


Part 1

Step 1-3 (sudo ls /dev/sd*; sudo fdisk -l; sudo parted -l):



```
(tiaw@Tia-Kali)-[~]
└─$ sudo ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5

(tiaw@Tia-Kali)-[~]
└─$ sudo fdisk -l
Disk /dev/sda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xa7a61c22

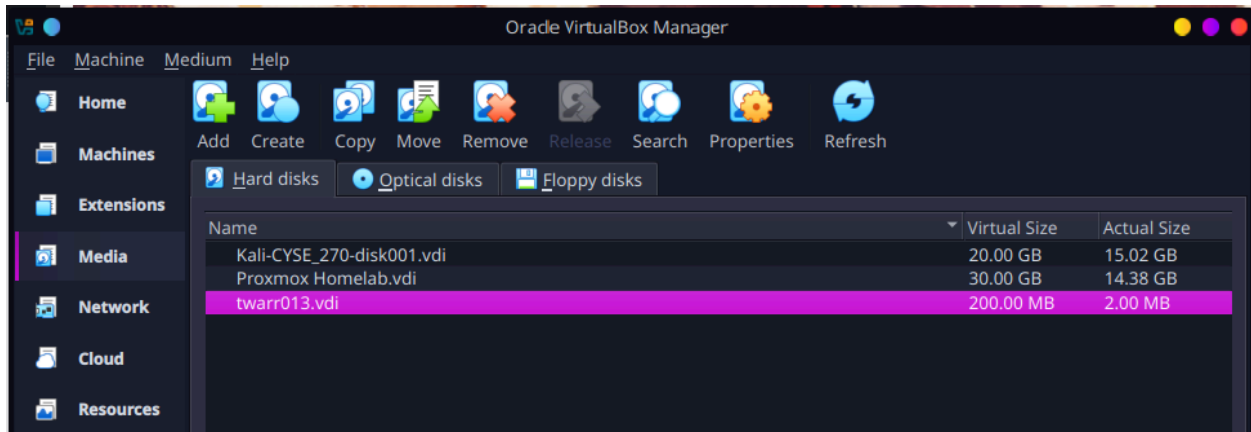
Device      Boot    Start        End    Sectors    Size Id Type
/dev/sda1   *                2048 38719487 38717440 18.5G 83 Linux
/dev/sda2                   38721534 41940991 3219458   1.5G  f W95 Ext'd (LBA)
/dev/sda5                   38721536 41940991 3219456   1.5G 82 Linux swap / Solaris

(tiaw@Tia-Kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

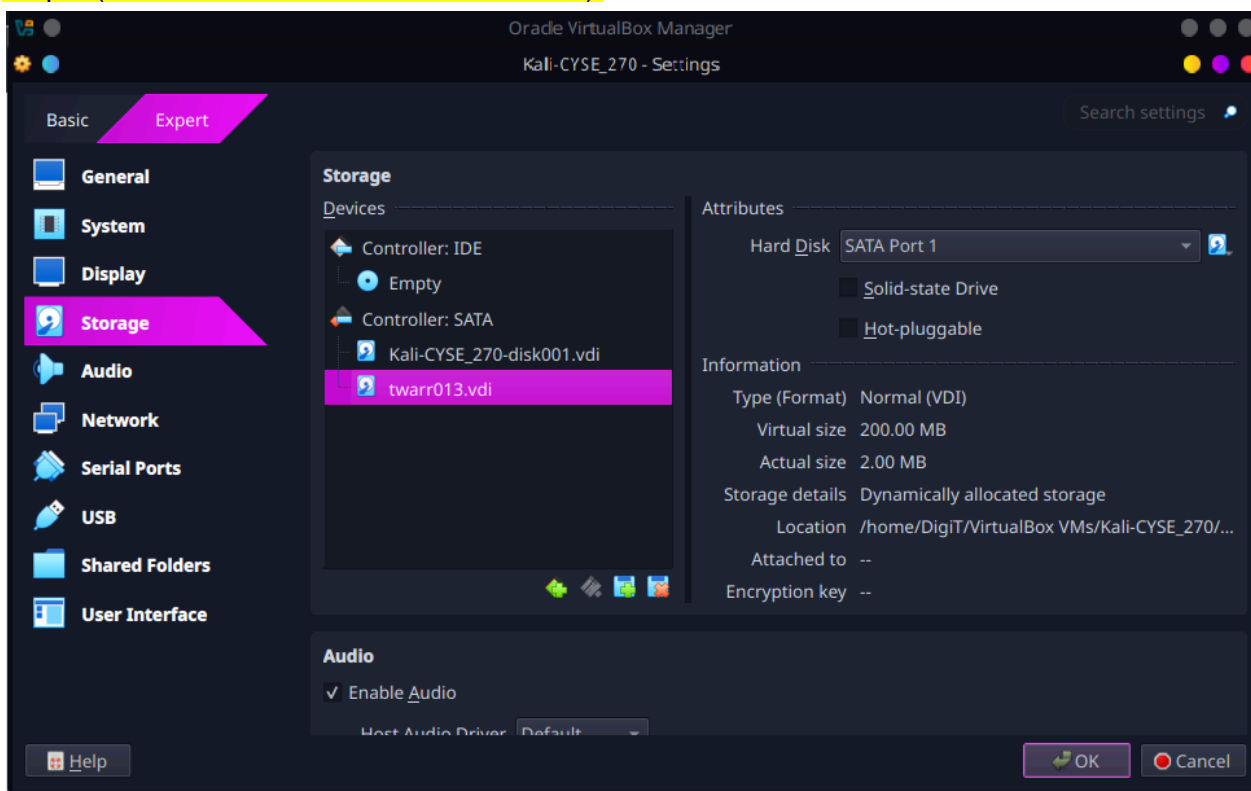
Number  Start   End     Size    Type     File system  Flags
  1      1049kB 19.8GB 19.8GB  primary ext4          boot
  2      19.8GB 21.5GB 1648MB extended lba
  5      19.8GB 21.5GB 1648MB logical  linux-swap(v1) swap
```

Part 2

Step 1 (Create twarr013.vdi 200 MB):



Step 2 (Attach twarr013.vdi 200 MB and load):



Step 3 (Repeat part 1 to show differences):

```
Kali-CYSE_270 [Running]
File Machine View Input Devices Help
tiaw@Tia-Kali
File Actions Edit View Help
(tiaw@Tia-Kali)-[~]
$ sudo ls /dev/sd*
[sudo] password for tiaw:
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb
```

```
(tiaw@Tia-Kali)-[~]
$ sudo fdisk -l
Disk /dev/sda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xa7a61c22

Device      Boot      Start      End  Sectors  Size Id Type
/dev/sda1   *          2048 38719487 38717440 18.5G 83 Linux
/dev/sda2                38721534 41940991 3219458  1.5G  f W95 Ext'd (LBA)
/dev/sda5                38721536 41940991 3219456  1.5G  82 Linux swap / Solaris

Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
(tiaw@Tia-Kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type     File system  Flags
  1      1049kB  19.8GB  19.8GB  primary  ext4         boot
  2      19.8GB  21.5GB  1648MB  extended lba
  5      19.8GB  21.5GB  1648MB  logical  linux-swap(v1) swap

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:
```

Part 3

Step 1 (sudo fdisk /dev/sdb):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo fdisk /dev/sdb

Welcome to fdisk (util-linux 2.41).
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 (MBR) disklabel with disk identifier 0xbf7c35ee.

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
Partition number (1-4, default 1): 1
First sector (2048-409599, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-409599, default 409599):

Created a new partition 1 of type 'Linux' and of size 199 MiB.
```

Step 2 (sudo mkfs -t ext4 /dev/sdb):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo mkfs -t ext4 /dev/sdb
mke2fs 1.47.2 (1-Jan-2025)
Creating filesystem with 204800 1k blocks and 51200 inodes
Filesystem UUID: cfa559b2-733c-4d11-9b97-39c557d7e566
Superblock backups stored on blocks:
    8193, 24577, 40961, 57345, 73729

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

Step 3 (repeat to show differences: `sudo ls /dev/sd*`; `sudo fdisk -l`; `sudo parted -l`):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb
```

```
(tiaw@Tia-Kali)-[~]
└─$ sudo fdisk -l
Disk /dev/sda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xa7a61c22
```

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/sda1	*	2048	38719487	38717440	18.5G	83	Linux
/dev/sda2		38721534	41940991	3219458	1.5G	f	W95 Ext'd (LBA)
/dev/sda5		38721536	41940991	3219456	1.5G	82	Linux swap / Solaris

```
Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
(tiaw@Tia-Kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:
```

Number	Start	End	Size	Type	File system	Flags
1	1049kB	19.8GB	19.8GB	primary	ext4	boot
2	19.8GB	21.5GB	1648MB	extended		lba
5	19.8GB	21.5GB	1648MB	logical	linux-swap(v1)	swap

```
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sdb: 210MB
Sector size (logical/physical): 512B/512B
Partition Table: loop
Disk Flags:
```

Number	Start	End	Size	File system	Flags
1	0.00B	210MB	210MB	ext4	

```
(tiaw@Tia-Kali)-[~]
└─$ █
```

Step 4 and 5 (sudo mkdir /cyse; sudo mount /dev/sdb /cyse):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo mkdir /cyse

(tiw@Tia-Kali)-[~]
└─$ sudo mount /dev/sdb /cyse

(tiw@Tia-Kali)-[~]
└─$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            4001228         0   4001228   0% /dev
tmpfs           813816        1008    812808   1% /run
/dev/sda1      18878720 15165668  2728732  85% /
tmpfs          4069064         4   4069060   1% /dev/shm
tmpfs           5120           0     5120    0% /run/lock
tmpfs           1024           0     1024    0% /run/credentials/systemd-journald.service
tmpfs          4069064         8   4069056   1% /tmp
tmpfs           1024           0     1024    0% /run/credentials/getty@tty1.service
tmpfs           813812        116    813696   1% /run/user/1000
/dev/sdb       186299         64   171899   1% /cyse
```

Step 6 (sudo vi /cyse/twarr013.txt; cat /cyse/twarr013.txt):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo vi /cyse/twarr013.txt

(tiw@Tia-Kali)-[~]
└─$ cat /cyse/twarr013.txt
Tia M Warren

(tiw@Tia-Kali)-[~]
└─$ █
```

Step 7 (sudo umount /cyse):

```
(tiaw@Tia-Kali)-[~]
└─$ sudo umount /cyse
```

Step 8 (sudo ls /cyse):

It's empty, none of the files created are listed until you remount the device

```
(tiaw@Tia-Kali)-[~]
└─$ ls /cyse

(tiw@Tia-Kali)-[~]
└─$ ls -l /cyse
total 0
```