Linux Examinations - Image Mounting

Image Mounting

Requires: WSL or Linux VM

If customer provides the image in the form of a **VMDK**, convert to DD using ***qemu-img***.

Tools/Install

1. Install qemu-tools

```
apt update && apt install qemu-utils
```

Conversion

Convert the image from VMDK to DD

   1.

```
qemu-img convert -f vmdk -O raw image.vmdk image.img
```

Mounting

1. Determine the partition layout and filesystem

```
fdisk -l <image-name.dd>
```

2. Note information from the output

    a. Note the **Sector Size** in the example below is **512 bytes**

    b. Note the **Sector Start** in the example below is **1054720**

```
root@CPIRT-THOR:/mnt/d/Virtual Machines/Ubuntu 22-04# fdisk -l image.dd
Disk image.dd: 60 GiB, 64424509440 bytes, 125829120 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
Disklabel type: gpt
Disk identifier: A9D84455-536E-4505-AF49-DC446032C4AB

Device        Start        End     Sectors  Size Type
image.dd1      2048       4095        2048    1M BIOS boot
image.dd2      4096    1054719     1050624  513M EFI System
image.dd3   1054720  125827071   124772352 59.5G Linux filesystem
```

3. Multiply the **Sector Size** by **Sector Start**. This will be the value we feed into the mount command for the **Offset** flag.

```
512 x 1054720 = 540016640
```

4. Make a mount point

```
mkdir /mnt/diskimage/
```

5. Mount the image using the following command:

```
sudo mount -o ro,loop,offset=[OFFSET],noload [IMAGE.dd] /mnt/
```

```
root@CPIRT-THOR:/mnt/d/Virtual Machines/Ubuntu 22-04# sudo mount -o ro,loop,offset=540016640,noload image.dd /mnt/diskimage/
root@CPIRT-THOR:/mnt/d/Virtual Machines/Ubuntu 22-04# cd /mnt/diskimage/
root@CPIRT-THOR:/mnt/diskimage# ls
bin    cdrom  etc   lib    lib64   lost+found  mnt  proc  run   snap  swapfile  tmp  var
boot   dev    home  lib32  libx32  media       opt  root  sbin  srv   sys       usr
```