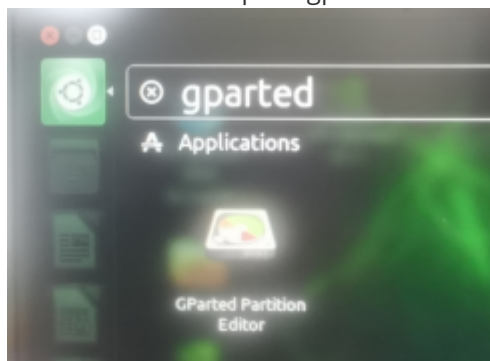


NVME system expansion

Due to the inability to directly expand the space of the running system, we need to first remove the solid-state drive, place it in the solid-state drive box, and then connect it to the computer (virtual machine) before proceeding with the operation.

1.Virtual machine opens gparted



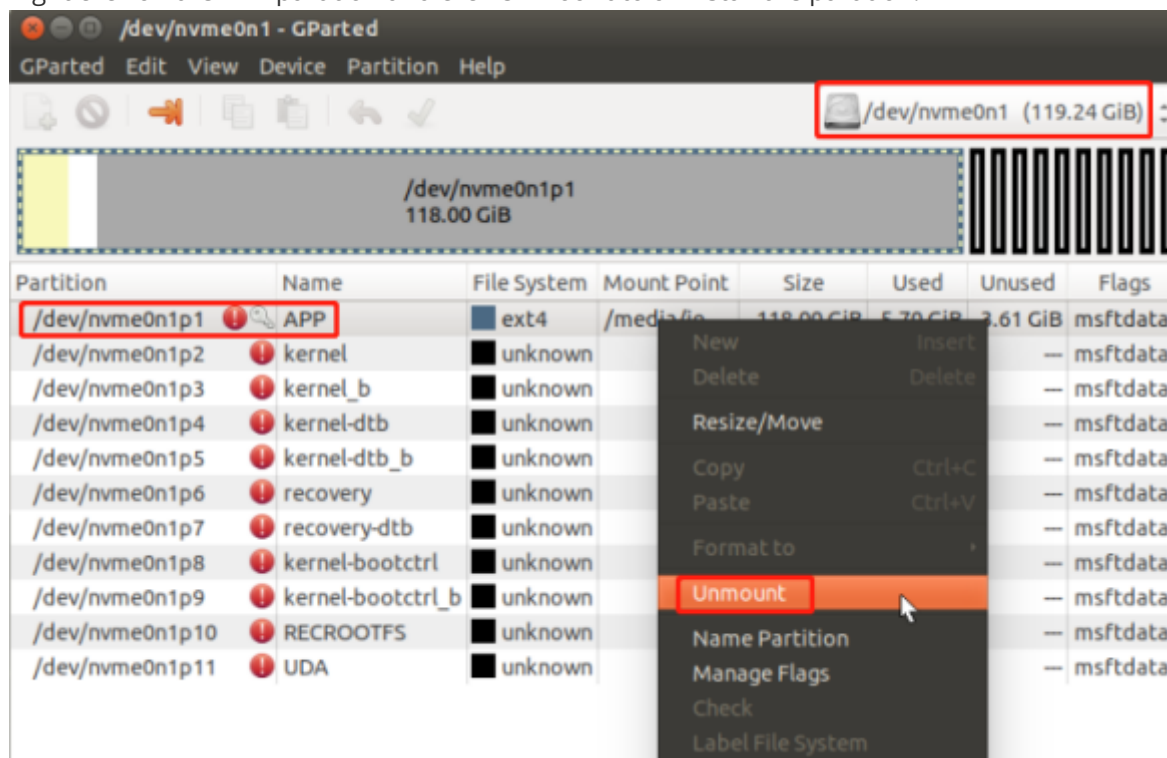
If you don't have this software, download it first

```
sudo apt install gparted
```

2.Select the corresponding NVME hard drive/`/dev/nvme0n1` (whichever is actual), and check the information. The corresponding partition of the APP partition is/`/dev/nvme0n1p1`. Note: This step must select the correct hard drive number.

It can be seen that some parts of the APP partition are gray, and it is normal to change the gray part to white. Color representation: Yellow represents used space, white represents unused space, and gray represents unavailable space. This is because the recovered system is compressed, so the internal space needs to be re checked before it can expand to the entire partition capacity.

Right click on the APP partition and click Unmount to uninstall the partition.



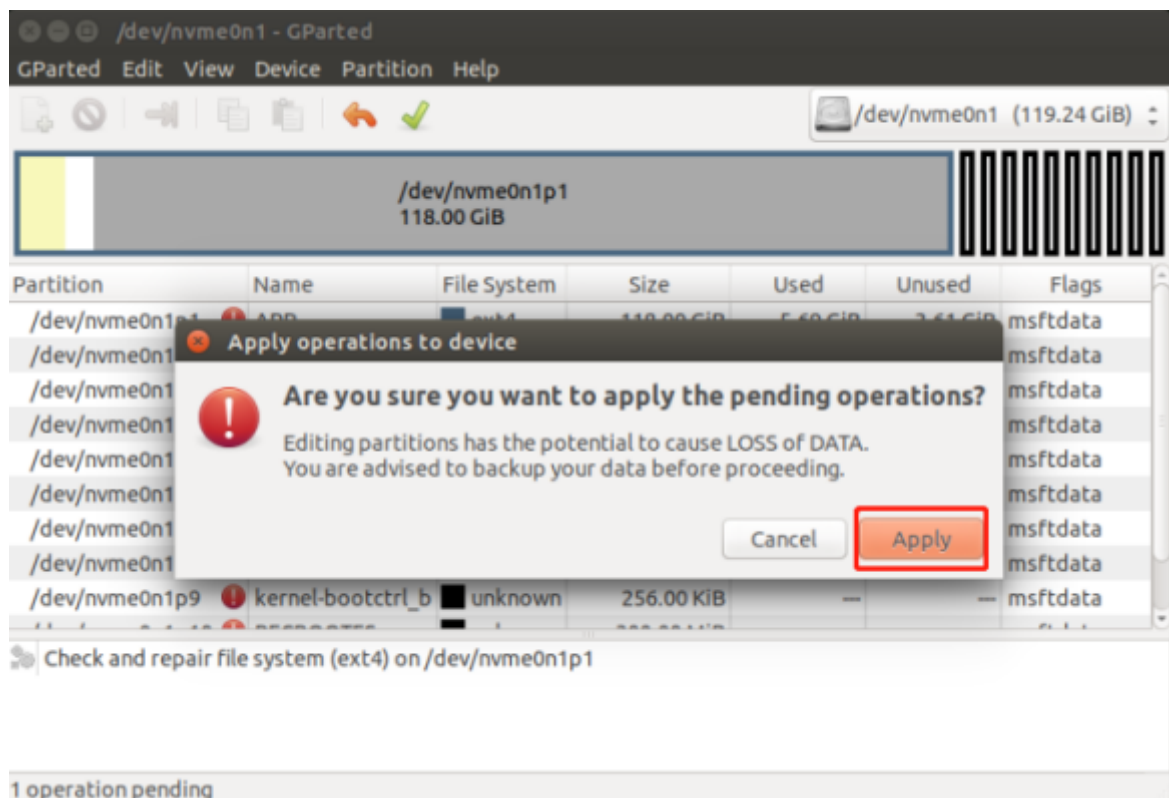
3. Select the APP partition, right-click again, select Check, and then follow the prompts to complete the operation.

The screenshot shows the GParted application window for the device `/dev/nvme0n1` (119.24 GiB). The partition table lists several partitions, including `/dev/nvme0n1p1` (APP, ext4, 118.00 GiB). A right-click context menu is open over the APP partition, with the 'Check' option highlighted. Below the partition table, a terminal window displays the command: `Check and repair file system (ext4) on /dev/nvme0n1p1`. The status bar at the bottom indicates '1 operation pending'.

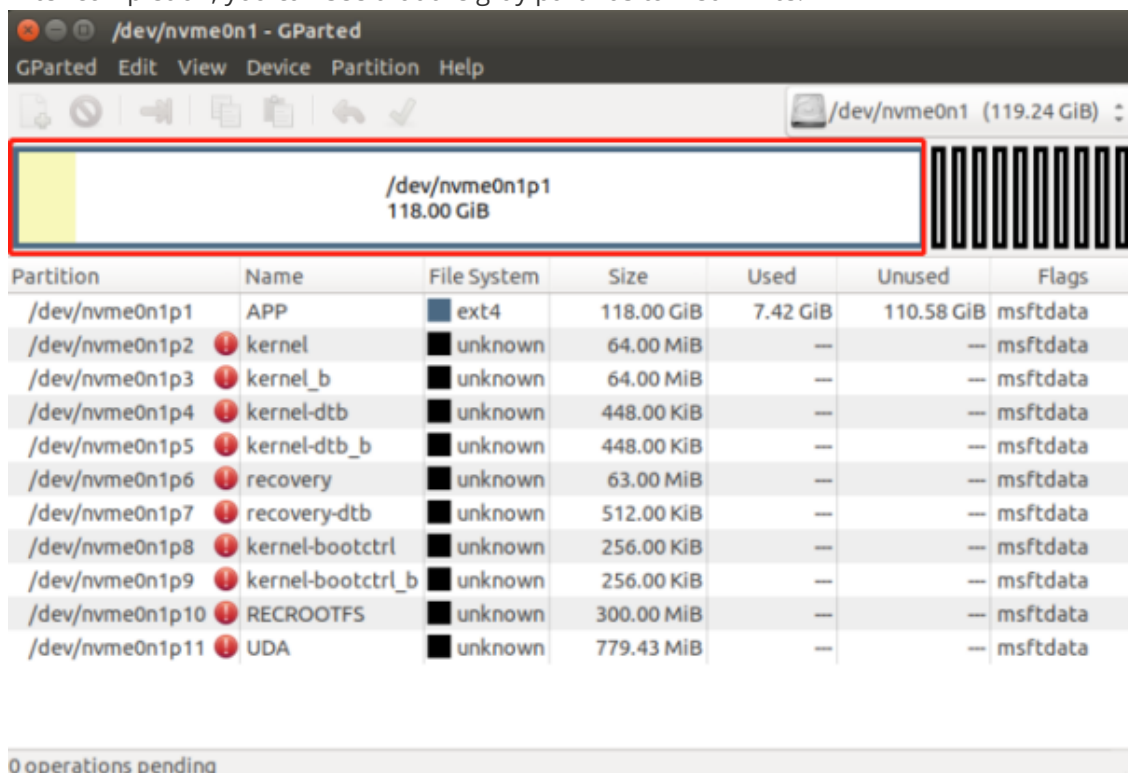
Partition	Name	File System	Size	Used	Unused	Flags
<code>/dev/nvme0n1p1</code>	APP	ext4	118.00 GiB	5.69 GiB	3.61 GiB	msftdata
<code>/dev/nvme0n1p2</code>	kernel	unknown	64.00 MiB	---	---	msftdata
<code>/dev/nvme0n1p3</code>	kernel_b	unknown	64.00 MiB	---	---	msftdata
<code>/dev/nvme0n1p4</code>	kernel-dtb	unknown	448.00 KiB	---	---	msftdata
<code>/dev/nvme0n1p5</code>	kernel-dtb_b	unknown	448.00 KiB	---	---	msftdata
<code>/dev/nvme0n1p6</code>	recovery	unknown	63.00 MiB	---	---	msftdata
<code>/dev/nvme0n1p7</code>	recovery-dtb	unknown	512.00 KiB	---	---	msftdata
<code>/dev/nvme0n1p8</code>	kernel-bootctrl	unknown	256.00 KiB	---	---	msftdata
<code>/dev/nvme0n1p9</code>	kernel-bootctrl_b	unknown	256.00 KiB	---	---	msftdata
<code>/dev/nvme0n1p10</code>	RECROOTFS	unknown	---	---	---	---
<code>/dev/nvme0n1p11</code>	UDA	unknown	---	---	---	---

Check and repair file system (ext4) on `/dev/nvme0n1p1`

1 operation pending



4. After completion, you can see that the gray part has turned white.



5. Complete the removal and installation of the solid-state drive from the solid-state drive case.