1. Use fdisk utility on disk size (2GB) to create primary partition of size 500MB put xfs filesystem

and mount persistently under /mnt/xfs\_storage and try the same using unit file unitfile.mount

[aniketvm1 ~]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).

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 0x8281b1d9.

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 (2048-4194303, default 2048):

Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-4194303, default 4194303): +500M

Created a new partition 1 of type 'Linux' and of size 500 MiB.

Command (m for help): w

The partition table has been altered.

Calling ioctl() to re-read partition table.

Syncing disks.

[aniketvm1 ~]# partprobe /dev/sdb

[aniketvm1 ~]# lsblk

NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS

sda 8:0 0 60G 0 disk

├─sda1 8:1 0 1G 0 part /boot

└─sda2 8:2 0 59G 0 part

├─cs-root 253:0 0 37G 0 lvm /

├─cs-swap 253:1 0 3.9G 0 lvm [SWAP]

└─cs-home 253:2 0 18.1G 0 lvm /home

sdb 8:16 0 2G 0 disk

└─sdb1 8:17 0 500M 0 part

sr0 11:0 1 1024M 0 rom

[aniketvm1 ~]# mkfs -t xfs /dev/sdb1

meta-data=/dev/sdb1 isize=512 agcount=4, agsize=32000 blks

= sectsz=512 attr=2, projid32bit=1

= crc=1 finobt=1, sparse=1, rmapbt=0

= reflink=1 bigtime=1 inobtcount=1 nrext64=0

data = bsize=4096 blocks=128000, imaxpct=25

= sunit=0 swidth=0 blks

naming =version 2 bsize=4096 ascii-ci=0, ftype=1

log =internal log bsize=4096 blocks=16384, version=2

= sectsz=512 sunit=0 blks, lazy-count=1

realtime =none extsz=4096 blocks=0, rtextents=0

[aniketvm1 ~]# blkid

/dev/mapper/cs-swap: UUID="2036c73f-6762-43c8-9b88-bcf6a0d4b0e7" TYPE="swap"

/dev/sdb1: UUID="d962ef39-4b32-404e-90a4-b96cffdf574e" TYPE="xfs" PARTUUID="8281b1d9-01"

/dev/mapper/cs-home: UUID="ced78101-1455-4b5d-bbcf-f6ff609ebe74" TYPE="xfs"

/dev/mapper/cs-root: UUID="05bb0f4f-f492-47dc-8581-0180cd09bd63" TYPE="xfs"

/dev/sda2: UUID="VuUjxS-HZRp-vnGU-ECZe-KpXj-h2rf-9EpOH3" TYPE="LVM2\_member" PARTUUID="ca6dcb7c-02"

/dev/sda1: UUID="d23e81f1-b408-4bea-954a-b4f3e9150c91" TYPE="xfs" PARTUUID="ca6dcb7c-01"

[aniketvm1 ~]# mkdir /mnt/xfs\_storage

[aniketvm1 ~]# mount /dev/sdb1 /mnt/xfs\_storage

[aniketvm1 ~]# cd /mnt/xfs\_storage/

[aniketvm1 xfs\_storage]# touch newfile{1..3}

[aniketvm1 xfs\_storage]# ls -l

total 0

-rw-r--r--. 1 root root 0 Jan 22 18:40 newfile1

-rw-r--r--. 1 root root 0 Jan 22 18:40 newfile2

-rw-r--r--. 1 root root 0 Jan 22 18:40 newfile3

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Persistent Mount

[aniketvm1 ~]# df -Th

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs tmpfs 1.8G 0 1.8G 0% /dev/shm

tmpfs tmpfs 726M 9.6M 716M 2% /run

/dev/mapper/cs-root xfs 37G 5.0G 33G 14% /

/dev/mapper/cs-home xfs 19G 233M 18G 2% /home

/dev/sda1 xfs 1014M 511M 504M 51% /boot

tmpfs tmpfs 363M 96K 363M 1% /run/user/1000

/dev/sdb1 xfs 436M 29M 408M 7% /mnt/xfs\_storage

[aniketvm1 ~]# umount /mnt/xfs\_storage

[aniketvm1 ~]# df -Th

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs tmpfs 1.8G 0 1.8G 0% /dev/shm

tmpfs tmpfs 726M 9.6M 716M 2% /run

/dev/mapper/cs-root xfs 37G 5.0G 33G 14% /

/dev/mapper/cs-home xfs 19G 233M 18G 2% /home

/dev/sda1 xfs 1014M 511M 504M 51% /boot

tmpfs tmpfs 363M 104K 363M 1% /run/user/1000

[aniketvm1 ~]# lsblh -f

bash: lsblh: command not found...

[aniketvm1 ~]# lsblk -f

NAME FSTYPE FSVER LABEL UUID FSAVAIL FSUSE% MOUNTPOINTS

sda

├─sda1 xfs d23e81f1-b408-4bea-954a-b4f3e9150c91 503.8M 50% /boot

└─sda2 LVM2\_member LVM2 001 VuUjxS-HZRp-vnGU-ECZe-KpXj-h2rf-9EpOH3

├─cs-root xfs 05bb0f4f-f492-47dc-8581-0180cd09bd63 32G 13% /

├─cs-swap swap 1 2036c73f-6762-43c8-9b88-bcf6a0d4b0e7 [SWAP]

└─cs-home xfs ced78101-1455-4b5d-bbcf-f6ff609ebe74 17.8G 1% /home

sdb

└─sdb1 xfs d962ef39-4b32-404e-90a4-b96cffdf574e

sr0

[aniketvm1 ~]# vim /etc/fstab

[aniketvm1 ~]# df -Th

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs tmpfs 1.8G 0 1.8G 0% /dev/shm

tmpfs tmpfs 726M 9.6M 716M 2% /run

/dev/mapper/cs-root xfs 37G 5.0G 33G 14% /

/dev/mapper/cs-home xfs 19G 233M 18G 2% /home

/dev/sda1 xfs 1014M 511M 504M 51% /boot

tmpfs tmpfs 363M 96K 363M 1% /run/user/1000

[aniketvm1 ~]# blkid

/dev/mapper/cs-swap: UUID="2036c73f-6762-43c8-9b88-bcf6a0d4b0e7" TYPE="swap"

/dev/sdb1: UUID="d962ef39-4b32-404e-90a4-b96cffdf574e" TYPE="xfs" PARTUUID="8281b1d9-01"

/dev/mapper/cs-home: UUID="ced78101-1455-4b5d-bbcf-f6ff609ebe74" TYPE="xfs"

/dev/mapper/cs-root: UUID="05bb0f4f-f492-47dc-8581-0180cd09bd63" TYPE="xfs"

/dev/sda2: UUID="VuUjxS-HZRp-vnGU-ECZe-KpXj-h2rf-9EpOH3" TYPE="LVM2\_member" PARTUUID="ca6dcb7c-02"

/dev/sda1: UUID="d23e81f1-b408-4bea-954a-b4f3e9150c91" TYPE="xfs" PARTUUID="ca6dcb7c-01"

[aniketvm1 ~]# vim /etc/fstab

[aniketvm1 ~]# vim /etc/fstab

[aniketvm1 ~]# systemctl daemon-reload

[aniketvm1 ~]# mount -a

[aniketvm1 ~]# df -Th

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs tmpfs 1.8G 0 1.8G 0% /dev/shm

tmpfs tmpfs 726M 9.6M 716M 2% /run

/dev/mapper/cs-root xfs 37G 5.0G 33G 14% /

/dev/mapper/cs-home xfs 19G 233M 18G 2% /home

/dev/sda1 xfs 1014M 511M 504M 51% /boot

tmpfs tmpfs 363M 96K 363M 1% /run/user/1000

/dev/sdb1 xfs 436M 29M 408M 7% /mnt/xfs\_storage

[aniketvm1 ~]#

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2. Next 1.5 G of the device to be used as swap to increase the size of swap by 1.5 G

[aniketvm1 ~]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).

Changes will remain in memory only, until you decide to write them.

Be careful before using the write command.

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

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 DOS partition table

s create a new empty Sun partition table

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): 2

First sector (1026048-4194303, default 1026048):

Last sector, +/-sectors or +/-size{K,M,G,T,P} (1026048-4194303, default 4194303): +1.5G

Created a new partition 2 of type 'Linux' and of size 1.5 GiB.

Command (m for help): t

Partition number (1,2, default 2): 2

Hex code or alias (type L to list all): 82

Changed type of partition 'Linux' to 'Linux swap / Solaris'.

Command (m for help): p

Disk /dev/sdb: 2 GiB, 2147483648 bytes, 4194304 sectors

Disk model: VMware Virtual S

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: 0x8281b1d9

Device Boot Start End Sectors Size Id Type

/dev/sdb1 2048 1026047 1024000 500M 83 Linux

/dev/sdb2 1026048 4171775 3145728 1.5G 82 Linux swap / Solaris

Command (m for help): w

The partition table has been altered.

Calling ioctl() to re-read partition table.

Syncing disks.

[aniketvm1 ~]# partprobe /dev/sdb

[aniketvm1 ~]# df -Th

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs tmpfs 1.8G 0 1.8G 0% /dev/shm

tmpfs tmpfs 726M 9.6M 716M 2% /run

/dev/mapper/cs-root xfs 37G 5.0G 33G 14% /

/dev/mapper/cs-home xfs 19G 233M 18G 2% /home

/dev/sda1 xfs 1014M 511M 504M 51% /boot

tmpfs tmpfs 363M 96K 363M 1% /run/user/1000

[aniketvm1 ~]# lsblk

NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS

sda 8:0 0 60G 0 disk

├─sda1 8:1 0 1G 0 part /boot

└─sda2 8:2 0 59G 0 part

├─cs-root 253:0 0 37G 0 lvm /

├─cs-swap 253:1 0 3.9G 0 lvm [SWAP]

└─cs-home 253:2 0 18.1G 0 lvm /home

sdb 8:16 0 2G 0 disk

├─sdb1 8:17 0 500M 0 part

└─sdb2 8:18 0 1.5G 0 part

sr0 11:0 1 1024M 0 rom

[aniketvm1 ~]# free \_h

Usage:

free [options]

Options:

-b, --bytes show output in bytes

--kilo show output in kilobytes

--mega show output in megabytes

--giga show output in gigabytes

--tera show output in terabytes

--peta show output in petabytes

-k, --kibi show output in kibibytes

-m, --mebi show output in mebibytes

-g, --gibi show output in gibibytes

--tebi show output in tebibytes

--pebi show output in pebibytes

-h, --human show human-readable output

--si use powers of 1000 not 1024

-l, --lohi show detailed low and high memory statistics

-t, --total show total for RAM + swap

-s N, --seconds N repeat printing every N seconds

-c N, --count N repeat printing N times, then exit

-w, --wide wide output

--help display this help and exit

-V, --version output version information and exit

For more details see free(1).

[aniketvm1 ~]# free -h

total used free shared buff/cache available

Mem: 3.5Gi 1.2Gi 1.8Gi 22Mi 792Mi 2.3Gi

Swap: 3.9Gi 0B 3.9Gi

[aniketvm1 ~]# mkswap /dev/sdb2

Setting up swapspace version 1, size = 1.5 GiB (1610608640 bytes)

no label, UUID=5e757774-9fcd-44d0-af85-cdea3d83265c

[aniketvm1 ~]# vim /etc/fstab

[aniketvm1 ~]# systemctl deamon-reload

Unknown command verb deamon-reload.

[aniketvm1 ~]# systemctl daemon-reload

[aniketvm1 ~]# swap -a

bash: swap: command not found...

Similar command is: 'swapon'

[aniketvm1 ~]# swapon -a

[aniketvm1 ~]# swapon -s

Filename Type Size Used Priority

/dev/dm-1 partition 4112380 0 -2

/dev/sdb2 partition 1572860 0 -3

[aniketvm1 ~]# lsblk

NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS

sda 8:0 0 60G 0 disk

├─sda1 8:1 0 1G 0 part /boot

└─sda2 8:2 0 59G 0 part

├─cs-root 253:0 0 37G 0 lvm /

├─cs-swap 253:1 0 3.9G 0 lvm [SWAP]

└─cs-home 253:2 0 18.1G 0 lvm /home

sdb 8:16 0 2G 0 disk

├─sdb1 8:17 0 500M 0 part

└─sdb2 8:18 0 1.5G 0 part [SWAP]

sr0 11:0 1 1024M 0 rom

[aniketvm1 ~]# free -m

total used free shared buff/cache available

Mem: 3625 1231 1849 22 792 2394

Swap: 5551 0 5551

[aniketvm1 ~]# free -mh

total used free shared buff/cache available

Mem: 3.5Gi 1.2Gi 1.8Gi 22Mi 792Mi 2.3Gi

Swap: 5.4Gi 0B 5.4Gi

[aniketvm1 ~]#