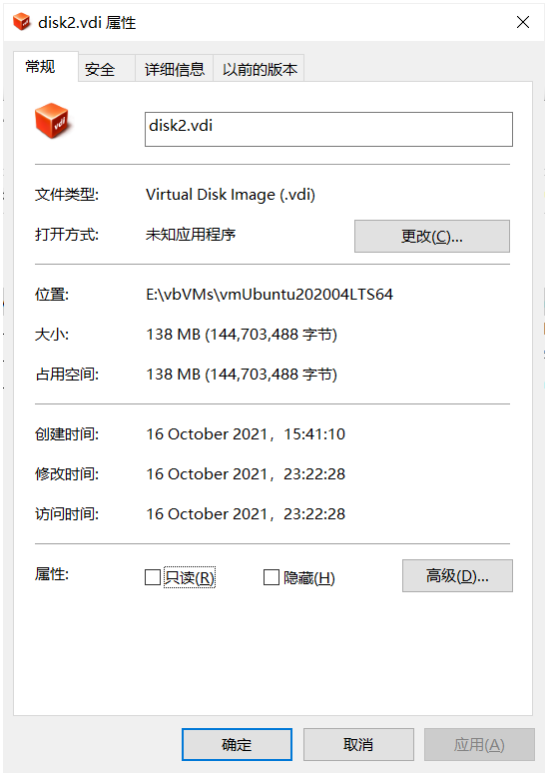
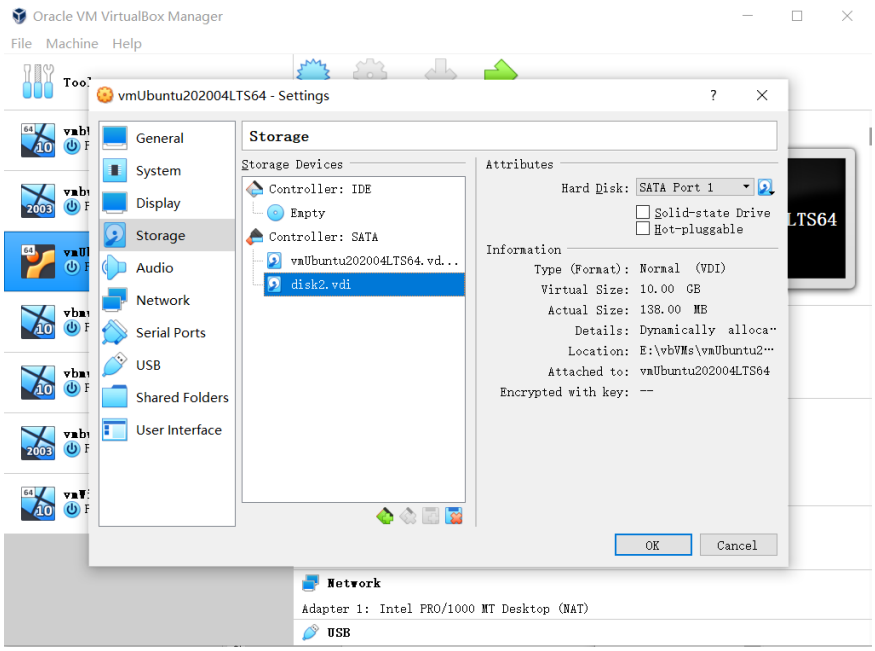
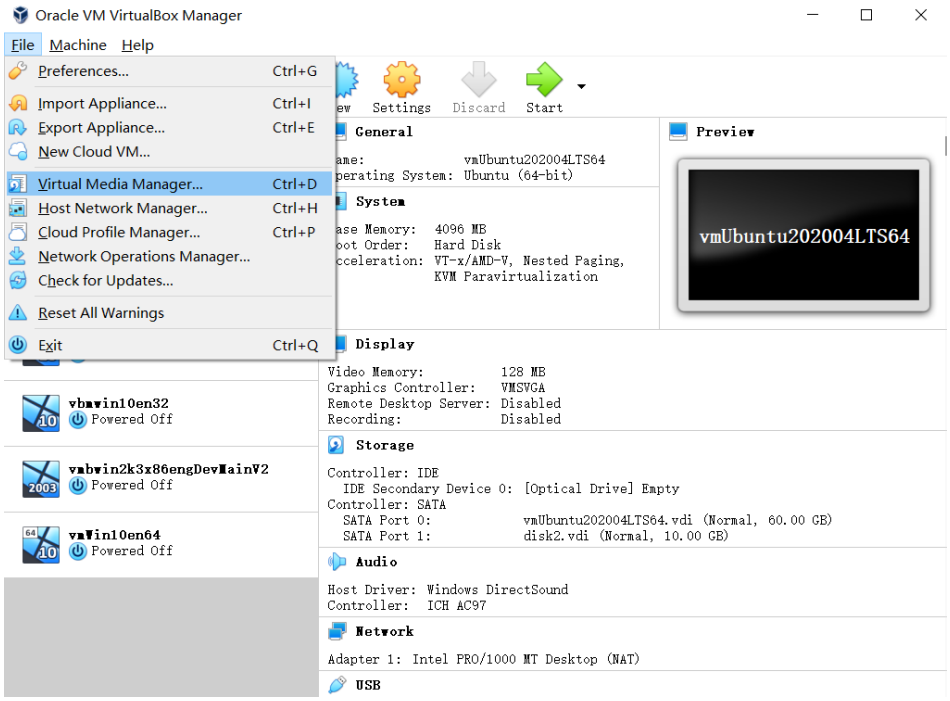
Add a New Disk and Resize it In Linux

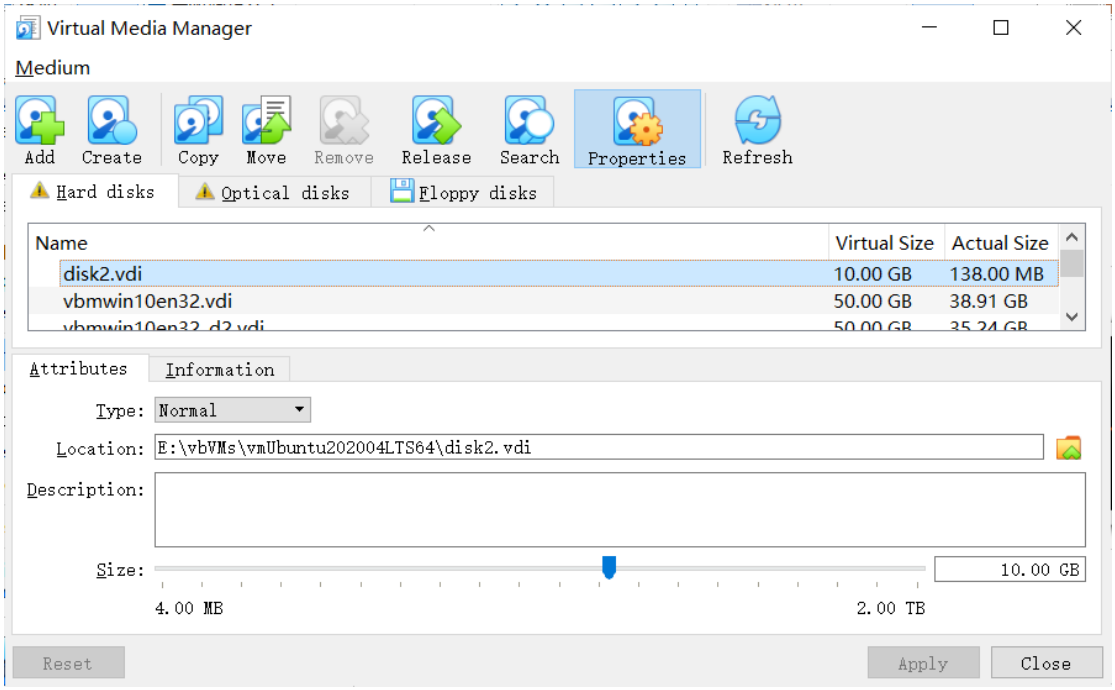
Extend the new disk:/dev/sdb

Power off

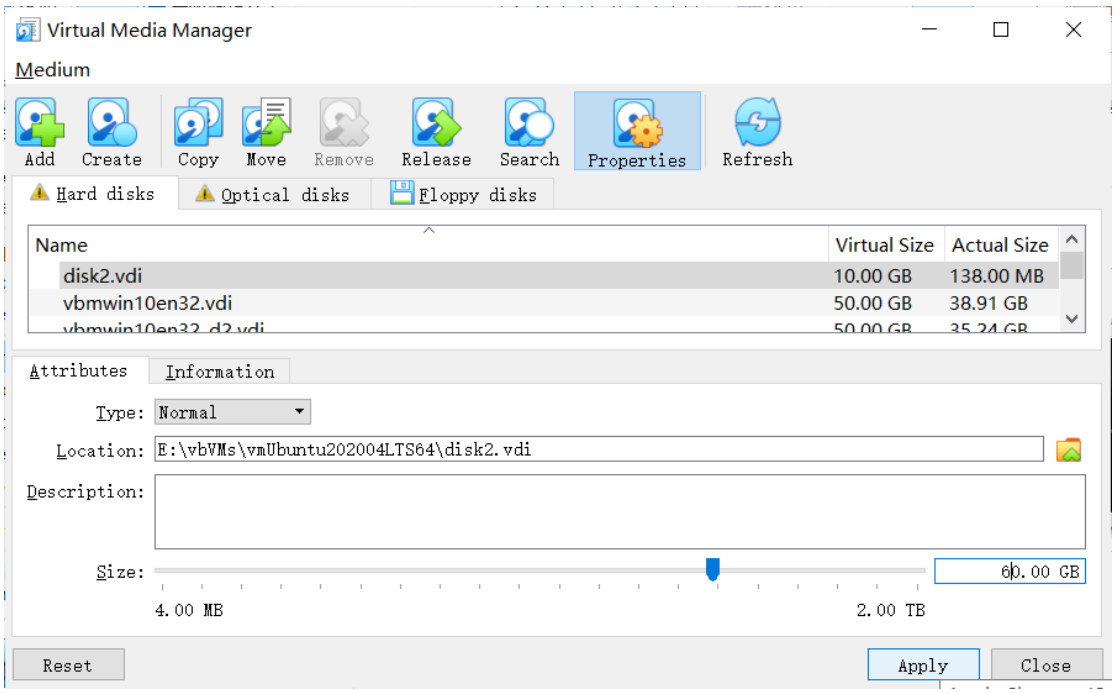



Oracle VM VirtualBox Manager
File Machine Help
vmUbuntu202004LTS64 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Storage
Storage Devices
Controller: IDE
Empty
Controller: SATA
vmUbuntu202004LTS64.vd...
disk2.vdi
Attributes
Hard Disk: SATA Port 1
Solid-state Drive
Hot-pluggable
Information
Type (Format): Normal (VDI)
Virtual Size: 10.00 GB
Actual Size: 138.00 MB
Details: Dynamically alloca...
Location: E:\vbVMs\vmUbuntu2...
Attached to: vmUbuntu202004LTS64
Encrypted with key: --
OK
Cancel
Network
Adapter 1: Intel PRO/1000 MT Desktop (NAT)
USB

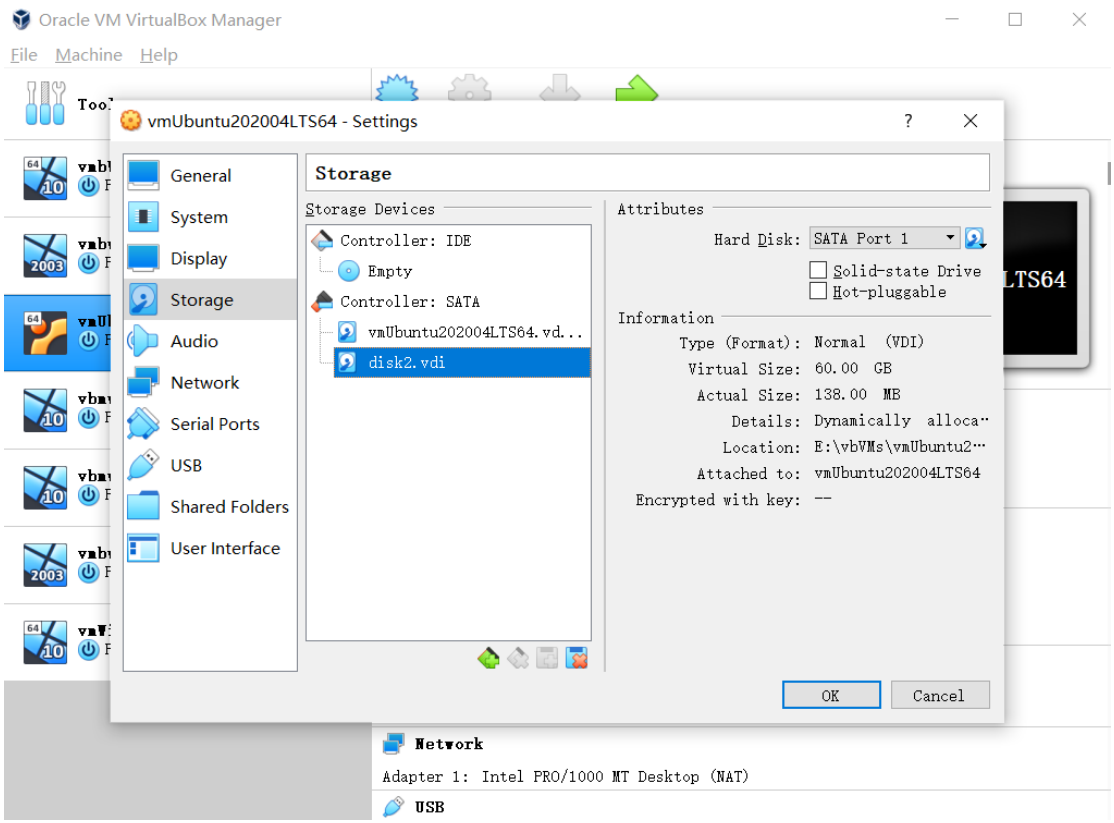

Oracle VM VirtualBox Manager
File Machine Help
Preferences... Ctrl+G
Import Appliance... Ctrl+I
Export Appliance... Ctrl+E
New Cloud VM...
Virtual Media Manager... Ctrl+D
Host Network Manager... Ctrl+H
Cloud Profile Manager... Ctrl+P
Network Operations Manager...
Check for Updates...
Reset All Warnings
Exit Ctrl+Q
Settings
Discard
Start
General
Name: vmUbuntu202004LTS64
Operating System: Ubuntu (64-bit)
System
Base Memory: 4096 MB
Boot Order: Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization
Preview
vmUbuntu202004LTS64
Display
Video Memory: 128 MB
Graphics Controller: VMSVGA
Remote Desktop Server: Disabled
Recording: Disabled
Storage
Controller: IDE
IDE Secondary Device 0: [Optical Drive] Empty
Controller: SATA
SATA Port 0: vmUbuntu202004LTS64.vdi (Normal, 60.00 GB)
SATA Port 1: disk2.vdi (Normal, 10.00 GB)
Audio
Host Driver: Windows DirectSound
Controller: ICH AC97
Network
Adapter 1: Intel PRO/1000 MT Desktop (NAT)
USB
vbwin10en32
Powered Off
vmbwin2k3x86engDevMainV2
Powered Off
vmWin10en64
Powered Off



Extend the size of the new disk:

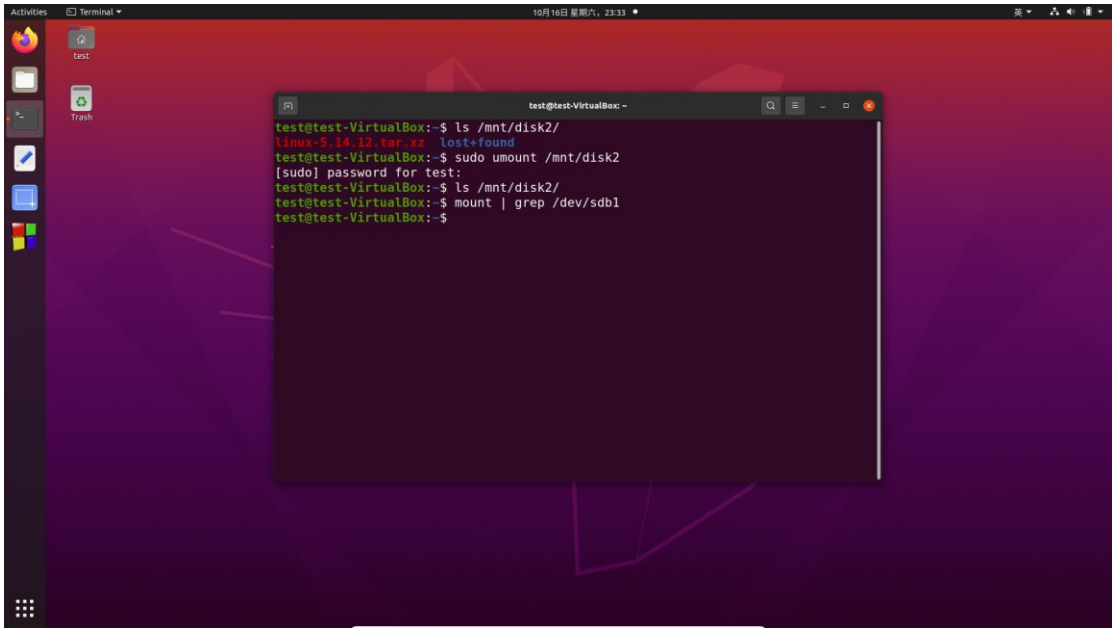


Verify it:

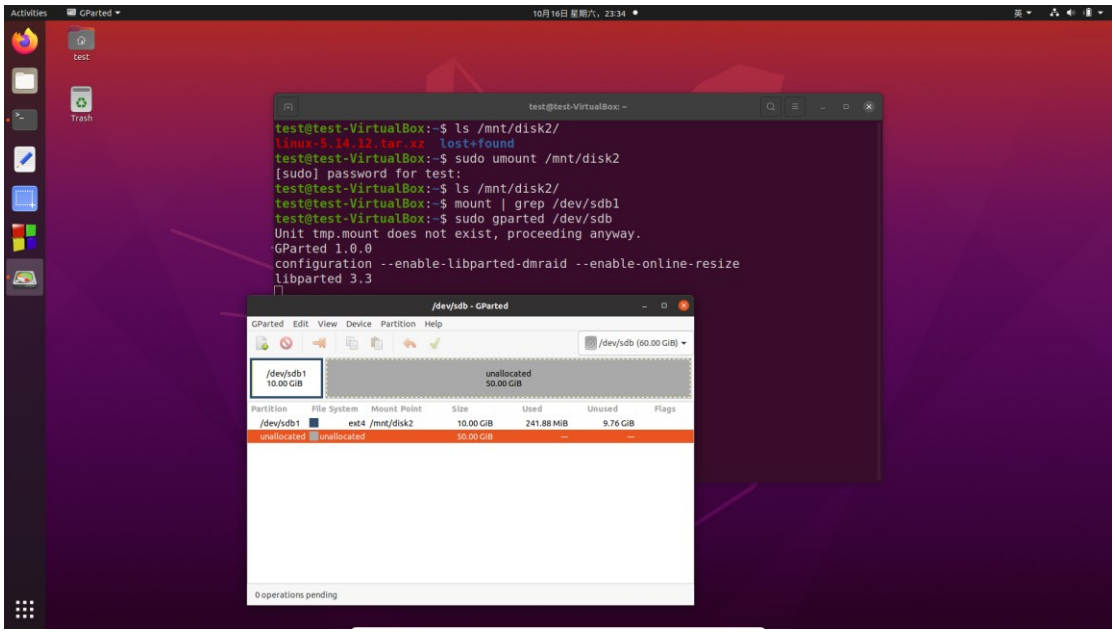


Extend the new partition:/dev/sdb1

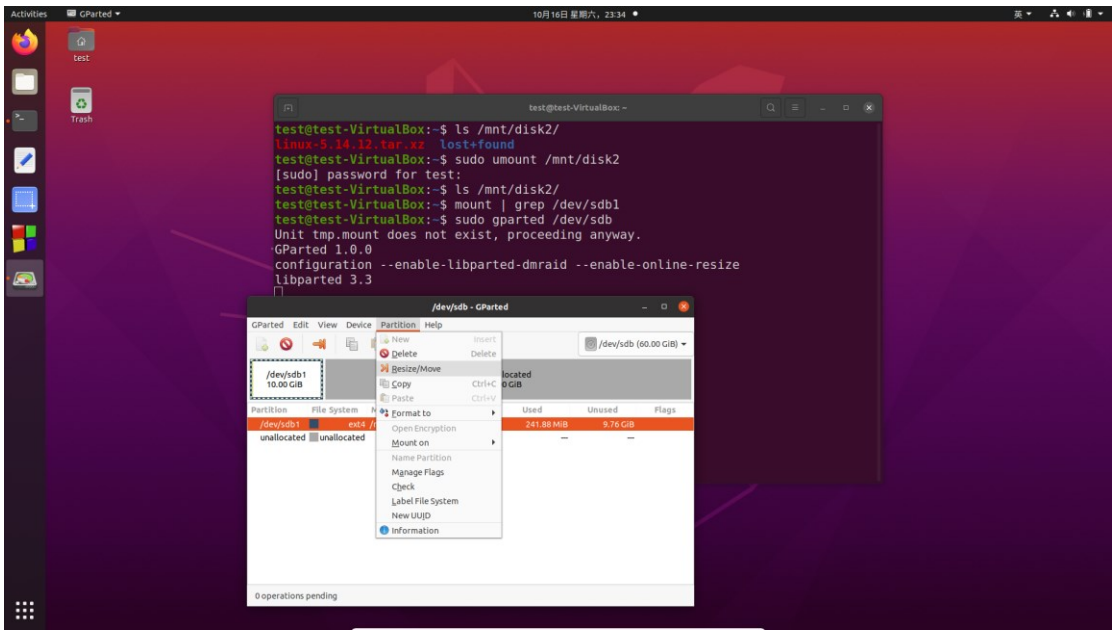
Umount the new partion:

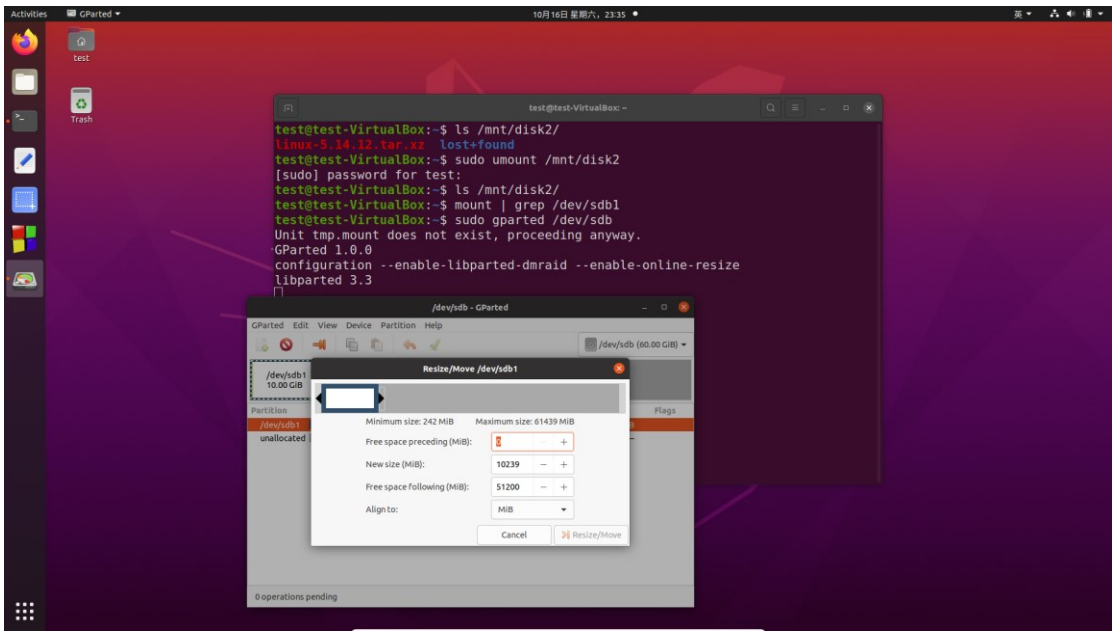


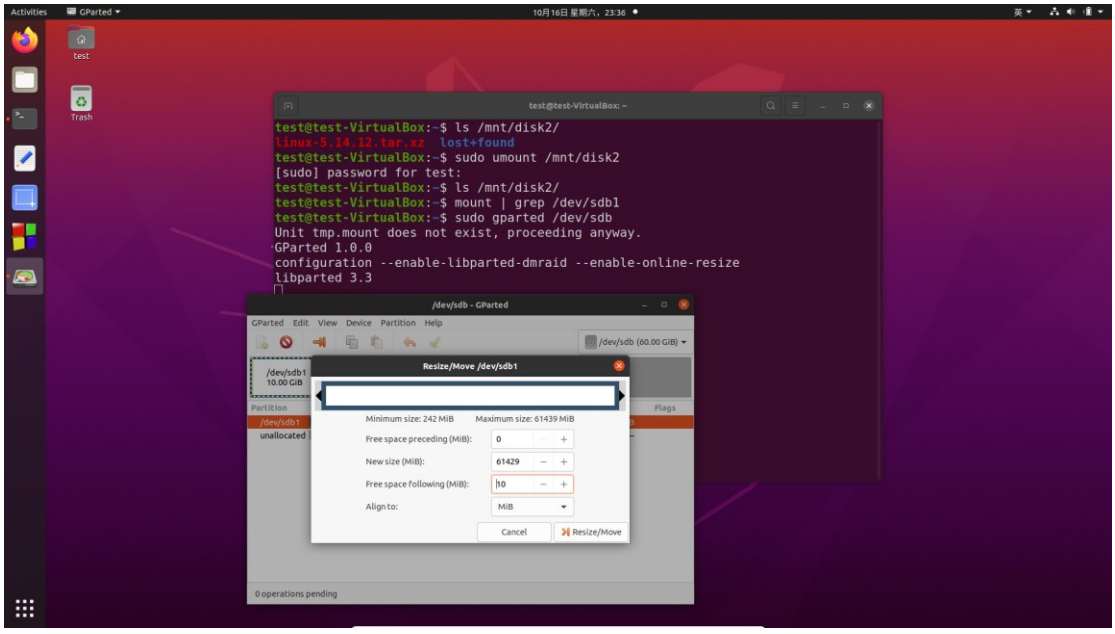
$ sudo gparted /dev/sdb

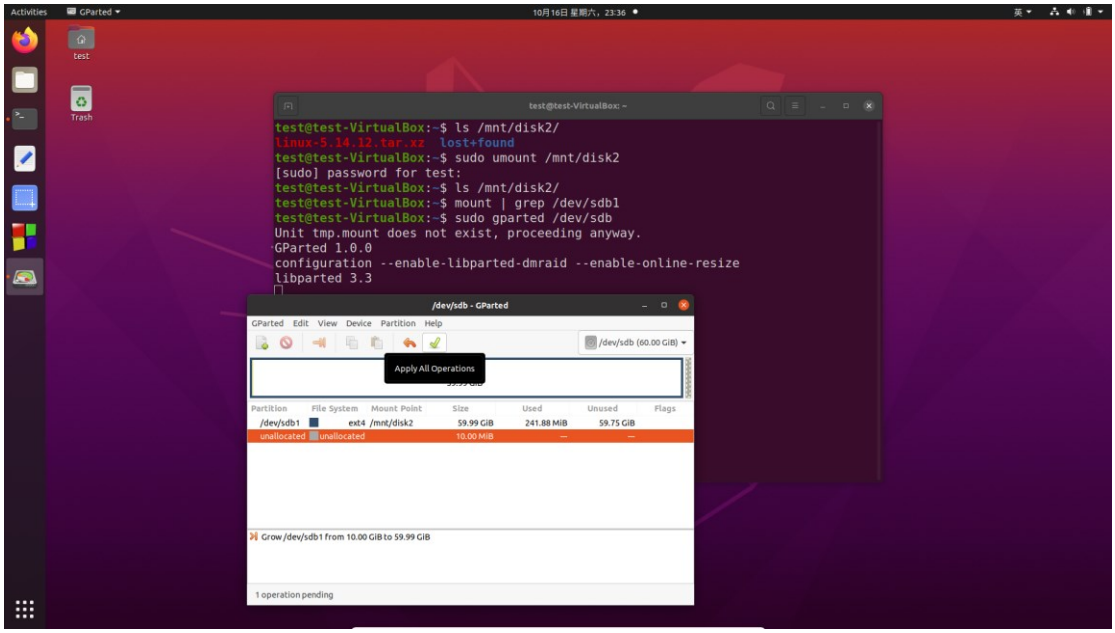


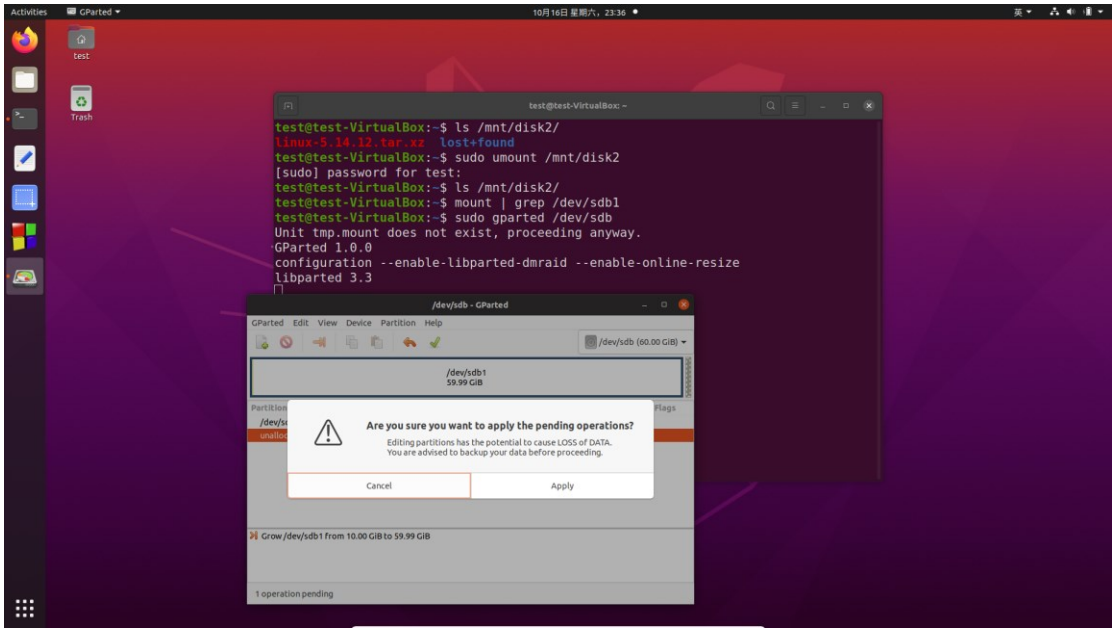
Resize the /dev/sdb1: to extend it

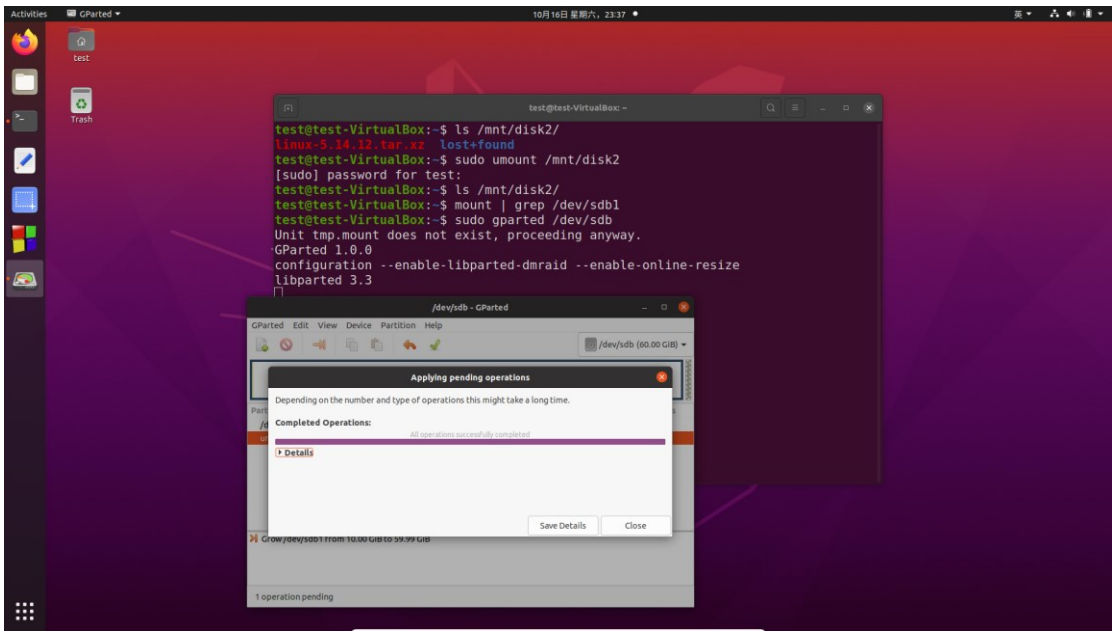



Activities
GParted
10月16日 星期六，23:35
test
Trash
test@test-VirtualBox: ~
test@test-VirtualBox:~$ ls /mnt/disk2/
linux-5.14.12.tar.xz lost+found
test@test-VirtualBox:~$ sudo umount /mnt/disk2
[sudo] password for test:
test@test-VirtualBox:~$ ls /mnt/disk2/
test@test-VirtualBox:~$ mount | grep /dev/sdb1
test@test-VirtualBox:~$ sudo gparted /dev/sdb
Unit tmp.mount does not exist, proceeding anyway.
GParted 1.0.0
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.3
/dev/sdb - GParted
GParted Edit View Device Partition Help
/dev/sdb (60.00 GiB)
/dev/sdb1
10.00 GiB
Partition
Flags
/dev/sdb1
unallocated
Resize/Move /dev/sdb1
Minimum size: 242 MiB
Maximum size: 61439 MiB
Free space preceding (MiB):
0
New size (MiB):
10239
Free space following (MiB):
51200
Align to:
MiB
Cancel
Resize/Move
0 operations pending

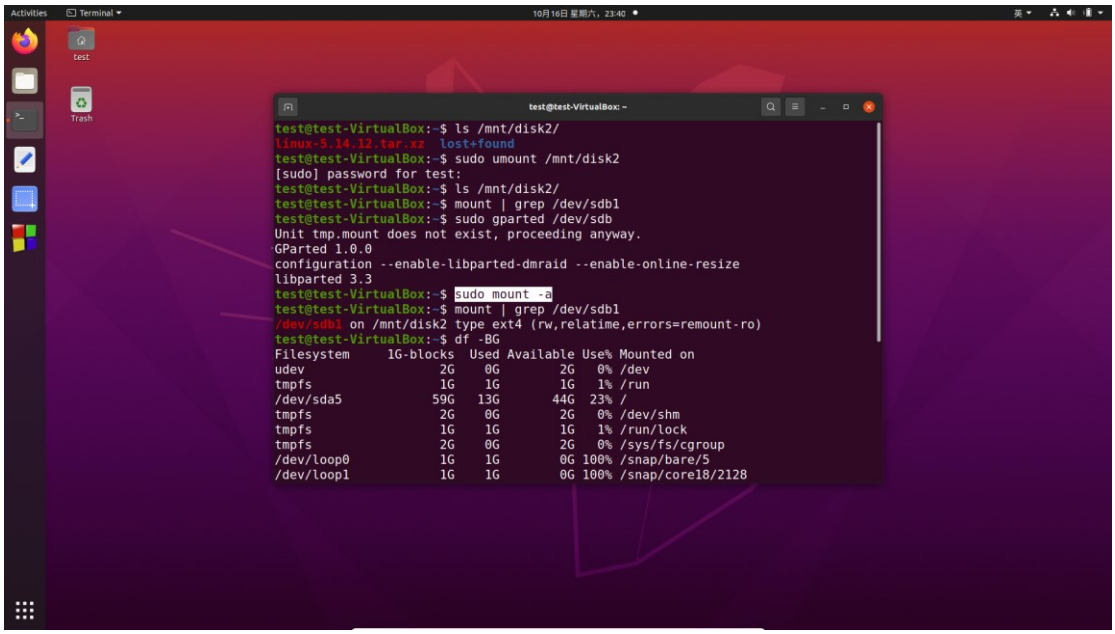

Activities
GParted
10月16日 星期六，23:36
test
Trash
test@test-VirtualBox: ~
test@test-VirtualBox:~$ ls /mnt/disk2/
linux-5.14.12.tar.xz lost+found
test@test-VirtualBox:~$ sudo umount /mnt/disk2
[sudo] password for test:
test@test-VirtualBox:~$ ls /mnt/disk2/
test@test-VirtualBox:~$ mount | grep /dev/sdb1
test@test-VirtualBox:~$ sudo gparted /dev/sdb
Unit tmp.mount does not exist, proceeding anyway.
GParted 1.0.0
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.3
/dev/sdb - GParted
GParted Edit View Device Partition Help
/dev/sdb (60.00 GiB)
/dev/sdb1
10.00 GiB
Partition
Flags
/dev/sdb1
unallocated
Resize/Move /dev/sdb1
Minimum size: 242 MiB
Maximum size: 61439 MiB
Free space preceding (MiB):
0
New size (MiB):
61429
Free space following (MiB):
10
Align to:
MiB
Cancel
Resize/Move
0 operations pending


Activities
GParted
10月16日 星期六，23:36
英
test
Trash
test@test-VirtualBox: ~
test@test-VirtualBox:~$ ls /mnt/disk2/
linux-5.14.12.tar.xz lost+found
test@test-VirtualBox:~$ sudo umount /mnt/disk2
[sudo] password for test:
test@test-VirtualBox:~$ ls /mnt/disk2/
test@test-VirtualBox:~$ mount | grep /dev/sdb1
test@test-VirtualBox:~$ sudo gparted /dev/sdb
Unit tmp.mount does not exist, proceeding anyway.
GParted 1.0.0
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.3
/dev/sdb - GParted
GParted Edit View Device Partition Help
/dev/sdb (60.00 GiB)
Apply All Operations
Partition File System Mount Point Size Used Unused Flags
/dev/sdb1 ext4 /mnt/disk2 59.99 GiB 241.88 MiB 59.75 GiB
unallocated unallocated 10.00 MiB --- ---
Grow /dev/sdb1 from 10.00 GiB to 59.99 GiB
1 operation pending

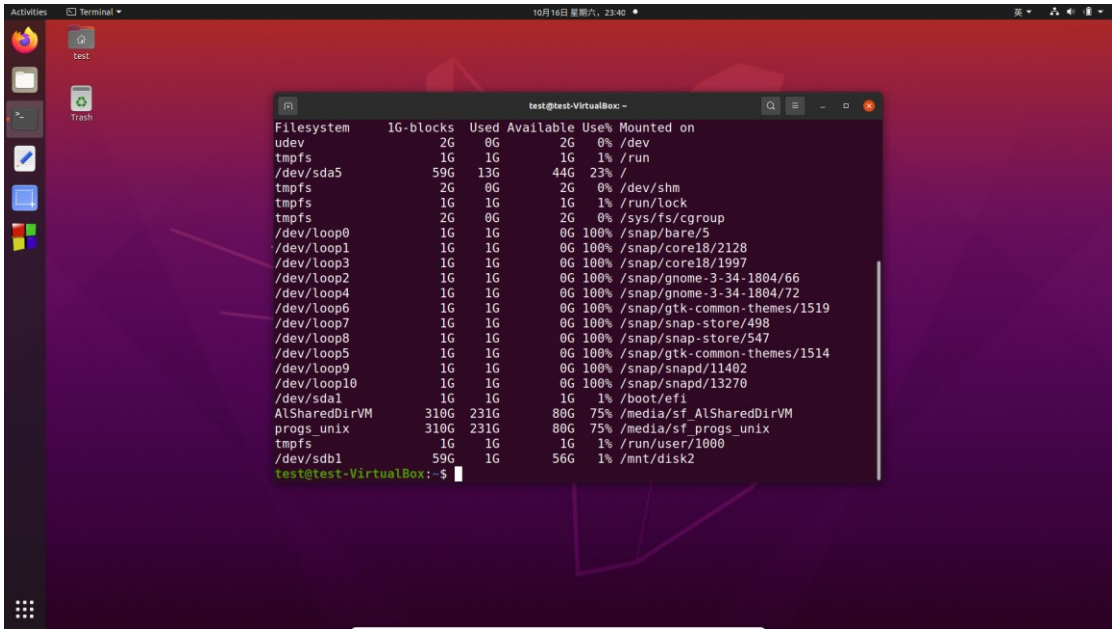

Activities
GParted
10月16日 星期六，23:36
英
test
Trash
test@test-VirtualBox: ~
test@test-VirtualBox:~$ ls /mnt/disk2/
linux-5.14.12.tar.xz lost+found
test@test-VirtualBox:~$ sudo umount /mnt/disk2
[sudo] password for test:
test@test-VirtualBox:~$ ls /mnt/disk2/
test@test-VirtualBox:~$ mount | grep /dev/sdb1
test@test-VirtualBox:~$ sudo gparted /dev/sdb
Unit tmp.mount does not exist, proceeding anyway.
GParted 1.0.0
configuration --enable-libparted-dmraid --enable-online-resize
libparted 3.3
/dev/sdb - GParted
GParted Edit View Device Partition Help
/dev/sdb (60.00 GiB)
/dev/sdb1
59.99 GiB
Are you sure you want to apply the pending operations?
Editing partitions has the potential to cause LOSS of DATA.
You are advised to backup your data before proceeding.
Cancel
Apply
Grow /dev/sdb1 from 10.00 GiB to 59.99 GiB
1 operation pending



Remount it:



$ df -BG


Activities
Terminal
10月16日 星期六，23:40
英
test
Trash
test@test-VirtualBox: ~
Filesystem 1G-blocks Used Available Use% Mounted on
udev 2G 0G 2G 0% /dev
tmpfs 1G 1G 1G 1% /run
/dev/sda5 59G 13G 44G 23% /
tmpfs 2G 0G 2G 0% /dev/shm
tmpfs 1G 1G 1G 1% /run/lock
tmpfs 2G 0G 2G 0% /sys/fs/cgroup
/dev/loop0 1G 1G 0G 100% /snap/bare/5
/dev/loop1 1G 1G 0G 100% /snap/core18/2128
/dev/loop3 1G 1G 0G 100% /snap/core18/1997
/dev/loop2 1G 1G 0G 100% /snap/gnome-3-34-1804/66
/dev/loop4 1G 1G 0G 100% /snap/gnome-3-34-1804/72
/dev/loop6 1G 1G 0G 100% /snap/gtk-common-themes/1519
/dev/loop7 1G 1G 0G 100% /snap/snap-store/498
/dev/loop8 1G 1G 0G 100% /snap/snap-store/547
/dev/loop5 1G 1G 0G 100% /snap/gtk-common-themes/1514
/dev/loop9 1G 1G 0G 100% /snap/snapd/11402
/dev/loop10 1G 1G 0G 100% /snap/snapd/13270
/dev/sda1 1G 1G 1G 1% /boot/efi
AlSharedDirVM 310G 231G 80G 75% /media/sf_AlSharedDirVM
progs_unix 310G 231G 80G 75% /media/sf_progs_unix
tmpfs 1G 1G 1G 1% /run/user/1000
/dev/sdb1 59G 1G 56G 1% /mnt/disk2
test@test-VirtualBox:~$

End.