

Exploring Hardware

Device Files /dev

- Look under /dev directory in your VM (ls -la to see the file type)
 - What file types do you see?
 - - : regular file
 - d : directory
 - c : character device file
 - b : block device file
 - s : local socket file
 - p : named pipe
 - l : symbolic link
 - What is under /dev/disk?
 - Explore this folder to see if you can identify your main hard disk
 - By looking at the hardware path can you identify what type of interface the disks have? (SATA, ATA, SCSI, etc...)

Storage

- Lookup these commands:
 - lsblk
 - fdisk
- Use lsblk and fdisk -l commands to look for following:
 - How many physical disks are attached to your system?
 - How big are the disks?
 - Is your physical disk partitioned and what are the names of the partition devices?
 - Look up what a loop device in Unix/Linux is
 - How many loop devices, and what are their mount points? Can you guess what they are?

File system

- To create a unix/linux file system:
 - mkfs
- To get reports on file systems:
 - df
 - du
- What is your current system's disk usage?
 - How much free space left?
- How big are the files inside your home directory?
 - How much space is your home directory taking in total?

Multiple filesystems

- /etc/fstab file specifies the disks to be mounted on Startup
 - Mount points and other attributes can be specified
- Look up these commands:
 - mount/umount
 - eject
- Things to try out:
 - Mount a second disk to your VM and see if you can format and mount it.
 - Optionally you can have this second vdisk be permanently attached to your machine by modifying /etc/fstab file. Just make sure to backup your VM before, in case something goes wrong
 - Mount a cdrom/DVD drive to your VM (use an iso image and attach to your VM) and explore the file system inside the removable media, then eject it.

Other hardware

- Explore the following commands:
 - `lspci`
 - `lsusb`
 - `lscpu`
 - `lsblk`
- Try attaching a USB device to your VM and see if it shows up using `lsusb`