Standard Partition:

 Offline Method (Normal Partitioning):

In traditional partitioning, extending a partition is an offline activity, meaning the partition must be unmounted first.

Here's how it works step-by-step:

 Normal Partition Extension (Offline):

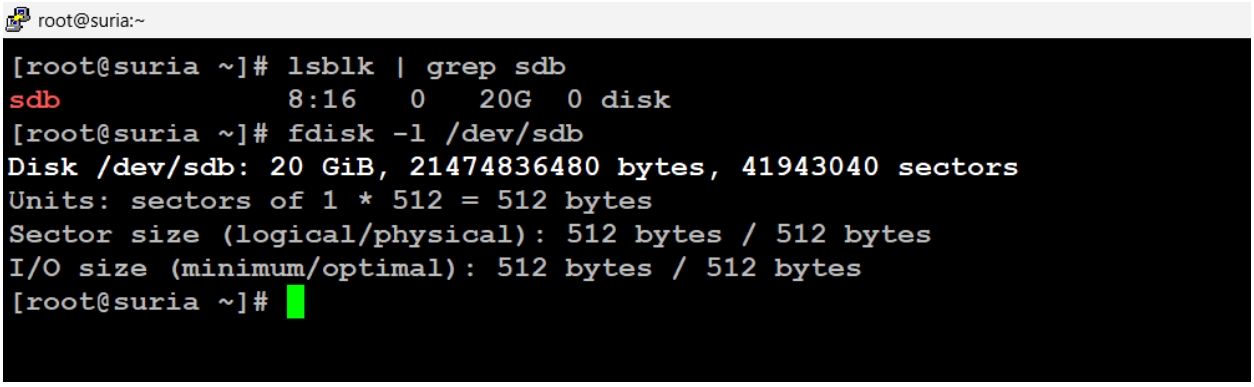
1. Add a New Disk in VMware:

Go to VM Settings

Click Add → Select Hard Disk

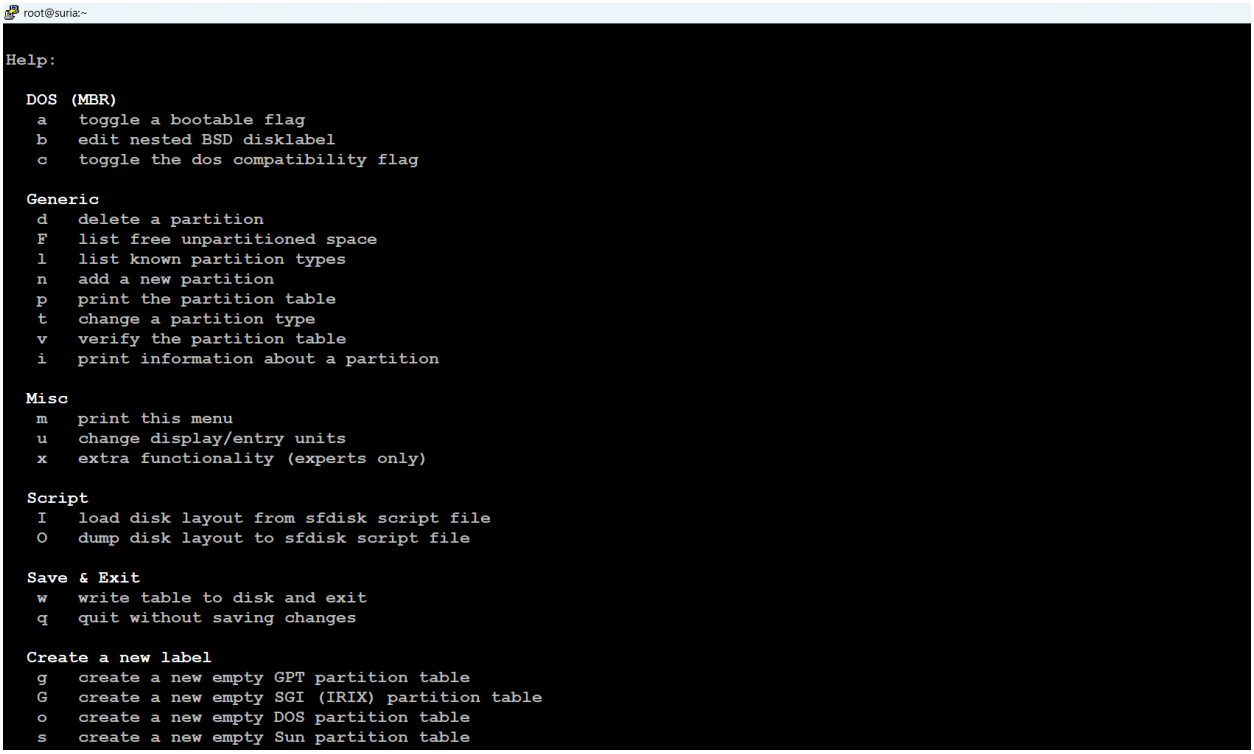
Configure the disk (size, type, etc.)

Click Finish to add the disk



2. Access the disk using fdisk:

fdisk /dev/sdb



3. Create a new partition:

Inside fdisk, follow these prompts:

Press n (new partition)

Press p (primary)

Enter partition number (default is fine)

Press Enter for starting sector (default)

Enter size (e.g., +1G, +2G, etc.)

Press w (write and exit)

root@suria:~

```
[root@suria ~]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.32.1).
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 disklabel with disk identifier 0xc8c32930.

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 (2048-41943039, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-41943039, default 41943039): +1G

Created a new partition 1 of type 'Linux' and of size 1 GiB.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@suria ~]# q
```

root@suria:/

```
[root@suria /]#
[root@suria /]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.32.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


Command (m for help): n
Partition type
   p   primary (1 primary, 0 extended, 3 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2):
First sector (2099200-41943039, default 2099200):
Last sector, +sectors or +size{K,M,G,T,P} (2099200-41943039, default 41943039): +1G

Created a new partition 2 of type 'Linux' and of size 1 GiB.

Command (m for help): t
Partition number (1,2, default 2):
Hex code (type L to list all codes): 8e

Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Syncing disks.

[root@suria /]#
```

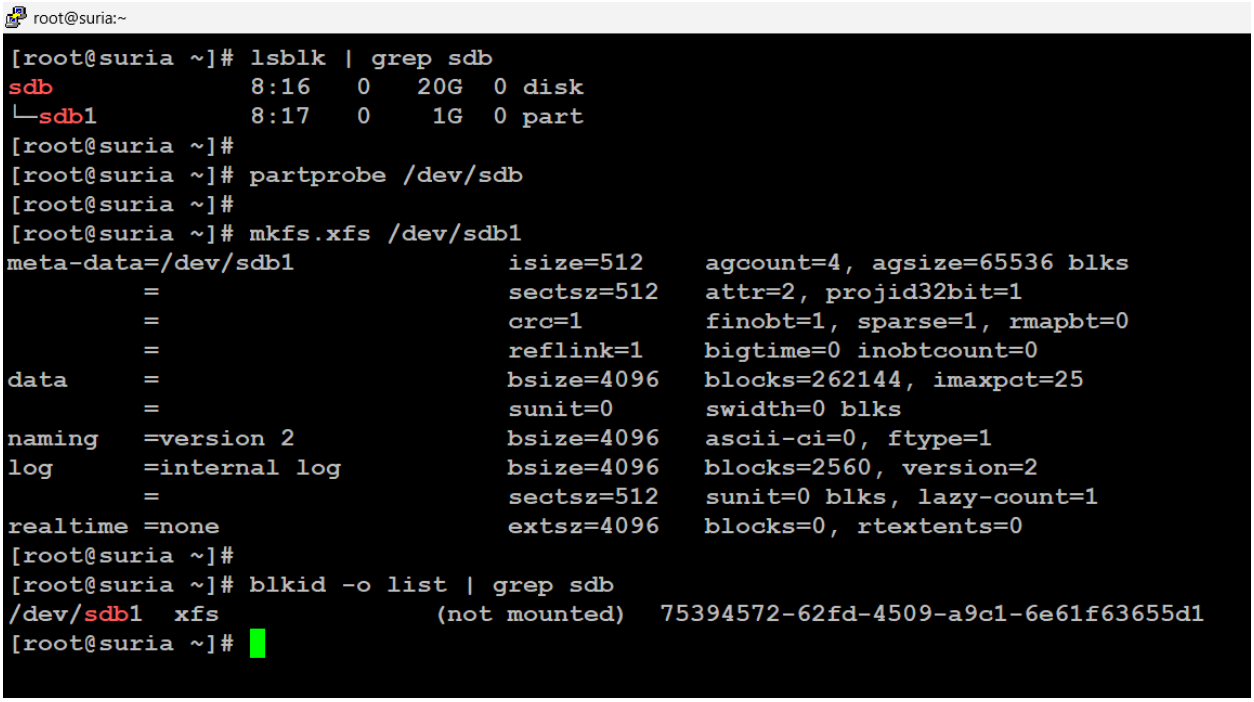
4. Inform the kernel about partition changes:

partprobe /dev/sdb

5. Format the new partition:

mkfs.xfs /dev/sdb1 (XFS filesystem)

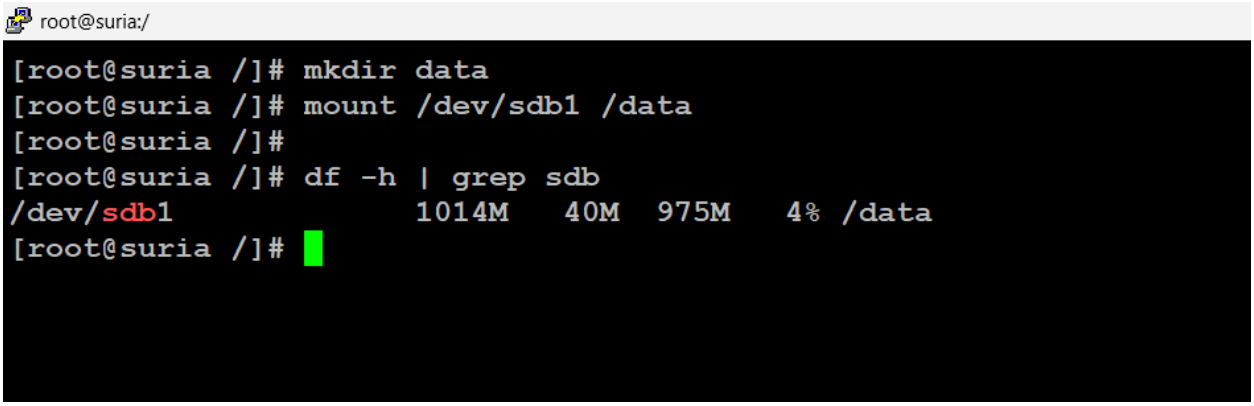
mkfs.ext4 /dev/sdb2 (ext4 filesystem)

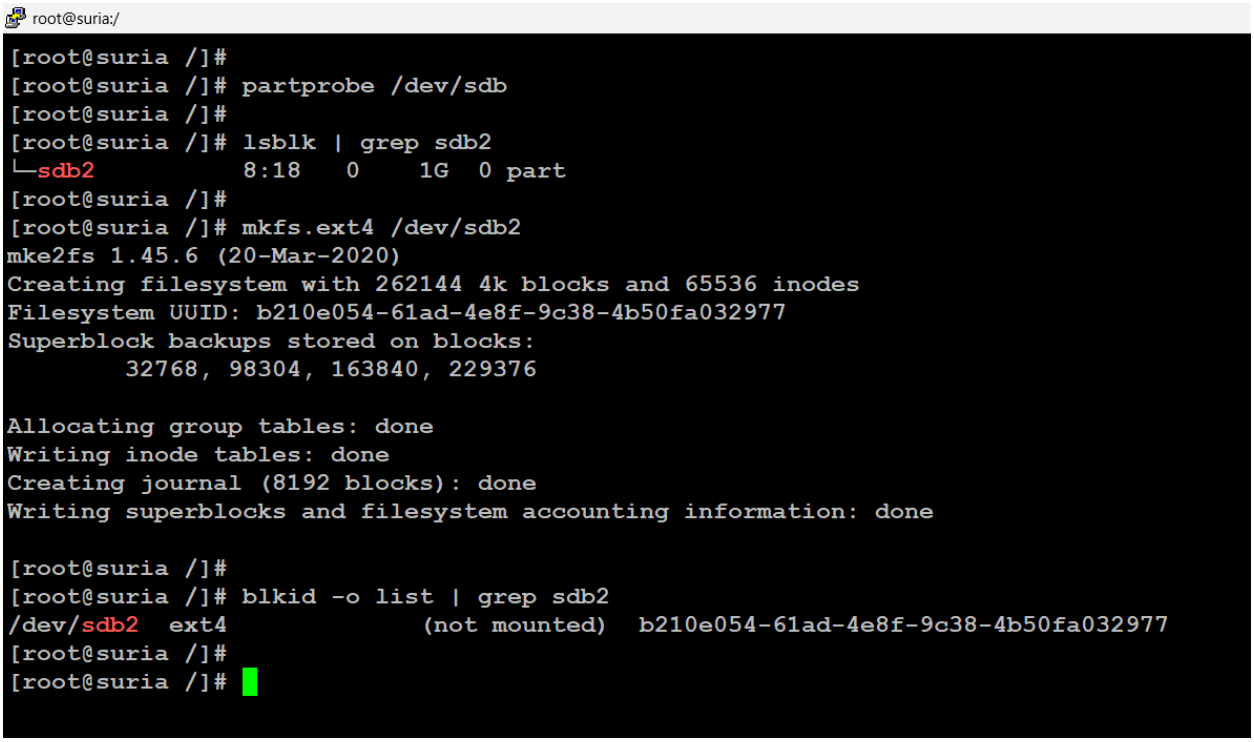


6. Create a mount point directory:

mkdir /data

mkdir /data2





7. Mount the partition:

mount /dev/sdb1 /data

mount /dev/sdb2 /data2

8. Verify the partition is mounted:

df -h

lsblk

9. Add Entry to /etc/fstab (Persistent Mount):

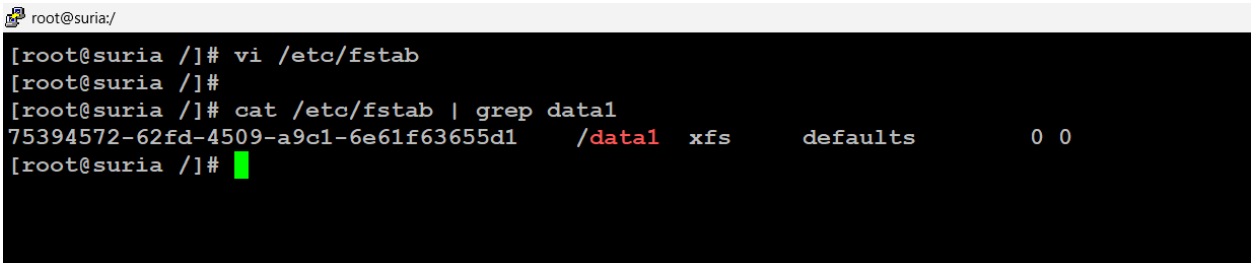
blkid /dev/sdb1 /dev/sdb2

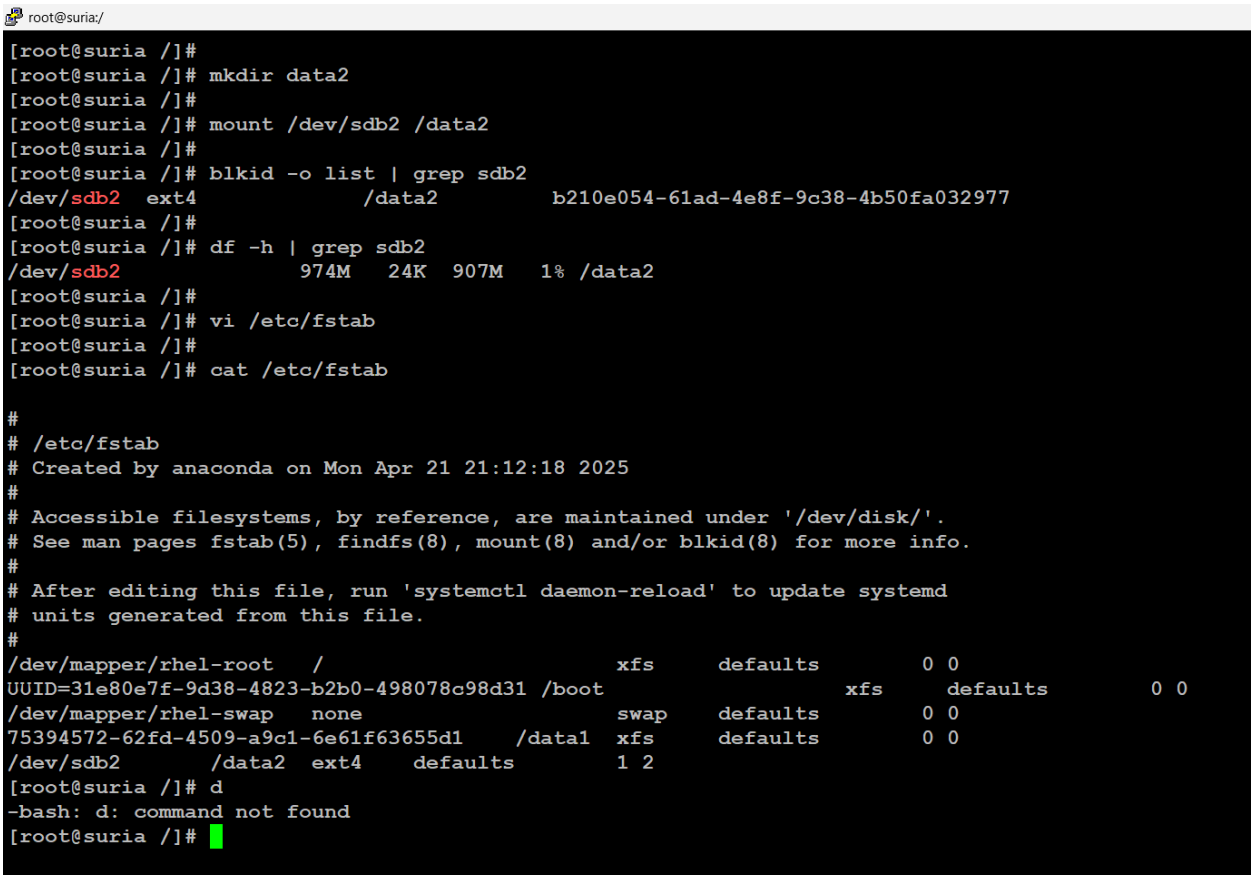
10. Open the fstab file for editing:

vi nano /etc/fstab

UUID=abcd-1234-efgh-5678 /data xfs defaults 0 0

UUID=ijkl-8989-mnop-3434 /data2 ext4 defaults 0 1





Test the fstab entry:

mount -a

Note:

The command for unmounting a filesystem in Linux:

umount /data