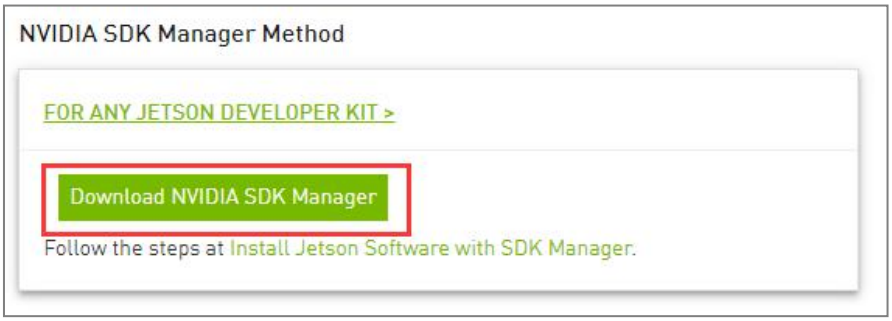
1.Download and install

1.1 Enter following website:

https://developer.nvidia.com/embedded/jetpack

By virtual machine Ubuntu18.04 system, click to “download SDK Manager”, please register/login NVIDIA account before use.



1.2 Install SDK Manager

Enter the path of the .deb file you just downloaded, for example, download it to the Downloads directory here.

cd Downloads/

```
yahboom@yahboom-vm:~$ cd Downloads/
yahboom@yahboom-vm:~/Downloads$ ls
sdkmanager_1.5.0-7774_amd64.deb
yahboom@yahboom-vm:~/Downloads$
```

1.3 Input following install command:

sudo dpkg -i sdkmanager_1.5.0-7774_amd64.deb

```
yahboom@yahboom-vm:~/Downloads$ sudo dpkg -i sdkmanager_1.5.0-7774_amd64.deb
[sudo] password for yahboom:
Selecting previously unselected package sdkmanager.
(Reading database ... 114535 files and directories currently installed.)
Preparing to unpack sdkmanager_1.5.0-7774_amd64.deb ...
Unpacking sdkmanager (1.5.0-7774) ...
dpkg: dependency problems prevent configuration of sdkmanager:
 sdkmanager depends on libgconf-2-4; however:
  Package libgconf-2-4 is not installed.
 sdkmanager depends on libcanberra-gtk-module; however:
  Package libcanberra-gtk-module is not installed.

dpkg: error processing package sdkmanager (--install):
 dependency problems - leaving unconfigured
Processing triggers for gnome-menus (3.13.3-11ubuntu1.1) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu3.18.04.2) ...
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Errors were encountered while processing:
 sdkmanager
```

1.4 At this point, the system may prompt an error that the dependent file cannot be found. Enter

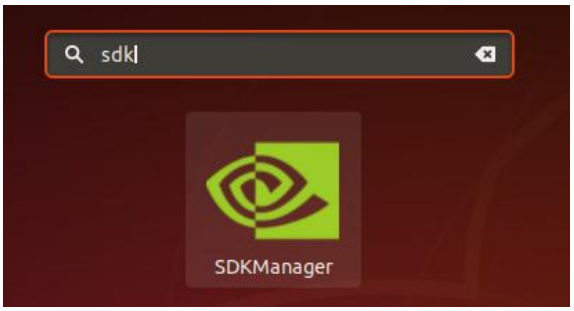
the following command to solve this problem.

sudo apt --fix-broken install

```
yahboom@yahboom-vm:~/Downloads$ sudo apt --fix-broken install
[sudo] password for yahboom:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Correcting dependencies... Done
The following packages were automatically installed and are no longer required:
  fonts-liberation2 fonts-opensymbol gir1.2-gst-plugins-base-1.0 gir1.2-gstreamer-1.0 gir1.2-gudev-1.0 gir1.2-udisks-2.0 grilo-plugins-0.3-base gstreamer1.0-gtk3
  libboost-date-time1.65.1 libboost-filesystem1.65.1 libboost-iostreams1.65.1 libboost-locale1.65.1 libcdr-0.1-1 libclucene-contribs1v5 libclucene-core1v5 libcmis-0.5-5v5
  libcolamd2 libdazzle-1.0-0 libe-book-0.1-1 libedataserverui-1.2-2 libeot0 libepubgen-0.1-1 libetonyek-0.1-1 libevent-2.1-6 libexiv2-14 libfreerdp-client2-2 libfreerdp2-2
  libgc1c2 libgee-0.8-2 libgexiv2-2 libgom-1.0-0 libgpgmepp6 libgpod-common libgpod4 liblangtag-common liblangtag1 liblirc-client0 liblua5.3-0 libmediaart-2.0-0 libmspub-0.1-1
  libodfgen-0.1-1 libqqwing2v5 libraw16 librevenge-0.0-0 libsgutils2-2 libssh-4 libsuitesparseconfig5 libvncclient1 libwinpr2-2 libxapian30 libxmlsec1 libxmlsec1-nss lp-solve
  media-player-info python3-mako python3-markupsafe syslinux syslinux-common syslinux-legacy usb-creator-common
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  gconf-service gconf-service-backend gconf2-common libcanberra-gtk-module libcanberra-gtk0 libgconf-2-4
The following NEW packages will be installed:
  gconf-service gconf-service-backend gconf2-common libcanberra-gtk-module libcanberra-gtk0 libgconf-2-4
0 upgraded, 6 newly installed, 0 to remove and 295 not upgraded.
1 not fully installed or removed.
Need to get 862 kB of archives.
After this operation, 8,134 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

2.Write

2.1 Open the program of the Ubuntu18.04 system, search for SDK, you can find SDKManager, and open the file.



2.2 A link will pop up in the browser, enter the user name and password to log in.

2.3 Let the virtual machine Ubuntu18.04 connect jetson NX. Before that, we need to let the jetson NX enter the system REC flashing mode.

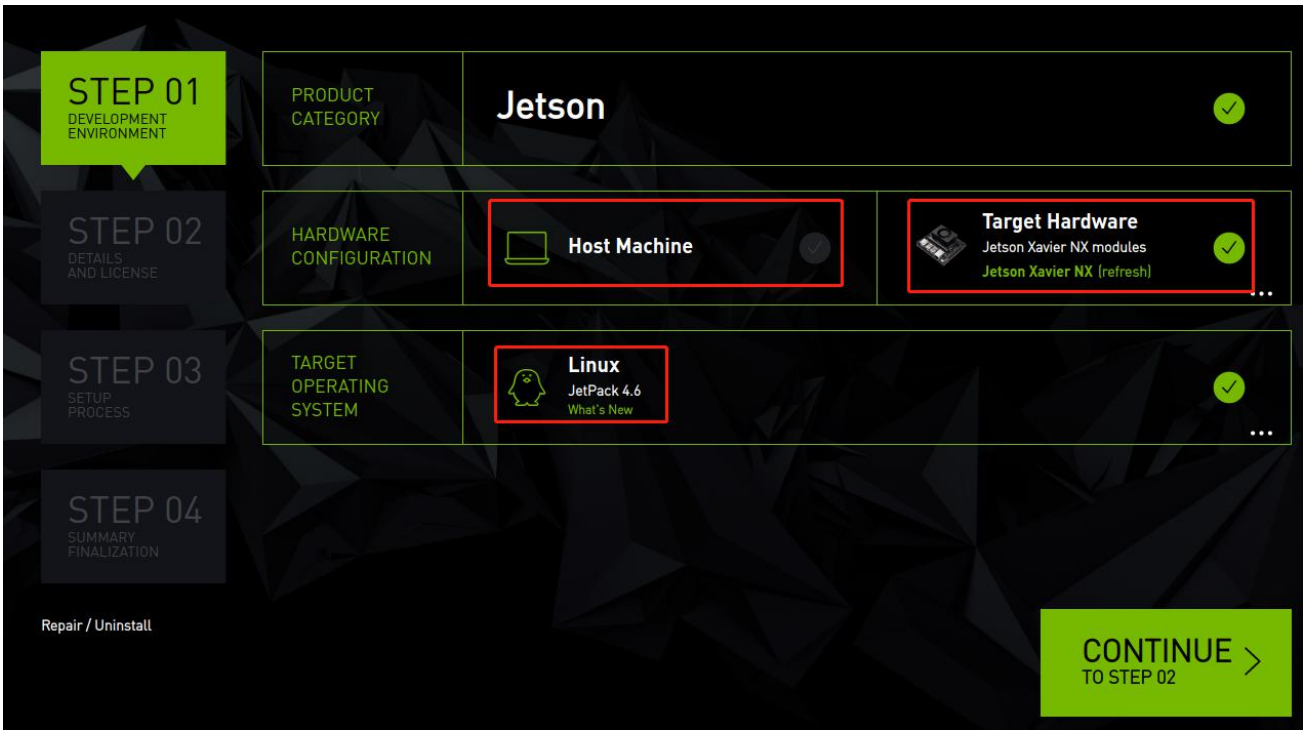
Connect the jumper caps to the **FC REC and GND** pins, that is, the second and third pins of the carrier board below the core board, as shown below.

2.4 Connect the HDMI display, mouse, keyboard, and microUSB cable to the Jetson Xavier NX, and connect the power adapter.

Since the jumper cap has been connected to the FC REC and GND pins in the previous step, Jetson Xavier NX will automatically enter the REC flashing mode after power on.

5.Make the following selections on the virtual machine Ubuntu18.04.

We use version 4.6 of JetPack as an example.

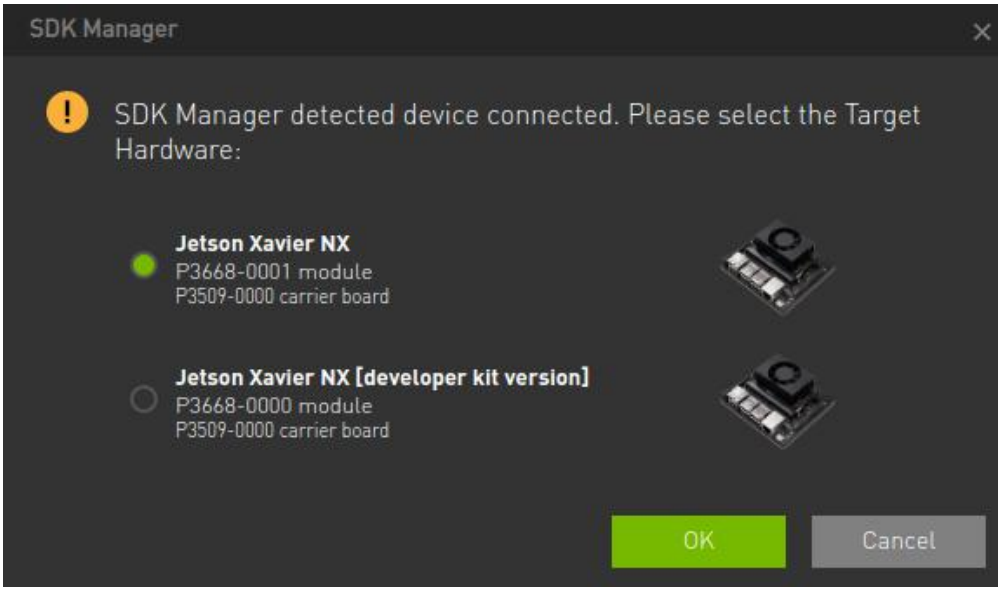


If the target hardware shows a disconnected status, please confirm whether the device has entered the REC flashing mode and connected to the virtual machine, and then click "refresh".

!! Note: Using a virtual machine requires the device to be set up to connect to the virtual machine.

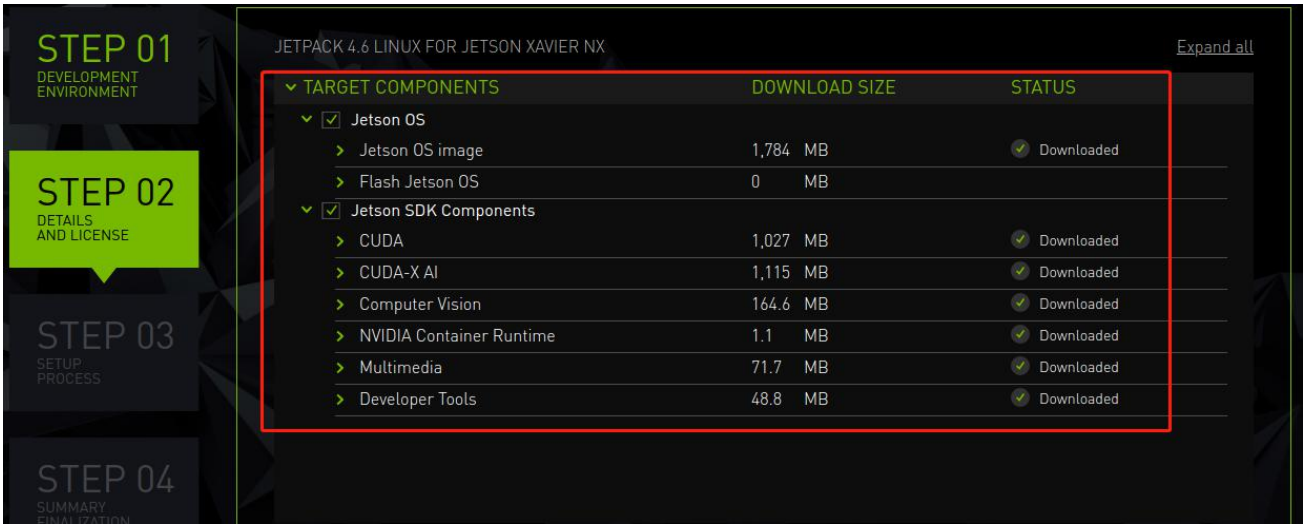
2.6 If the above prompt does not appear, you can connect manually in the lower right corner of the virtual machine: After finding NVIDIA APX, click Connect to the virtual machine.
The light is on to indicate that it is connected to the virtual machine. As shown below.

There are two versions of Jetson Xavier NX, we need to choose according to the actual situation.
Choose P3668-0001 module with EMMC, choose P3668-0000 module with SD card slot.

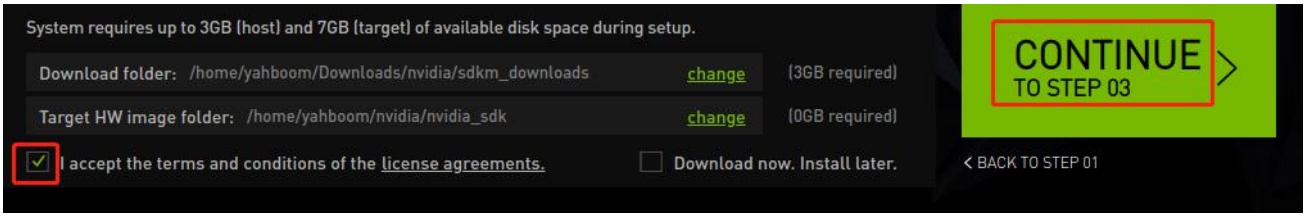


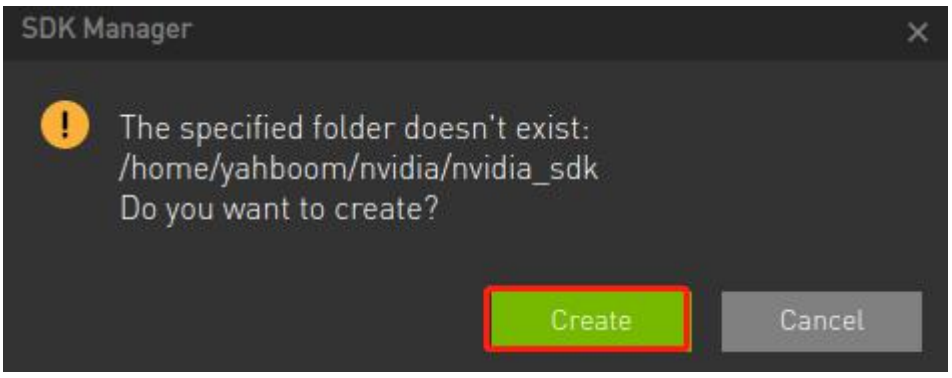
After confirmation, click “CONTINUE”.

2.7 By default, Jetson OS and Jetson SDK Components will be checked, indicating that the system and SDK are flashed. We can choose the system OS or software SDK separately, but before flashing the software SDK separately, we need to ensure that the system OS has been flashed.

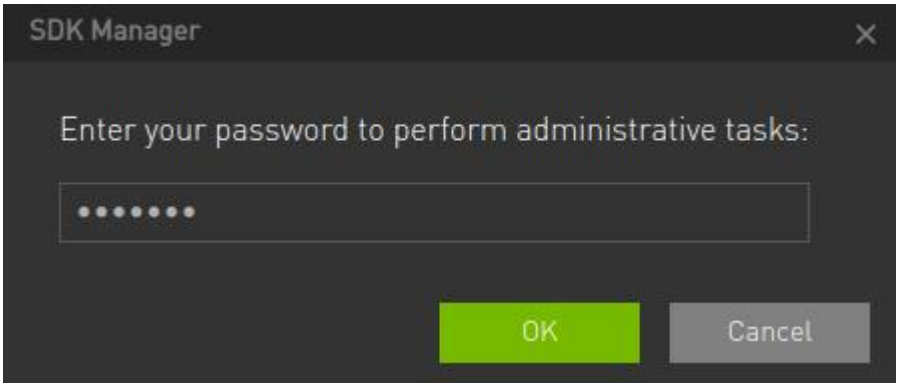


2.8 Just keep the default file download path, check the protocol, and click “CONTINUE” to go to the next step.



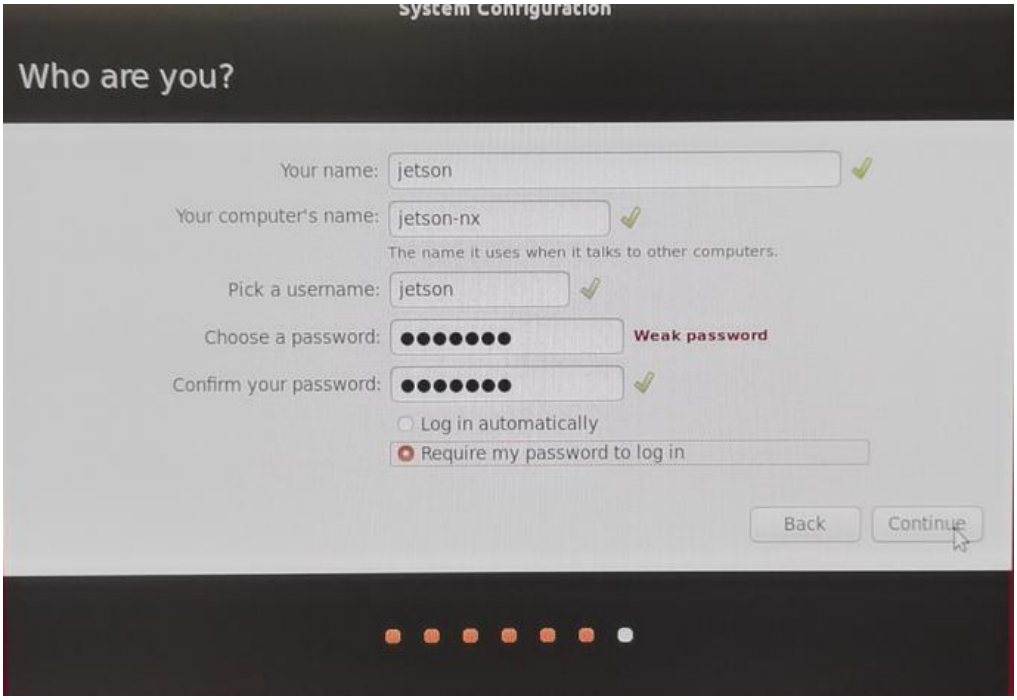


Input password.

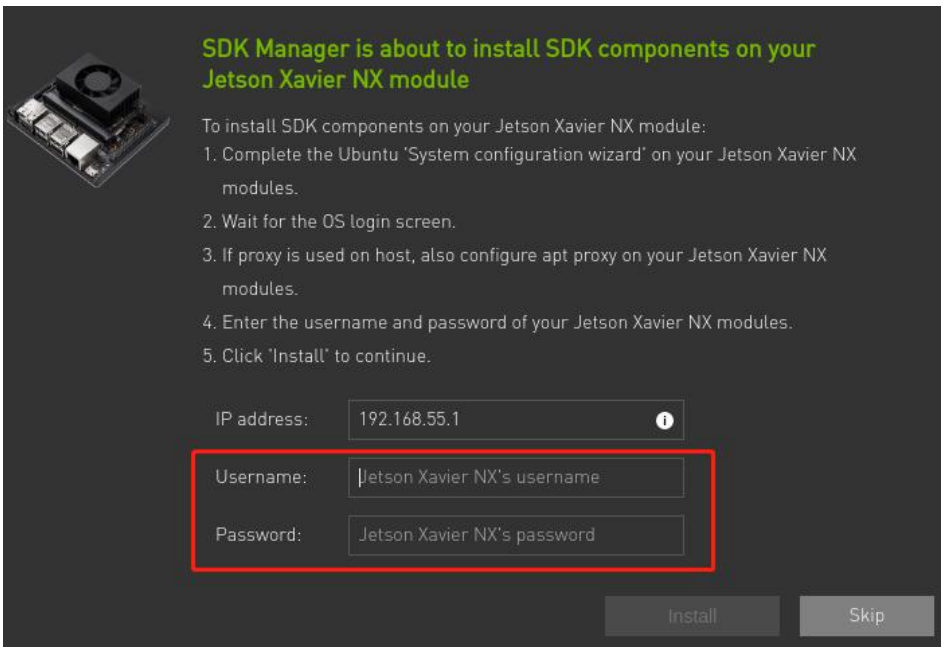


At this time, SDKManager will first download the files to be written, and wait for the download of the files to complete to start writ the system file.

2.9 After the system OS writing is completed, Jetson Xavier NX will automatically restart and enter the system. At this time, you need to set the basic functions of the system according to the system prompts. You must set the user name and password, etc. You must remember the user name and password here, otherwise there will be a problem of not logging into the system.

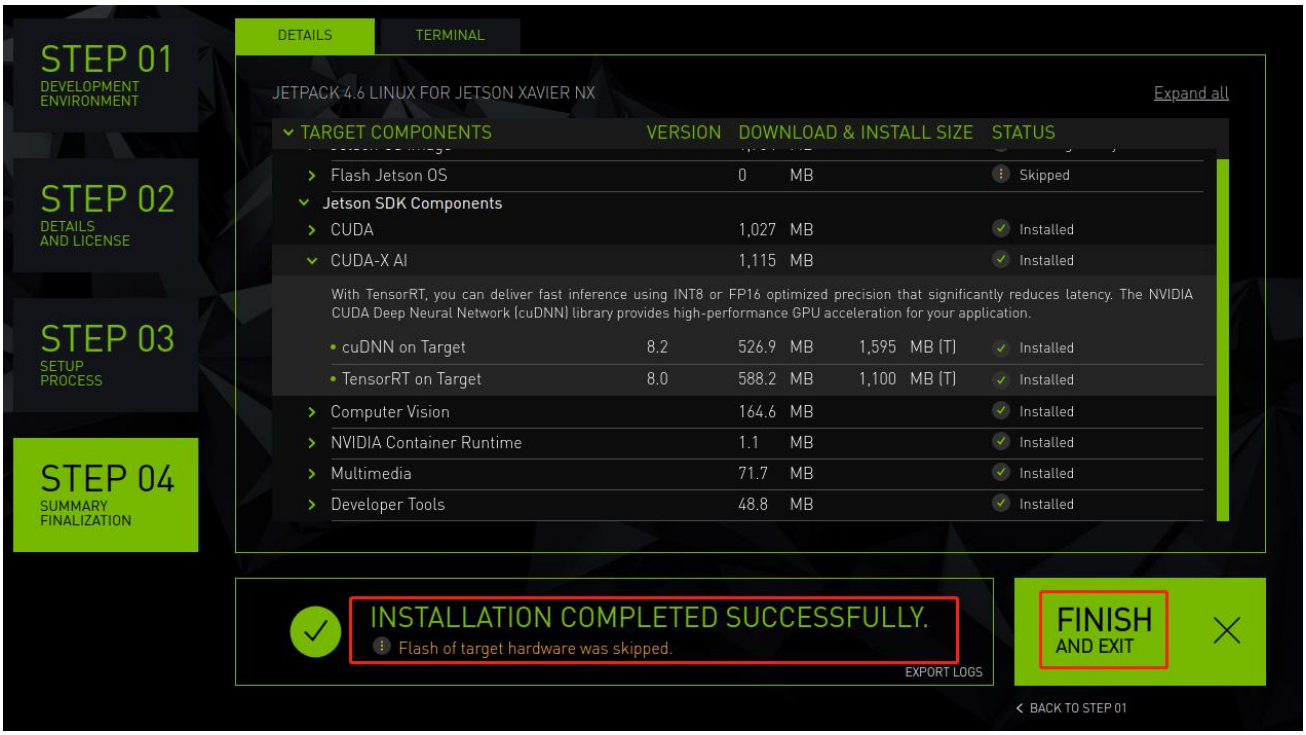


2.10 After the system setup is completed, the Jetson Xavier NX will be restarted again, and it will be disconnected from the virtual machine. We can re-plug and unplug the USB data cable, and then connect it to the virtual machine.
Then, enter the username and password of the Jetson Xavier NX you just set, and click “Install” to install the software SDK.



Note: Since flashing the SDK needs to use the network in the LAN to transmit data, please insert the network cable for stable transmission.

After completion, it will prompt that all installations are successful, click “FINISH”. If the installation of a software fails during the installation process, please click “Reinstall”.



2.11 After flashing the system and SDK, please remove the jumper cap between FC REC and GND.