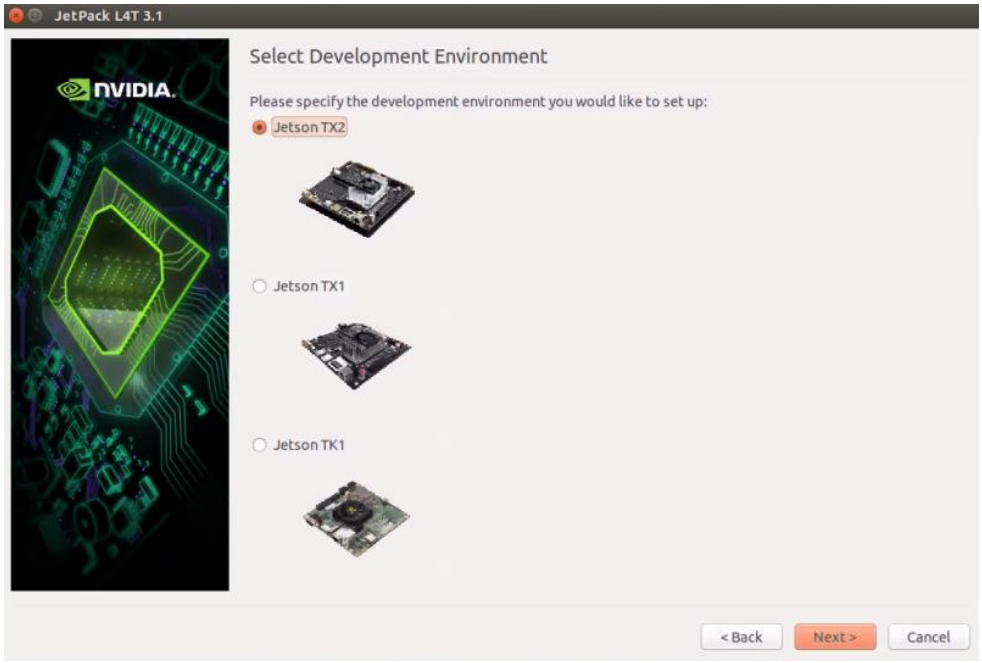
```
./ JetPack-L4T-3.1-linux-x64.run
```



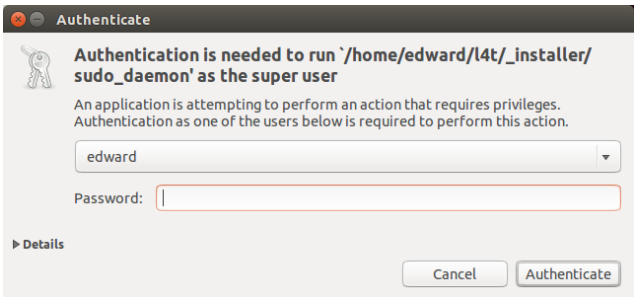
6. Next, the JetPack installer will indicate the installation directory.



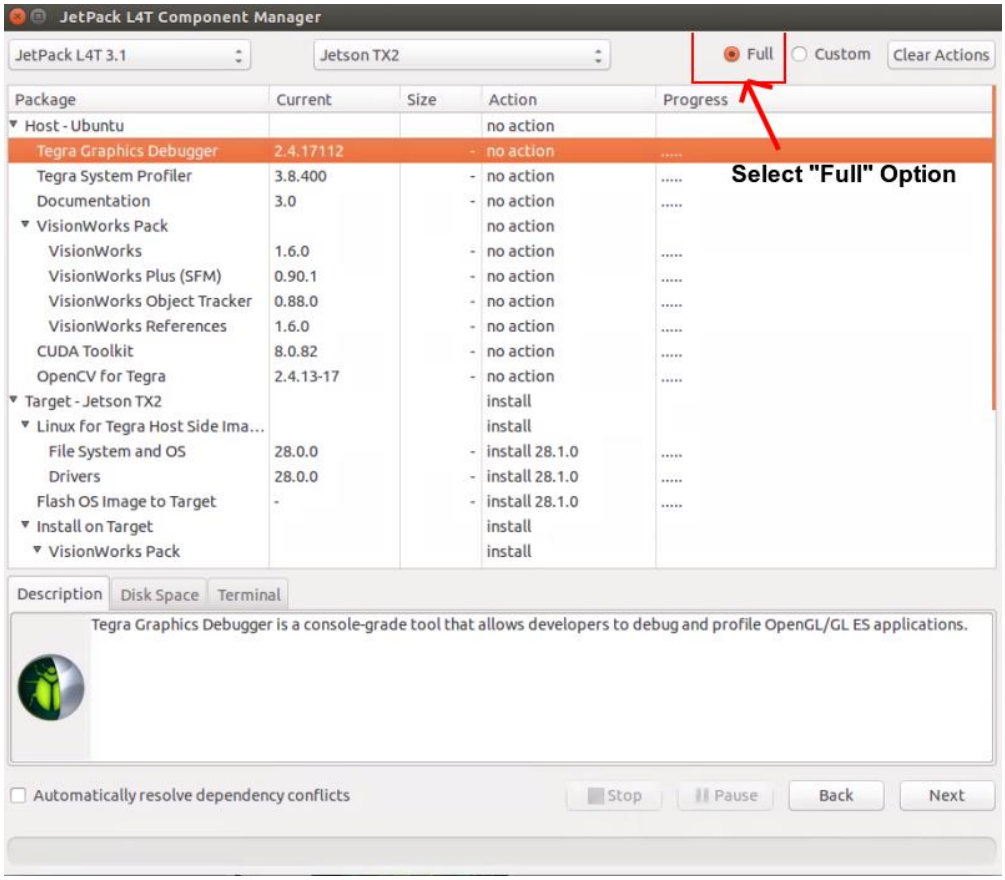
7. Select the development environment to setup.



8. The JetPack installer will pop up a window to ask for permission to use during the installation process; you will need to enter your sudo password here



9. Select the **Full** option for installing all the packages on the jetson.



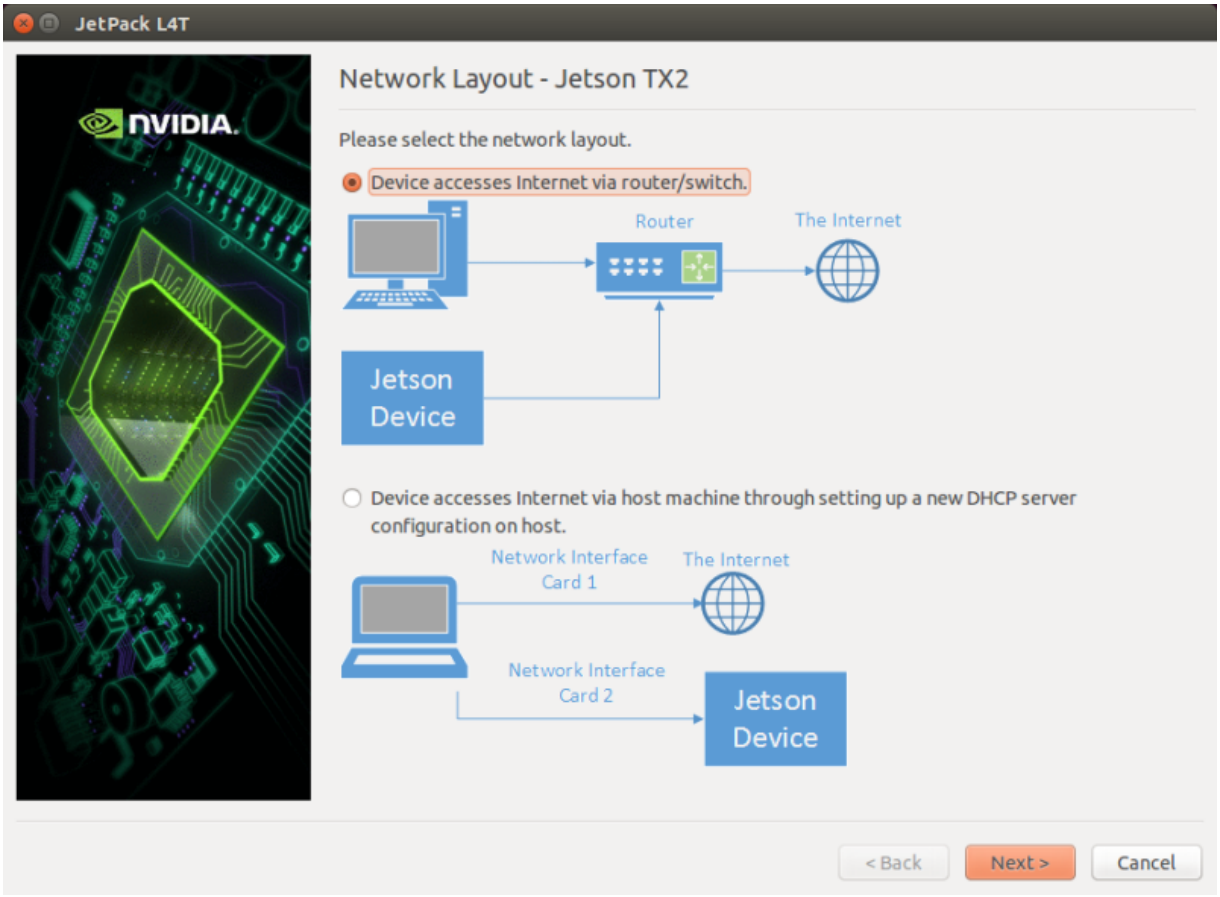
This will take around 20 minutes.

10. Accept the license agreement for the selected components. Select all.

11. The Component Manager will proceed with the installation. Once the host installation steps are completed, click the Next button to continue with the installation of target components.

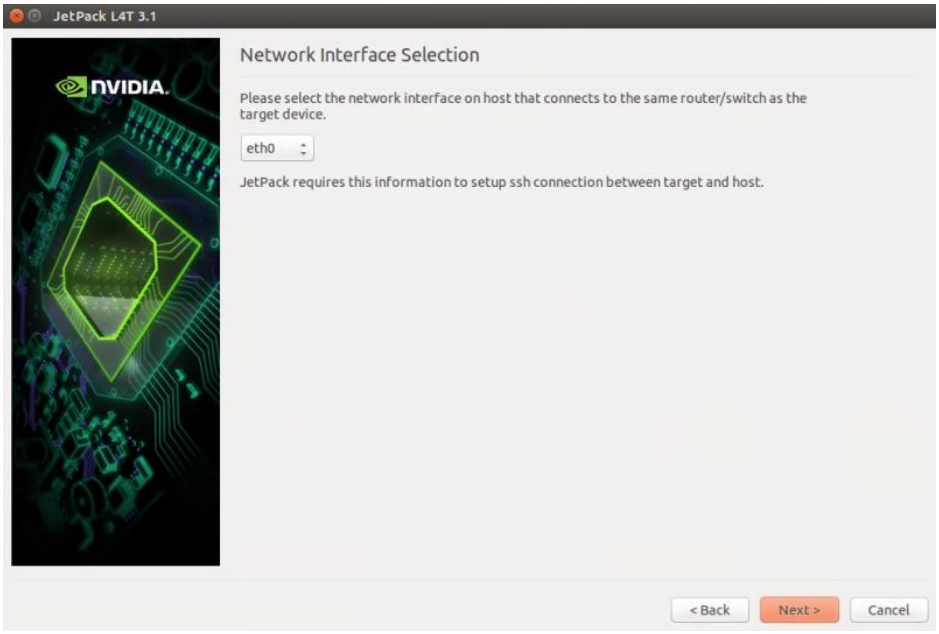
12. Please refer following setup for flashing jetson.

Note: Jetson and Host machine should be in same sub network and internet connection should be working on host machine.



13. If you selected the **Device access Internet via router/switch** layout, you will be asked to select which interface to use for Internet access.

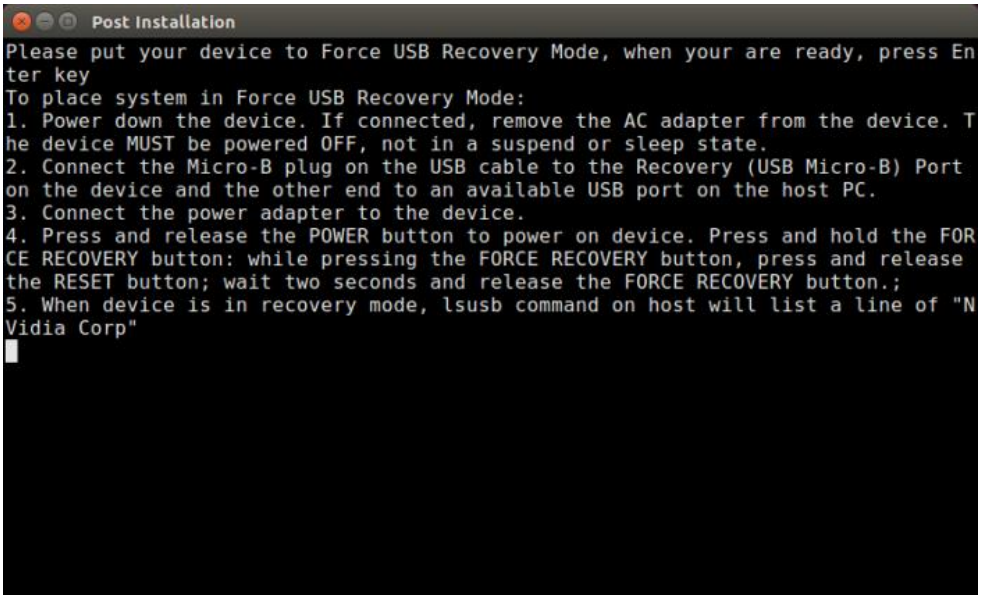
Note: eth0 or ensp0 will be displayed as option.



14. A pop-up window will instruct you to put your device into Force USB Recovery Mode, so you can flash the OS.

Fix for 4th step to put device in recovery mode:

Long press FORCE RECOVERY button, meanwhile press POWER button and release POWER button after a second. Then release FORCE RECOVERY button.



Note: Verify that Device with 'Nvidia Corp' is listed in lsusb output.

This will take around 15 minutes.

15. Next the host will try to identify the IP address of Jetson system. If it **gives up**, enter IP manually.

Note: To know IP of Jetson: Open Terminal on Jetson machine->**ifconfig**. Use HDMI cable to connect monitor/display.

16. After obtaining the IP the host PC will install all the libraries on Jetson device. This will take around 15 minutes.

17. After all the processing the host PC will give a 'Done Installation' message. Then Jetson is completely flashed.

18. Connect monitor, keyboard, mouse to jetson for further steps.