1. Install partition software

Open the terminal of the computer (virtual machine) system and enter the following command to install the partition management tool gparted
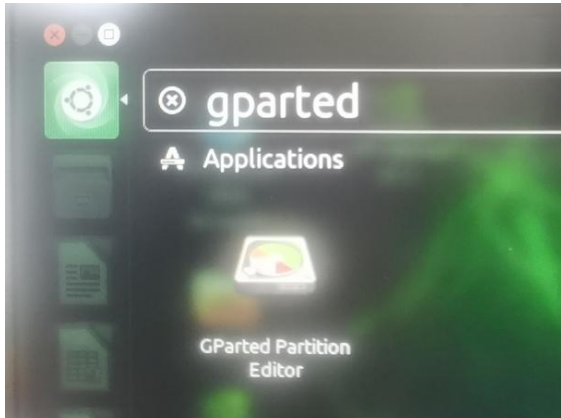
sudo apt install gparted

2. Backup system

2.1 Remove the NVME solid-state drive from the Jetson Xavier NX board, insert it into the solid-state drive box, and connect it to the computer (virtual machine). At this time, the computer will automatically recognize the solid-state drive.
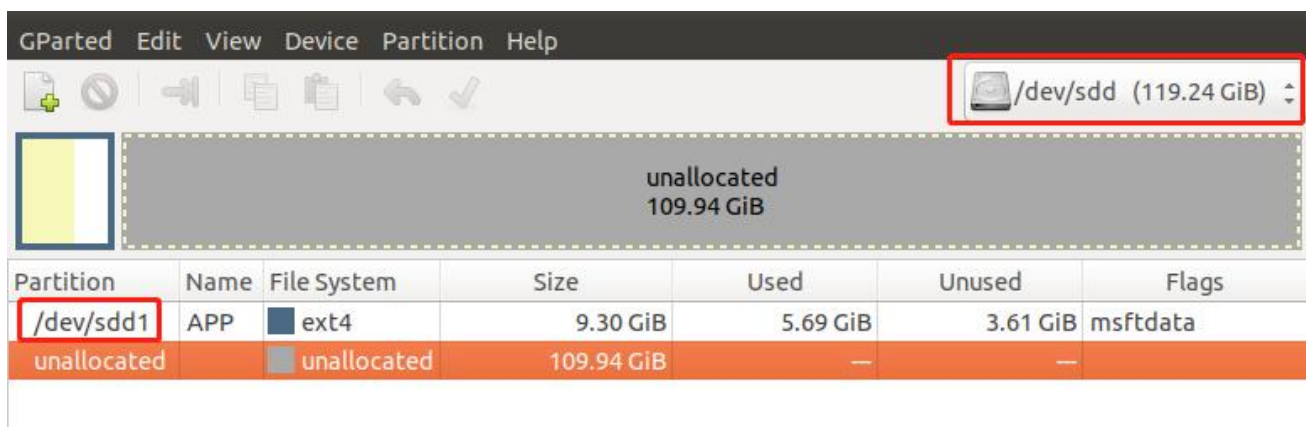
2.2 Open the application repository of the computer (virtual machine), search for and open "gparted".

3. Check the hard disk number, write down the device number (/dev/sdd1) in Partition.

Right-click the device number, and click "Unmount" to download the hard disk.

Note: In this step, you must select the correct hard disk number.

4. Open the terminal of the computer (virtual machine) and enter the following command to start backing up the system.

sudo dd if=/dev/sdd1 of=/home/yahboom/nx_rootfs.raw bs=1M

```
yahboom@YAB:~$ sudo dd if=/dev/sdd1 of=/home/yahboom/nx_rootfs.raw bs=1M
```

dd parameter explanation:

if=file   #Input file name, default is standard input.

of=file   #Output file name, default is standard output.

bs=bytes   #At the same time, set the size of the read and write blocks to bytes.

At this point just wait for it to complete.

If you need to view the progress of dd, you need to open another terminal and enter the following command:

sudo watch -n 3 pkill -USR1 ^dd$

```
yahboom@YAB:~$ sudo watch -n 3 pkill -USR1 ^dd$
```

Then, the terminal of the original dd will print the progress every three seconds until it is completed.

```
9897508864 bytes (9.9 GB, 9.2 GiB) copied, 609.736 s, 16.2 MB/s
9486+0 records in
9485+0 records out
9945743360 bytes (9.9 GB, 9.3 GiB) copied, 612.742 s, 16.2 MB/s
9524+1 records in
9524+1 records out
9987665920 bytes (10 GB, 9.3 GiB) copied, 615.451 s, 16.2 MB/s
yahboom@YAB:~$
```

After completion, you can view the generated raw file. This file needs to be saved and used for subsequent system recovery.

```
yahboom@YAB:~$ ls
Desktop     Downloads        jetsonNX  nvidia        Pictures  Templates
Documents   examples.desktop Music     nx_rootfs.raw Public    Videos
yahboom@YAB:~$
```