

Johnny Gomez-Reyes

CYSE 270: Lab 7 – Manage Local Storage

Part 1 (Steps 1-3):



```
johnny-gomezreyes@kali: ~  
└─$ sudo ls /dev/sd*  
[sudo] password for johnny-gomezreyes:  
/dev/sda /dev/sda1 /dev/sda2 /dev/sda3 /dev/sda4 /dev/sdb /dev/sdb1  
  
johnny-gomezreyes@kali: ~  
└─$ fdisk -l  
fdisk: cannot open /dev/sda: Permission denied  
fdisk: cannot open /dev/sdb: Permission denied  
  
johnny-gomezreyes@kali: ~  
└─$ sudo parted -l  
Model: VBOX HARDDISK (scsi)  
Disk /dev/sda: 27.1GB  
Sector size (logical/physical): 512B/512B  
Partition Table: gpt  
Disk Flags:  

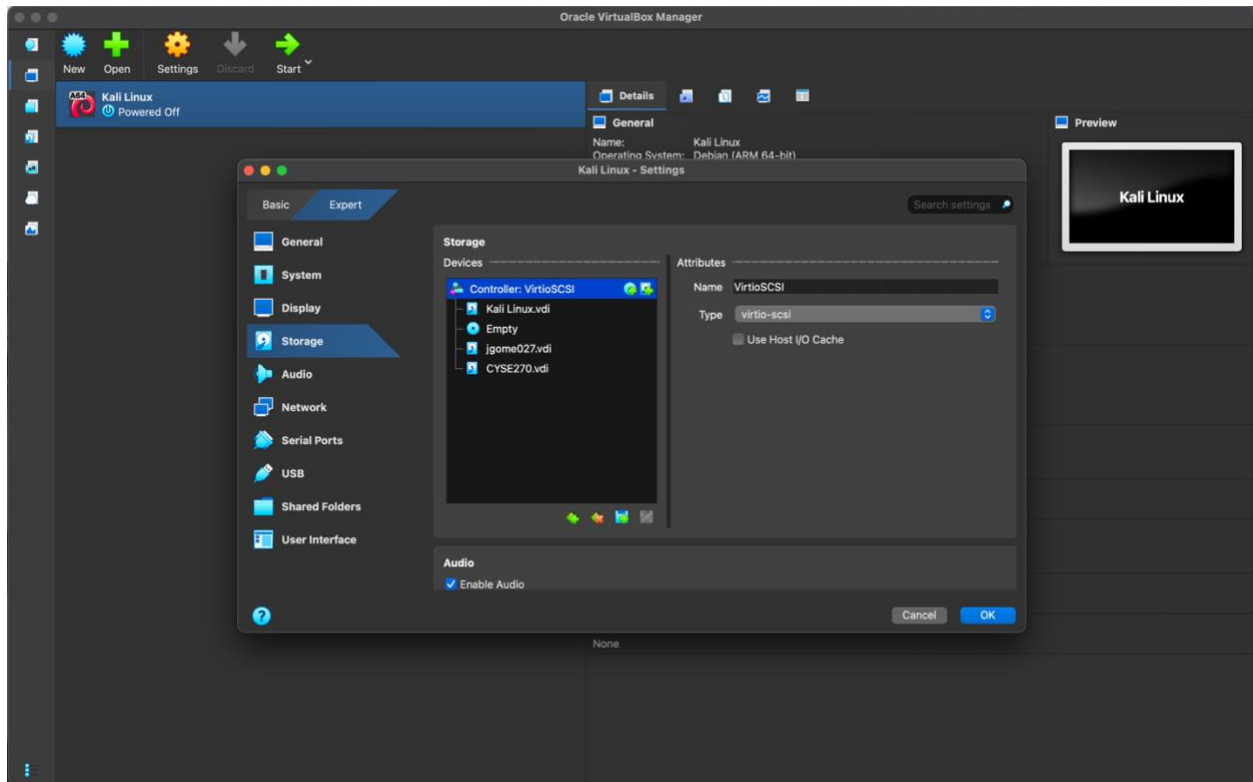

| Number | Start  | End    | Size   | File system    | Name | Flags     |
|--------|--------|--------|--------|----------------|------|-----------|
| 1      | 1049KB | 17.8MB | 16.8MB |                |      |           |
| 2      | 17.8MB | 1042MB | 1024MB | fat16          |      | boot, esp |
| 3      | 1042MB | 25.7GB | 24.6GB | ext4           |      |           |
| 4      | 25.7GB | 27.1GB | 1402MB | linux-swap(v1) |      | swap      |

  
Model: VBOX HARDDISK (scsi)  
Disk /dev/sdb: 1074MB  
Sector size (logical/physical): 512B/512B  
Partition Table: msdos  
Disk Flags:  


| Number | Start  | End    | Size   | Type    | File system | Flags |
|--------|--------|--------|--------|---------|-------------|-------|
| 1      | 1049KB | 1074MB | 1073MB | primary |             |       |

  
johnny-gomezreyes@kali: ~  
└─$
```

Part 2 (Steps 1-2):



Part 2 (Step 3):

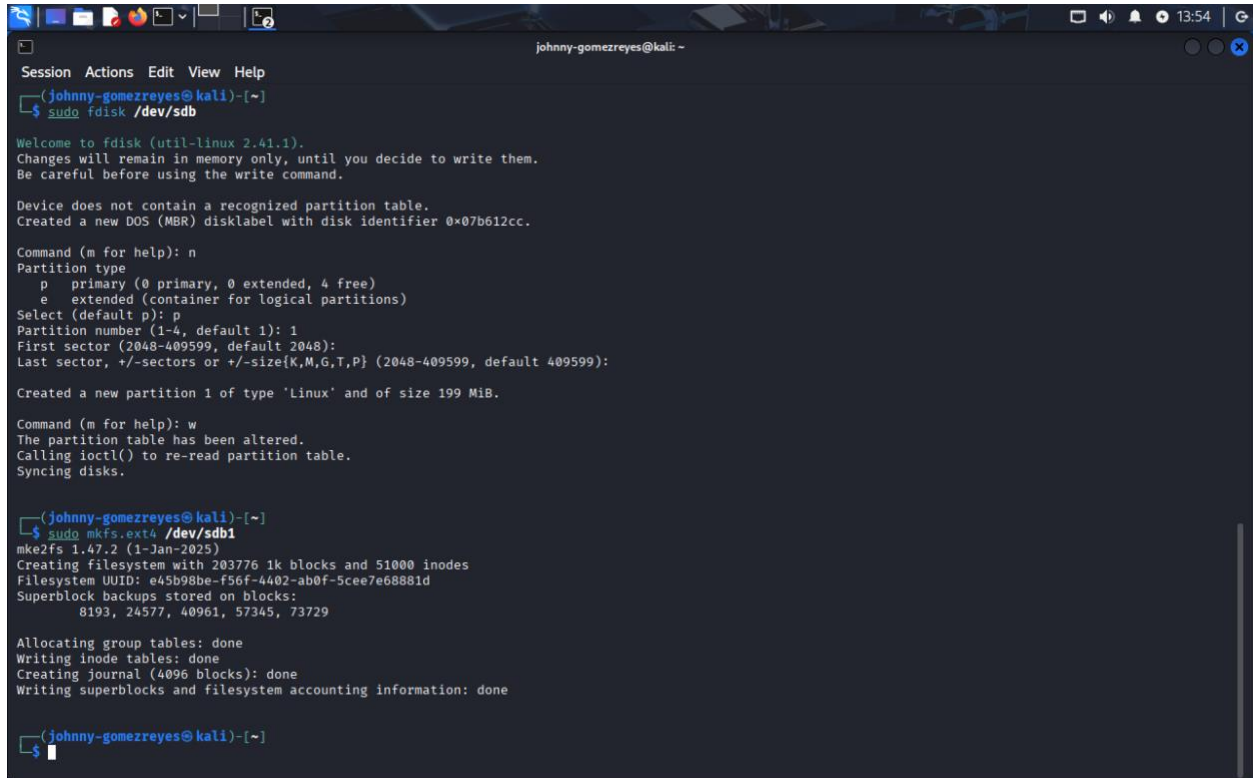
```
johnny-gomezreyes@kali: ~  
Session Actions Edit View Help  
johnny-gomezreyes@kali)~  
└─$ sudo ls /dev/sd*  
[sudo] password for johnny-gomezreyes:  
/dev/sda /dev/sda1 /dev/sda2 /dev/sda3 /dev/sda4 /dev/sdb /dev/sdc /dev/sdc1  
  
johnny-gomezreyes@kali)~  
└─$ sudo fdisk -l  
Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors  
Disk model: 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  
  
Disk /dev/sda: 25.2 GiB, 27058293760 bytes, 52848230 sectors  
Disk model: 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: gpt  
Disk identifier: D1F1B16A-3B14-48E7-84C9-1029F4EDB1B6  
  
Device      Start      End  Sectors  Size Type  
/dev/sda1    2048      34815   32768   16M Linux filesystem  
/dev/sda2    34816    2035711 2000896  977M EFI System  
/dev/sda3    2035712  50108415 48072704 22.9G Linux filesystem  
/dev/sda4    50108416 52846591 2738176  1.3G Linux swap  
  
Disk /dev/sdc: 1 GiB, 1073741824 bytes, 2097152 sectors  
Disk model: 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: 0x00a27170  
  
Device      Boot Start      End  Sectors  Size Id Type  
/dev/sdc1    2048    2097151 2095104 1023M 83 Linux  
  
johnny-gomezreyes@kali)~  
└─$ sudo parted -l  
Model: VBOX HARDDISK (scsi)
```

```
johnny-gomezreyes@kali: ~  
Session Actions Edit View Help  
/dev/sda4 50108416 52846591 2738176 1.3G Linux swap  
  
Disk /dev/sdc: 1 GiB, 1073741824 bytes, 2097152 sectors  
Disk model: 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: 0x00a27170  
  
Device      Boot Start      End  Sectors  Size Id Type  
/dev/sdc1    2048    2097151 2095104 1023M 83 Linux  
  
johnny-gomezreyes@kali)~  
└─$ sudo parted -l  
Model: VBOX HARDDISK (scsi)  
Disk /dev/sda: 27.1GB  
Sector size (logical/physical): 512B/512B  
Partition Table: gpt  
Disk Flags:  
  
Number  Start   End     Size    File system  Name  Flags  
1       1049kB  17.8MB  16.8MB                boot, esp  
2       17.8MB  1042MB  1024MB fat16  
3       1042MB  25.7GB  24.6GB ext4  
4       25.7GB  27.1GB  1402MB linux-swap(v1)  swap  
  
Error: /dev/sdb: unrecognized disk label  
Model: VBOX HARDDISK (scsi)  
Disk /dev/sdb: 210MB  
Sector size (logical/physical): 512B/512B  
Partition Table: unknown  
Disk Flags:  
  
Model: VBOX HARDDISK (scsi)  
Disk /dev/sdc: 1074MB  
Sector size (logical/physical): 512B/512B  
Partition Table: msdos  
Disk Flags:  
  
Number  Start   End     Size    Type    File system  Flags
```

You can now see an extra disk that wasn't there before.

That new entry is my 200 MB virtual disk (jgame027.vdi) that's the difference!

Part 3 (Steps 1-2):



```
johnny-gomezreyes@kali: ~  
Session Actions Edit View Help  
(johnny-gomezreyes@kali)-[~]  
└─$ sudo fdisk /dev/sdb  
Welcome to fdisk (util-linux 2.41.1).  
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 0x07b612cc.  
  
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.  
  
Command (m for help): w  
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.  
  
(johnny-gomezreyes@kali)-[~]  
└─$ sudo mkfs.ext4 /dev/sdb1  
mke2fs 1.47.2 (1-Jan-2025)  
Creating filesystem with 203776 1k blocks and 51000 inodes  
Filesystem UUID: e45b98be-f56f-4402-ab0f-5cee7e68881d  
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  
  
(johnny-gomezreyes@kali)-[~]  
└─$
```

Part 3 (Step 3):

```
johnny-gomezreyes@kali: ~  
Session Actions Edit View Help  
  
(johnny-gomezreyes@kali)-[~]  
└─$ sudo fdisk -l  
Disk /dev/sdb: 200 MiB, 209715200 bytes, 409600 sectors  
Disk model: 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: 0x07b612cc  
  
Device      Boot Start    End Sectors  Size Id Type  
/dev/sdb1           2048 409599  407552  199M 83 Linux  
  
Disk /dev/sda: 25.2 GiB, 27058293760 bytes, 52848230 sectors  
Disk model: 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: gpt  
Disk identifier: D1F1B16A-3B14-48E7-84C9-1029F4EDB186  
  
Device      Start    End Sectors  Size Type  
/dev/sda1     2048    34815   32768   16M Linux filesystem  
/dev/sda2     34816  2035711 2000896  977M EFI System  
/dev/sda3    2035712 50108415 48072704 22.9G Linux filesystem  
/dev/sda4    50108416 52846591 2738176   1.3G Linux swap  
  
Disk /dev/sdc: 1 GiB, 1073741824 bytes, 2097152 sectors  
Disk model: 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: 0x00a27170  
  
Device      Boot Start    End Sectors  Size Id Type  
/dev/sdc1           2048 2097151 2095104 1023M 83 Linux  
  
(johnny-gomezreyes@kali)-[~]  
└─$
```

Part 3 (Steps 4-5):

```
johnny-gomezreyes@kali: ~  
Session Actions Edit View Help  
  
Device      Start    End Sectors  Size Type  
/dev/sda1     2048    34815   32768   16M Linux filesystem  
/dev/sda2     34816  2035711 2000896  977M EFI System  
/dev/sda3    2035712 50108415 48072704 22.9G Linux filesystem  
/dev/sda4    50108416 52846591 2738176   1.3G Linux swap  
  
Disk /dev/sdc: 1 GiB, 1073741824 bytes, 2097152 sectors  
Disk model: 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: 0x00a27170  
  
Device      Boot Start    End Sectors  Size Id Type  
/dev/sdc1           2048 2097151 2095104 1023M 83 Linux  
  
(johnny-gomezreyes@kali)-[~]  
└─$ sudo mkdir /cyse  
  
(johnny-gomezreyes@kali)-[~]  
└─$ sudo mount /dev/sdb1 /cyse  
  
(johnny-gomezreyes@kali)-[~]  
└─$ df -h  
Filesystem      Size  Used Avail Use% Mounted on  
udev            1.9G   0 1.9G   0% /dev  
tmpfs           392M  980K 391M   1% /run  
/dev/sda3       23G   13G  8.5G  61% /  
tmpfs           2.0G  4.0K 2.0G   1% /dev/shm  
efivarfs        256K   17K 240K   7% /sys/firmware/efi/efivars  
tmpfs           5.0M   0 5.0M   0% /run/lock  
tmpfs           1.0M   0 1.0M   0% /run/credentials/systemd-journald.service  
tmpfs           2.0G   92K 2.0G   1% /tmp  
/dev/sda2       977M  368K 977M   1% /boot/efi  
tmpfs           1.0M   0 1.0M   0% /run/credentials/getty@tty1.service  
tmpfs           392M  112K 392M   1% /run/user/1000  
/dev/sdb1       181M   63K 167M   1% /cyse  
  
(johnny-gomezreyes@kali)-[~]  
└─$
```