

Backup NVME system

1.Backup preparation

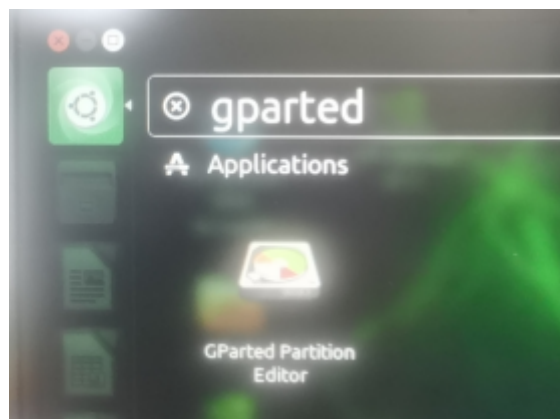
Open the terminal of the Ubuntu computer (virtual machine) system and enter the following command to install the partition management tool gparted

```
sudo apt install gparted
```

```
yahboom@YAB:~$ sudo apt install gparted
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

Remove the solid-state drive from the motherboard, insert it and connect it to the computer (virtual machine). At this time, the computer will automatically recognize the solid-state drive (requires a solid-state drive box).

Open the application repository of the computer (virtual machine), search for and open gparted



Attention: Incorrect operation may cause the system or files to malfunction. In this step, it is important to select the correct disk device number.

2、 Record partition information

Record disk device number: /dev/sdb

Enter the following command to view partition information, record the numbers in the Free Space row and Start column, **Pay attention to removing the last unit s.**

```
./parted_info.sh /dev/sdb
```

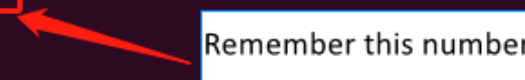
The /dev/sdb parameter must be specified, which is consistent with the disk device number viewed in the previous step.

If parted_ The info.sh file does not have permission to run. Enter chmod+x parted_ Add permissions to info.sh.

```
yahboom@YAB:~$ ./parted_info.sh /dev/sdb
2022年 08月 15日 星期一 16:32:31 CST
/dev/sdb
GNU Parted 3.2
Using /dev/sdb
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) unit s
(parted) print free
Model: SD Card Reader (scsi)
Disk /dev/sdb: 31116288s
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start      End          Size         Type         File system  Flags
 1      32s        8191s        8160s        primary      Free Space   lba
 2      8192s      532479s      524288s      primary      fat32        lba
 3      532480s    27875327s    27342848s    primary      ext4
 4      27875328s 31116287s    3240960s     Free Space

(parted) quit
yahboom@YAB:~$
```



parted_info.sh Content

```
#!/bin/bash
date
echo $1
sudo parted $1 <<EOF
unit s
print free
quit
EOF
```

3、Backup image IMG files

Open the system terminal, and the storage space of the computer (virtual machine) must be greater than the image.

```
sudo dd if=/dev/sdb of=backup.img bs=512 count=27875328
```

if=/dev/sdb:For the disk device number found in the first step

of=backup.img:Is the name of the backup

bs=512:Indicates block size

count=27875328:Represents the backup size, which is obtained from the second step.

```
yahboom@YAB:~$ sudo dd if=/dev/sdb of=backup.img bs=512 count=27875328
```

Restart a terminal and run the following command to check the progress.

```
sudo watch -n 3 pkill -USR1 ^dd$
```

```

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:~$

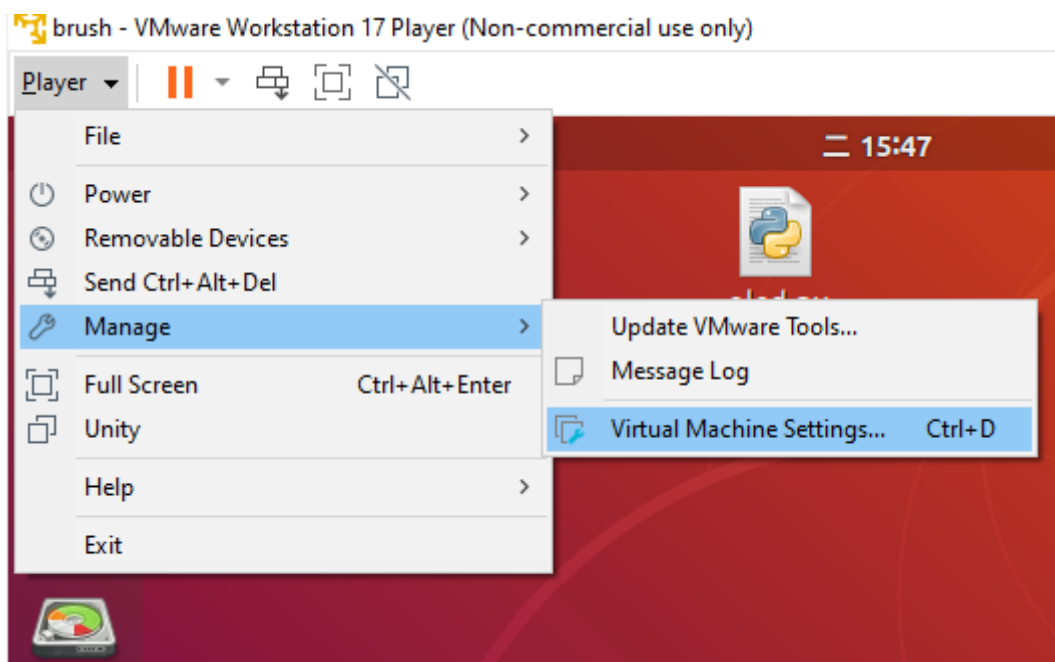
```

Wait for the backup to complete.

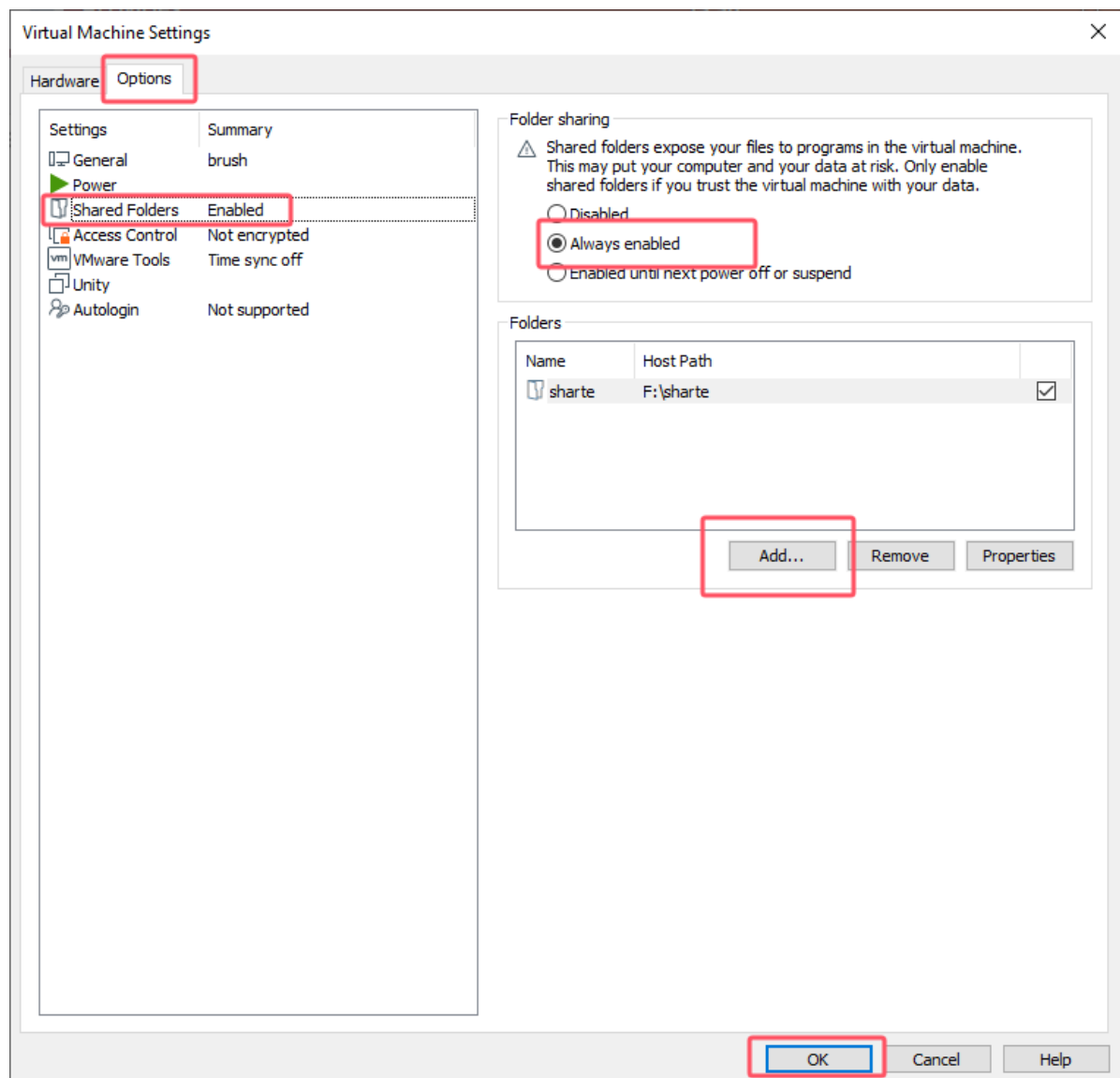
4、 Copy Mirror to Windows

Due to the fact that the backed up image is on a Linux computer (virtual machine), it is necessary to turn on the shared folder function in the virtual machine to transfer the files to Windows.

Click on the settings of the virtual machine



Click on 'Options' - 'Shared Folder' - 'Always Enable' - 'Add', and then add the location of the Windows computer as a shared folder, Taking adding to path D:\Virtual Machines\share as an example in the following figure. Click OK to save the configuration.



Copying Mirror Files to a Shared Folder

```
sudo cp backup.img /mnt/hgfs/share/
```

So far, the mirror backup is complete.