



samuel@samuel-VirtualBox: ~



```
samuel@samuel-VirtualBox:~$ ls/dev/sd*  
bash: ls/dev/sd*: No such file or directory
```

```
samuel@samuel-VirtualBox:~$ ls /dev/sd*  
/dev/sda /dev/sda1 /dev/sda2 /dev/sda3
```

```
samuel@samuel-VirtualBox:~$ sudo fdisk -l
```

```
[sudo] password for samuel:
```

```
Disk /dev/loop0: 63.91 MiB, 67014656 bytes, 130888 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop1: 4 KiB, 4096 bytes, 8 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop2: 74.24 MiB, 77844480 bytes, 152040 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop3: 63.91 MiB, 67010560 bytes, 130880 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop4: 91.69 MiB, 96141312 bytes, 187776 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop5: 59.32 MiB, 62201856 bytes, 121488 sectors
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```





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Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes



**Disk /dev/loop12: 38.73 MiB, 40615936 bytes, 79328 sectors**  
Units: sectors of 1 \* 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes



**Disk /dev/loop14: 349.7 MiB, 366682112 bytes, 716176 sectors**  
Units: sectors of 1 \* 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes



**Disk /dev/loop15: 74.11 MiB, 77713408 bytes, 151784 sectors**  
Units: sectors of 1 \* 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes



**Disk /dev/loop16: 496.98 MiB, 521121792 bytes, 1017816 sectors**  
Units: sectors of 1 \* 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes



samuel@samuel-VirtualBox:~\$ sudo parted -l

Model: ATA VBOX HARDDISK (scsi)  
Disk /dev/sda: 53.7GB  
Sector size (logical/physical): 512B/512B  
Partition Table: gpt  
Disk Flags:



Number	Start	End	Size	File system	Name	Flags
1	1049kB	2097kB	1049kB			bios_grub
2	2097kB	540MB	538MB	fat32	EFI System Partition	boot, esp
3	540MB	53.7GB	53.2GB	ext4		




samuel@samuel-VirtualBox:~\$



### File location and size

Please type the name of the new virtual hard disk file into the box below or click on the folder icon to select a different folder to create the file in.

C:\Users\unkno\VirtualBox VMs\Ubuntu3\sbaid001.vdi 

Select the size of the virtual hard disk in megabytes. This size is the limit on the amount of file data that a virtual machine will be able to store on the hard disk.

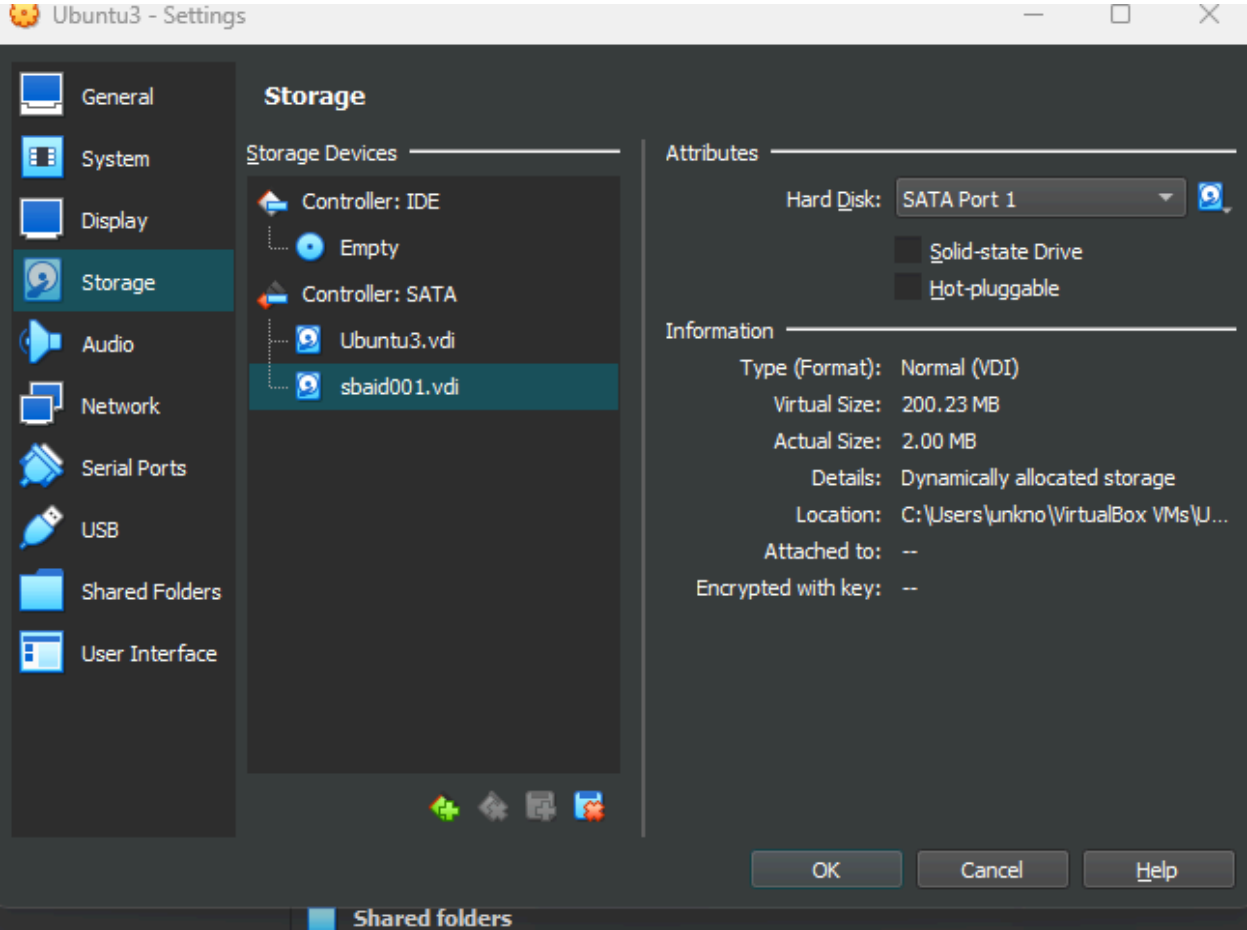
4.00 MB  200.23 MB 2.00 TB

Help

Back

Finish

Cancel





samuel@samuel-VirtualBox: ~

```
amuel@samuel-VirtualBox:~$ ls /dev/sd*  
dev/sda  /dev/sda1  /dev/sda2  /dev/sda3  /dev/sdb  
amuel@samuel-VirtualBox:~$
```

```
Ubuntu3 [Running] - Oracle VM VirtualBox
Machine View Input Devices Help
Activities Terminal Apr 28 14:26
samuel@samuel-VirtualBox: ~
samuel@samuel-VirtualBox:~$ ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda3 /dev/sdb
samuel@samuel-VirtualBox:~$ sudo fdisk -l
[sudo] password for samuel:
Sorry, try again.
[sudo] password for samuel:
Disk /dev/loop0: 4 KiB, 4096 bytes, 8 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop1: 74.24 MiB, 77844480 bytes, 152040 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop2: 63.91 MiB, 67010560 bytes, 130880 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop3: 63.91 MiB, 67014656 bytes, 130888 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop4: 262.5 MiB, 275251200 bytes, 537600 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop5: 74.11 MiB, 77713408 bytes, 151784 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop11: 349.7 MiB, 366682112 bytes, 716176 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop12: 452 KiB, 462848 bytes, 904 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop13: 476 KiB, 487424 bytes, 952 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop14: 59.32 MiB, 62201856 bytes, 121488 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop16: 40.43 MiB, 42393600 bytes, 82800 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop15: 496.98 MiB, 521121792 bytes, 1017816 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
samuel@samuel-VirtualBox:~$ parted -l
samuel@samuel-VirtualBox:~$ parted -l
samuel@samuel-VirtualBox:~$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 53.7GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size    File system  Name              Flags
  1      1049kB  2097kB  1049kB                bios_grub
  2      2097kB  540MB   538MB   fat32         EFI System Partition  boot, esp
  3      540MB   53.7GB  53.2GB   ext4

Error: /dev/sdb: unrecognised disk label
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:

samuel@samuel-VirtualBox:~$
```

```
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
samuel@samuel-VirtualBox:~$ parted -l
samuel@samuel-VirtualBox:~$ parted -l
samuel@samuel-VirtualBox:~$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 53.7GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size    File system  Name              Flags
  1      1049kB  2097kB  1049kB                bios_grub
  2      2097kB  540MB   538MB   fat32        EFI System Partition  boot, esp
  3      540MB   53.7GB  53.2GB   ext4

Error: /dev/sdb: unrecognised disk label
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:

samuel@samuel-VirtualBox:~$ sudo fdisk /dev/sdb
[sudo] password for samuel:

Welcome to fdisk (util-linux 2.37.2).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0x4b3ae629.

Command (m for help): n
Partition type
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
```



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Partition number (1-4, default 1): 1  
First sector (2048-410070, default 2048): 2048  
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-410070, default 410070):

Created a new partition 1 of type 'Linux' and of size 199.2 MiB.



Command (m for help): w  
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.



```
samuel@samuel-VirtualBox:~$ ls /dev/sd*  
/dev/sda /dev/sda1 /dev/sda2 /dev/sda3 /dev/sdb /dev/sdb1
```



```
samuel@samuel-VirtualBox:~$ sudo mkfs.ext4 /dev/sdb1  
mke2fs 1.46.5 (30-Dec-2021)  
Creating filesystem with 51002 4k blocks and 51008 inodes  
Filesystem UUID: 497f7efa-0202-4777-b206-68aabdcc6d01  
Superblock backups stored on blocks:  
32768
```



```
Allocating group tables: done  
Writing inode tables: done  
Creating journal (4096 blocks): done  
Writing superblocks and filesystem accounting information: done
```



```
samuel@samuel-VirtualBox:~$ sudo fdisk -l  
Disk /dev/loop0: 4 KiB, 4096 bytes, 8 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes  
  
Disk /dev/loop1: 74.24 MiB, 77844480 bytes, 152040 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes
```



```
Disk /dev/loop2: 63.91 MiB, 67010560 bytes, 130880 sectors  
Units: sectors of 1 * 512 = 512 bytes
```



```
Activities Terminal Apr 28 16:26 samuel@samuel-VirtualBox: ~

Disk /dev/loop16: 40.43 MiB, 42393600 bytes, 82800 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop15: 496.98 MiB, 521121792 bytes, 1017816 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
samuel@samuel-VirtualBox:~$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 53.7GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:
Number  Start  End      Size    File system  Name              Flags
  1      1049kB 2097kB  1049kB                bios_grub
  2      2097kB 540MB   538MB   fat32         EFI System Partition  boot, esp
  3      540MB  53.7GB  53.2GB  ext4

Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:
Number  Start  End      Size    Type        File system  Flags
  1      1049kB 210MB   209MB   primary     ext4

samuel@samuel-VirtualBox:~$ sudo mkdir /cyse
samuel@samuel-VirtualBox:~$ sudo mkdir /cyse
mkdir: cannot create directory '/cyse': File exists
samuel@samuel-VirtualBox:~$ sudo mount /dev/sdb1 /cyse
samuel@samuel-VirtualBox:~$ sudo df
Filesystem      1K-blocks    Used Available Use% Mounted on
```

```
Activities Terminal Apr 28 16:27
samuel@samuel-VirtualBox: ~
Disk Flags:
Number Start End Size Type File system Flags
1 1049kB 210MB 209MB primary ext4

samuel@samuel-VirtualBox:~$ sudo mkdir /cyse
samuel@samuel-VirtualBox:~$ sudo mkdir /cyse
mkdir: cannot create directory '/cyse': File exists
samuel@samuel-VirtualBox:~$ sudo mount /dev/sdb1 /cyse
samuel@samuel-VirtualBox:~$ sudo df
Filesystem 1K-blocks Used Available Use% Mounted on
tmpfs 630064 1572 628492 1% /run
/dev/sda3 50810360 13676476 34520380 29% /
tmpfs 3150320 0 3150320 0% /dev/shm
tmpfs 5120 4 5116 1% /run/lock
/dev/sda2 524252 6220 518032 2% /boot/efi
tmpfs 630064 148 629916 1% /run/user/1000
/dev/sdb1 174648 24 160344 1% /cyse

samuel@samuel-VirtualBox:~$ cd /cyse
samuel@samuel-VirtualBox:/cyse$ ls
lost+found
samuel@samuel-VirtualBox:/cyse$ touch sbaid001.txt
touch: cannot touch 'sbaid001.txt': Permission denied
samuel@samuel-VirtualBox:/cyse$ sudo touch sbaid001.txt
samuel@samuel-VirtualBox:/cyse$ sudo nano sbaid001.txt
samuel@samuel-VirtualBox:/cyse$ cat sbaid001.txt
Samuel Baidoo
samuel@samuel-VirtualBox:/cyse$ ls
lost+found sbaid001.txt
samuel@samuel-VirtualBox:/cyse$ sudo umount /cyse
umount: /cyse: target is busy.
samuel@samuel-VirtualBox:/cyse$ pwd
/cyse
samuel@samuel-VirtualBox:/cyse$ cd
samuel@samuel-VirtualBox:~$ sudo umount /cyse
samuel@samuel-VirtualBox:~$ ls cyse
ls: cannot access 'cyse': No such file or directory
samuel@samuel-VirtualBox:~$ ls /cyse
samuel@samuel-VirtualBox:~$
```