

Jimmy Benjamin

Professor Mohammed Al -Kinoon

CYSE 270

10/29/2025

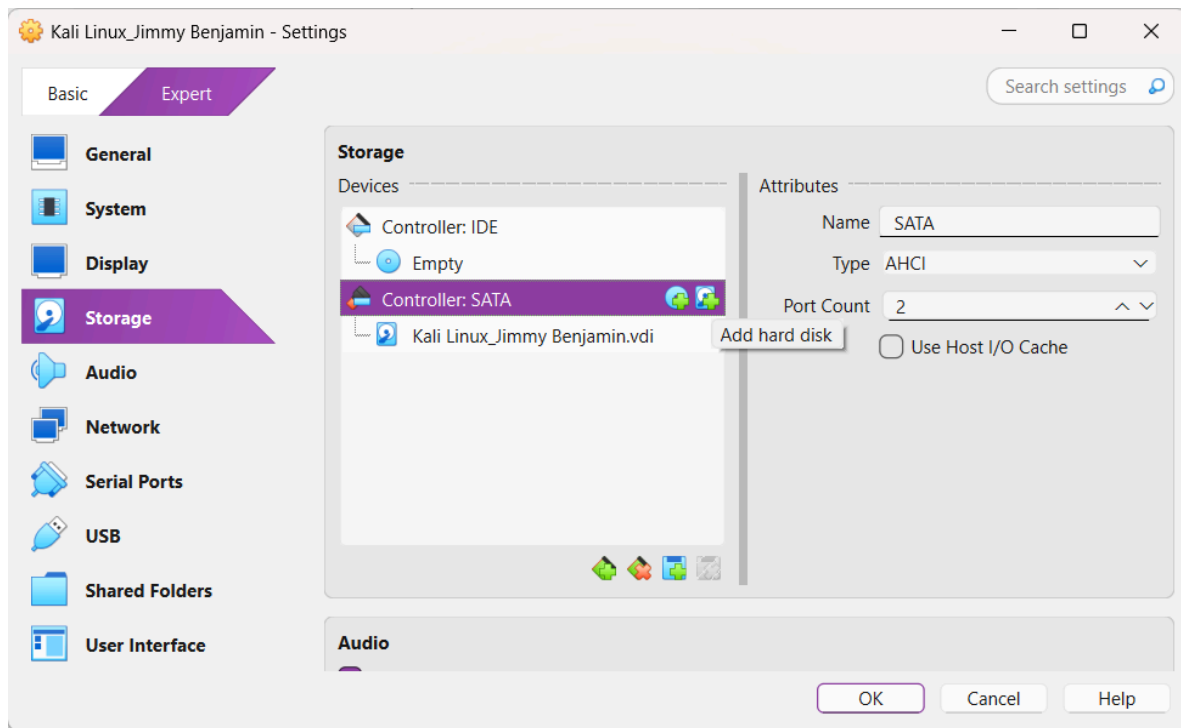
Part 1:

Steps 1-3:

```
jimmy_benjamin_009@kali: ~  
File Actions Edit View Help  
  
(jimmy_benjamin_009@kali)-[~]  
└─$ ls /dev/sd*  
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb  
  
(jimmy_benjamin_009@kali)-[~]  
└─$ sudo fdisk -l  
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 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: 0x5bc8cf75  
  
Device      Boot      Start      End  Sectors  Size Id Type  
/dev/sda1   *          2048 49641471 49639424 23.7G 83 Linux  
/dev/sda2           49643518 52426751 2783234   1.3G  f W95 Ext'd (LBA)  
/dev/sda5           49643520 52426751 2783232   1.3G  82 Linux swap / Solaris  
  
Disk /dev/sdb: 1 GiB, 1073741824 bytes, 2097152 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  
  
(jimmy_benjamin_009@kali)-[~]  
└─$ sudo parted -l  
Model: ATA VBox HARDDISK (scsi)  
Disk /dev/sda: 26.8GB  
Sector size (logical/physical): 512B/512B  
Partition Table: msdos  
Disk Flags:  
  
Number  Start   End     Size    Type    File system  Flags  
1       1049kB 25.4GB 25.4GB  primary ext4          boot  
2       25.4GB 26.8GB 1425MB extended lba  
5       25.4GB 26.8GB 1425MB logical  linux-swap(v1) swap  
  
Error: /dev/sdb: unrecognised disk label  
Model: ATA VBox HARDDISK (scsi)  
Disk /dev/sdb: 1074MB  
Sector size (logical/physical): 512B/512B  
Partition Table: unknown  
Disk Flags:  
  
(jimmy_benjamin_009@kali)-[~]  
└─$
```




Part 2:

Step 1:

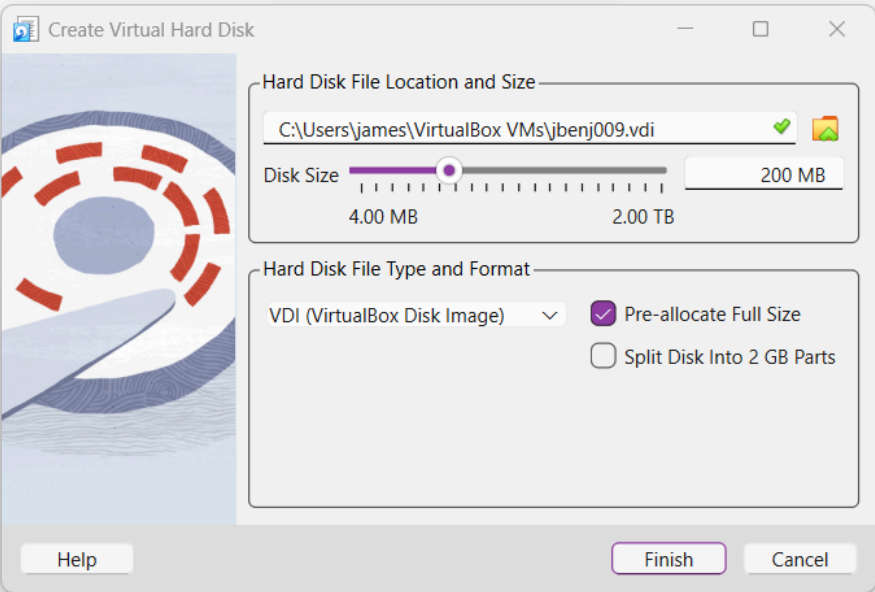


Kali Linux_Jimmy Benjamin - Hard Disk Selector

Medium Selector

  
Add Create Refresh

Name	Virtual Size	Actual Size
▼ Attached		
Kali Linux_Jimmy Benjamin.vdi	25.00 GB	15.36 GB
▼ Not Attached		
Kali Linux_Jimmy Benjamin.vdi	1.00 GB	1.00 GB
Kali Linux_Jimmy Benjamin_1.vdi	1.30 GB	2.00 MB



Hard Disk File Location and Size

C:\Users\james\VirtualBox VMs\jbenj009.vdi

Disk Size: 200 MB (range from 4.00 MB to 2.00 TB)

Hard Disk File Type and Format

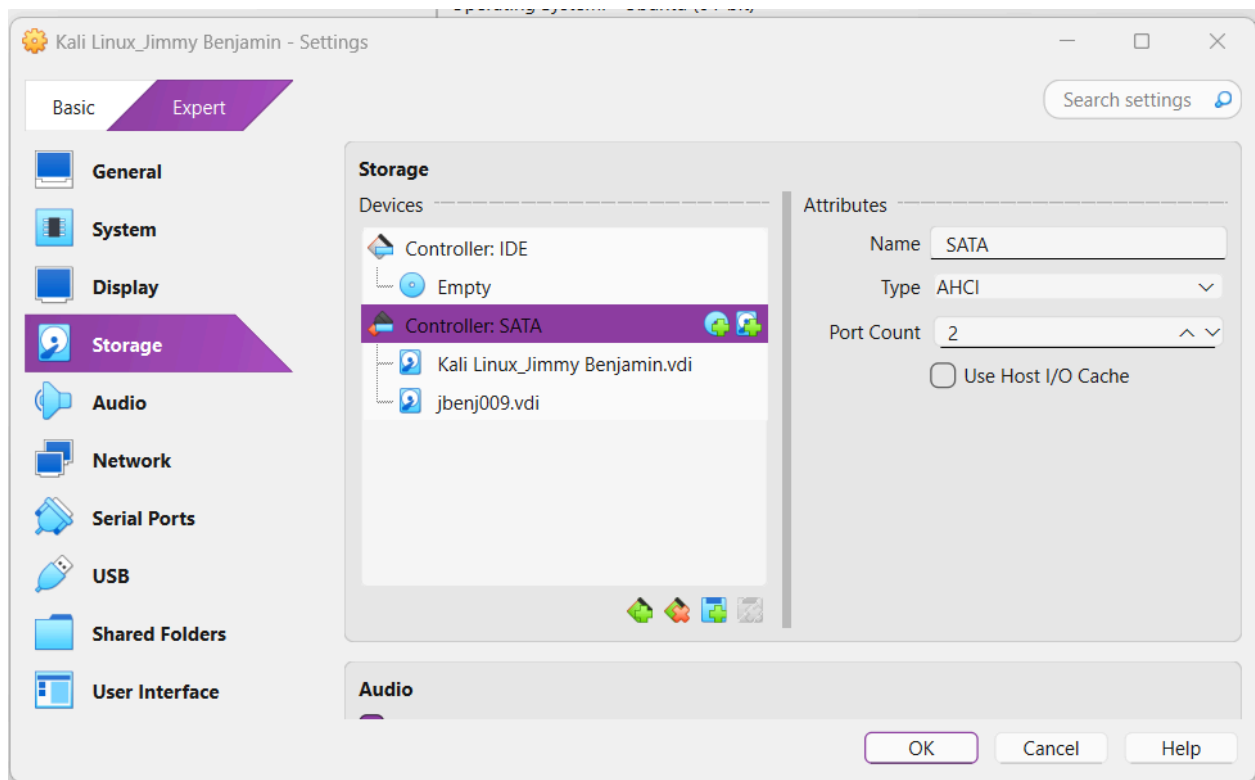
VDI (VirtualBox Disk Image) Pre-allocate Full Size Split Disk Into 2 GB Parts

Buttons: Help, Finish, Cancel

Search By Name

Choose Cancel

Step 2:



Step 3:

```
jimmy_benjamin_009@kali: ~
File Actions Edit View Help
(jimmy_benjamin_009@kali)-[~]
└─$ ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb

(jimmy_benjamin_009@kali)-[~]
└─$ sudo fdisk -l
[sudo] password for jimmy_benjamin_009:
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 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: 0x5bc8cf75

Device Boot      Start         End      Sectors  Size Id Type
/dev/sda1 *          2048     49641471   49639424   23.7G 83 Linux
/dev/sda2             49643518   52426751   2783234    1.3G  f W95 Ext'd (LBA)
/dev/sda5             49643520   52426751   2783232    1.3G 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

(jimmy_benjamin_009@kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 26.8GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type     File system  Flags
  1      1049kB 25.4GB 25.4GB  primary ext4          boot
  2      25.4GB 26.8GB 1425MB extended                lba
  5      25.4GB 26.8GB 1425MB 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:

(jimmy_benjamin_009@kali)-[~]
└─$
```

- `ls /dev/sd*`: stayed the same
- `fdisk -l`: Before creating the 200 MB hard disk, I removed another hard disk that was one GB. This disk though is the smallest in amount of bytes and vectors.
- `parted -l`: Disk /dev/sdb is worth 210 MB, while the original amount was 1074 MB

Part 3:

Step 1:

```
jimmy_benjamin_009@kali: ~  
File Actions Edit View Help  
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 0x3aec82b6.  
  
Command (m for help): m  
  
Help:  
  
DOS (MBR)  
a toggle a bootable flag  
b edit nested BSD disklabel  
c toggle the dos compatibility flag  
  
Generic  
d delete a partition  
F list free unpartitioned space  
l list known partition types  
n add a new partition  
p print the partition table  
t change a partition type  
v verify the partition table  
i print information about a partition  
e resize a partition  
T discard (trim) sectors  
  
Misc  
m print this menu  
u change display/entry units  
x extra functionality (experts only)  
  
Script  
I load disk layout from sfdisk script file  
O dump disk layout to sfdisk script file  
  
Save & Exit  
w write table to disk and exit  
q quit without saving changes  
  
Create a new label  
g create a new empty GPT partition table  
G create a new empty SGI (IRIX) partition table  
o create a new empty MBR (DOS) partition table  
s create a new empty Sun partition table  
  
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):  
First sector (2048-409599, default 2048):  
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-409599, default 409599):
```

Steps 2-3:

```
(jimmy_benjamin_009@kali)-[~]
└─$ sudo mkfs.ext4 /dev/sdb1
[sudo] password for jimmy_benjamin_009:
mke2fs 1.47.2 (1-Jan-2025)
The file /dev/sdb1 does not exist and no size was specified.

(jimmy_benjamin_009@kali)-[~]
└─$ ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb

(jimmy_benjamin_009@kali)-[~]
└─$ sudo fdisk -l
Disk /dev/sda: 25 GiB, 26843545600 bytes, 52428800 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: 0x5bc8cf75

Device Boot      Start         End      Sectors   Size Id Type
/dev/sda1 *          2048     49641471    49639424   23.7G 83 Linux
/dev/sda2             49643518    52426751    2783234    1.3G  f W95 Ex
/dev/sda5             49643520    52426751    2783232    1.3G  82 Linux

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

(jimmy_benjamin_009@kali)-[~]
└─$ sudo parted -l
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sda: 26.8GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type     File system
Flags
1       1049kB  25.4GB  25.4GB  primary  ext4
boot
2       25.4GB  26.8GB  1425MB  extended
lba
5       25.4GB  26.8GB  1425MB  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
```

Step 4-5:

```
(jimmy_benjamin_009@kali)-[~]
└─$ sudo mkdir /cyse

(jimmy_benjamin_009@kali)-[~]
└─$ sudo mount /dev/sdb1 /cyse
mount: /cyse: fsconfig() failed: /dev/sdb1: Can't lookup b
lockdev.
       dmesg(1) may have more information after failed mou
nt system call.

(jimmy_benjamin_009@kali)-[~]
└─$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            921M   0    921M   0% /dev
tmpfs           198M  996K  197M   1% /run
/dev/sda1       24G   15G   7.5G  67% /
tmpfs           987M  4.0K  987M   1% /dev/shm
tmpfs           5.0M   0    5.0M   0% /run/lock
tmpfs           1.0M   0    1.0M   0% /run/credentials/sys
temd-journald.service
tmpfs           987M  76K  987M   1% /tmp
tmpfs           1.0M   0    1.0M   0% /run/credentials/get
ty@tty1.service
tmpfs           198M  116K  198M   1% /run/user/1000

(jimmy_benjamin_009@kali)-[~]
└─$ █
```