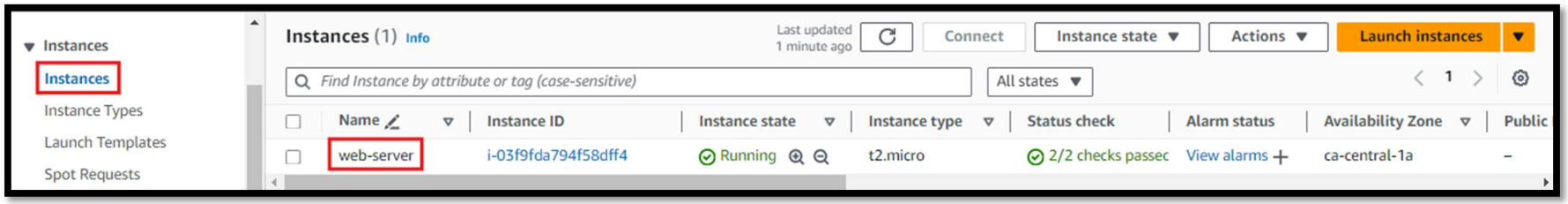
CONCAT LV



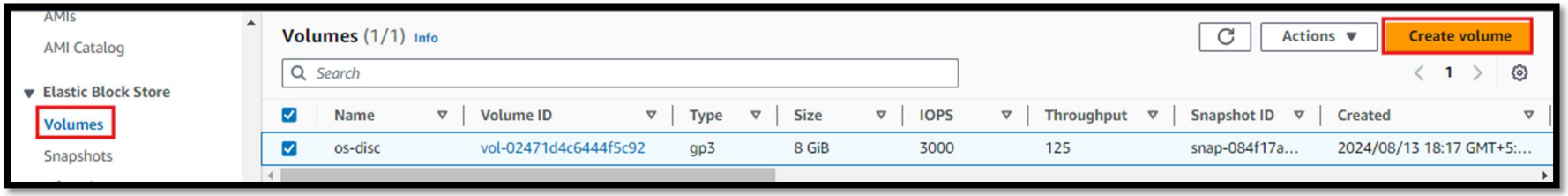
Launched instance (web server)

Instances >> web server

```
[root@ip-10-10-1-184 ~]# lsblk
NAME      MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda      202:0    0   8G  0 disk
├─xvda1   202:1    0   8G  0 part /
├─xvda127 259:0    0   1M  0 part
└─xvda128 259:1    0  10M  0 part /boot/efi
[root@ip-10-10-1-184 ~]#
```

Can see only root disc here

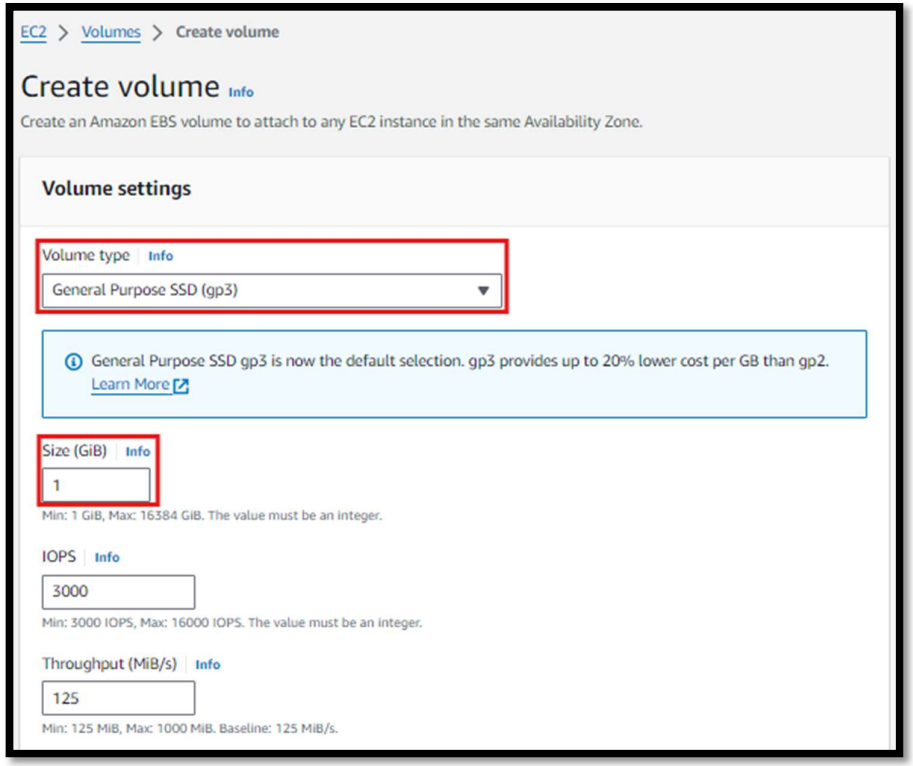
CONCAT LV



Note:

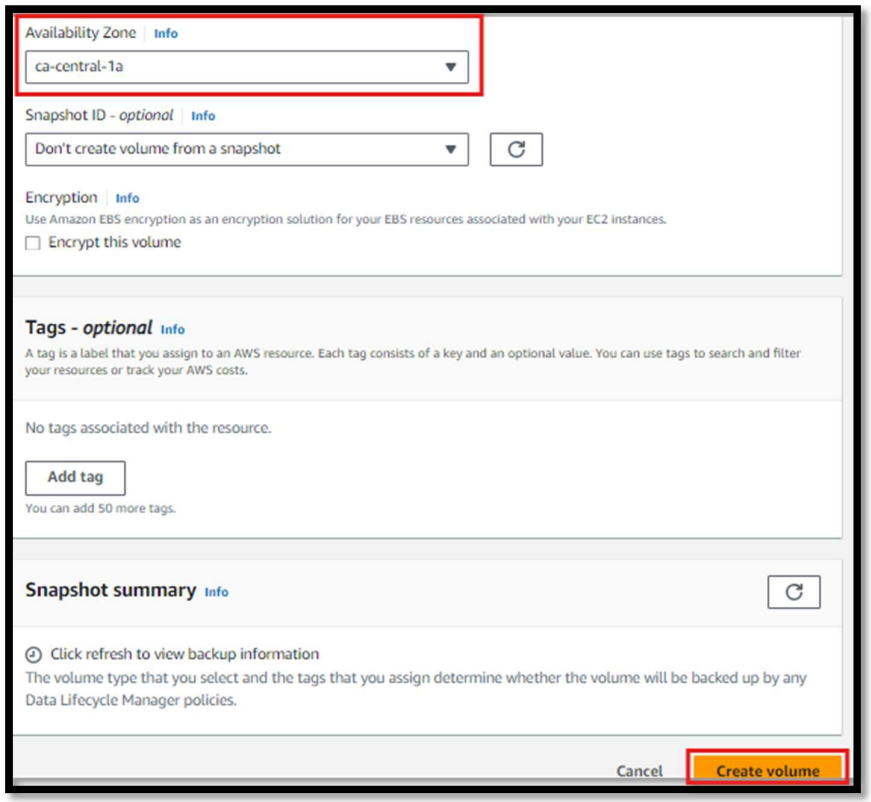
- **Creating concat LV**
- **For this we need minimum one disk**
- **So, here we creating a volume to attach to the instance.**

CONCAT LV



- **Taken volume type = gp3**
- **Size = 1 GiB**

CONCAT LV

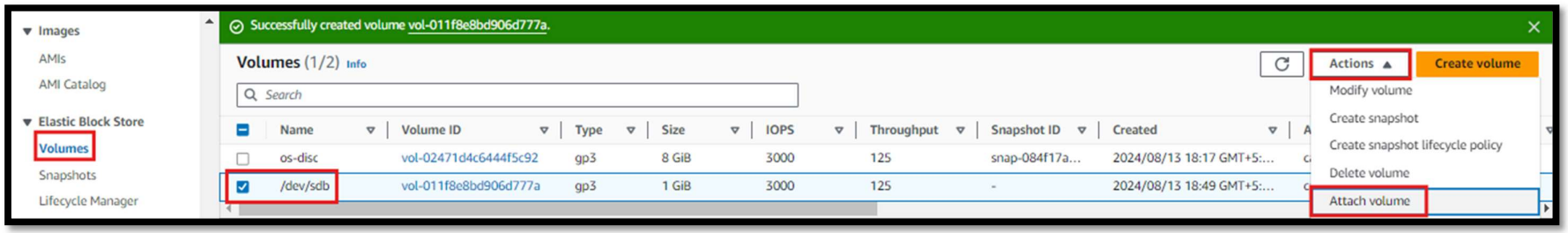


Availability Zone = ca-central-1a

Finally, create the volume

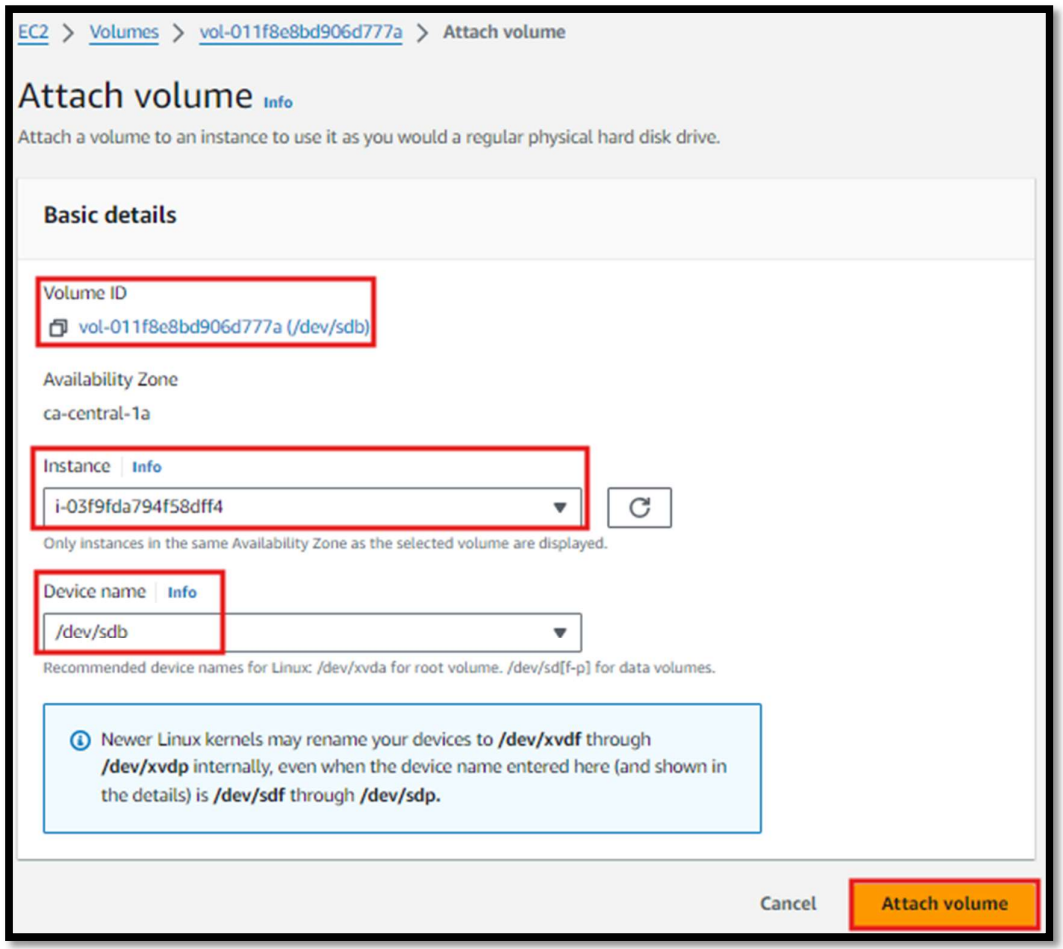
CONCAT LV

Volumes >> select the volume created (/dev/sdb)



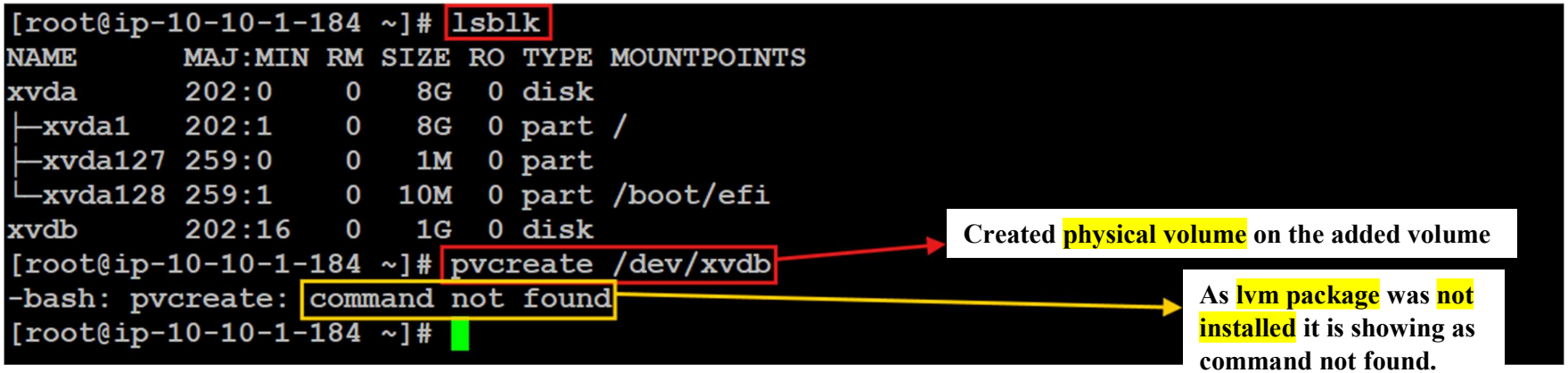
Volumes >> select the volume created (/dev/sdb) >> Actions >> Attach volume

CONCAT LV



- **Can see the volume ID**
- **Select the instance (we-server) seeing the instance ID.**
- **Select the device name (/dev/sdb).**

CONCAT LV

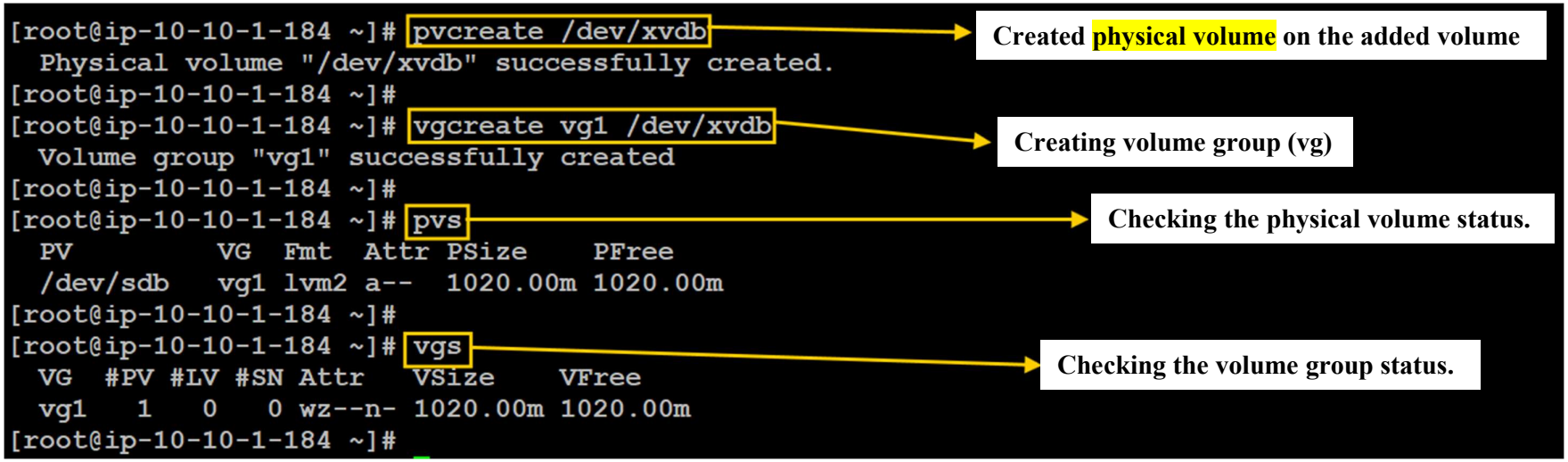

[root@ip-10-10-1-184 ~]# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda 202:0 0 8G 0 disk
├─xvda1 202:1 0 8G 0 part /
├─xvda127 259:0 0 1M 0 part
└─xvda128 259:1 0 10M 0 part /boot/efi
xvdb 202:16 0 1G 0 disk
[root@ip-10-10-1-184 ~]# pvcreate /dev/xvdb
-bash: pvcreate: command not found
[root@ip-10-10-1-184 ~]#
Created physical volume on the added volume
As lvm package was not installed it is showing as command not found.

CONCAT LV

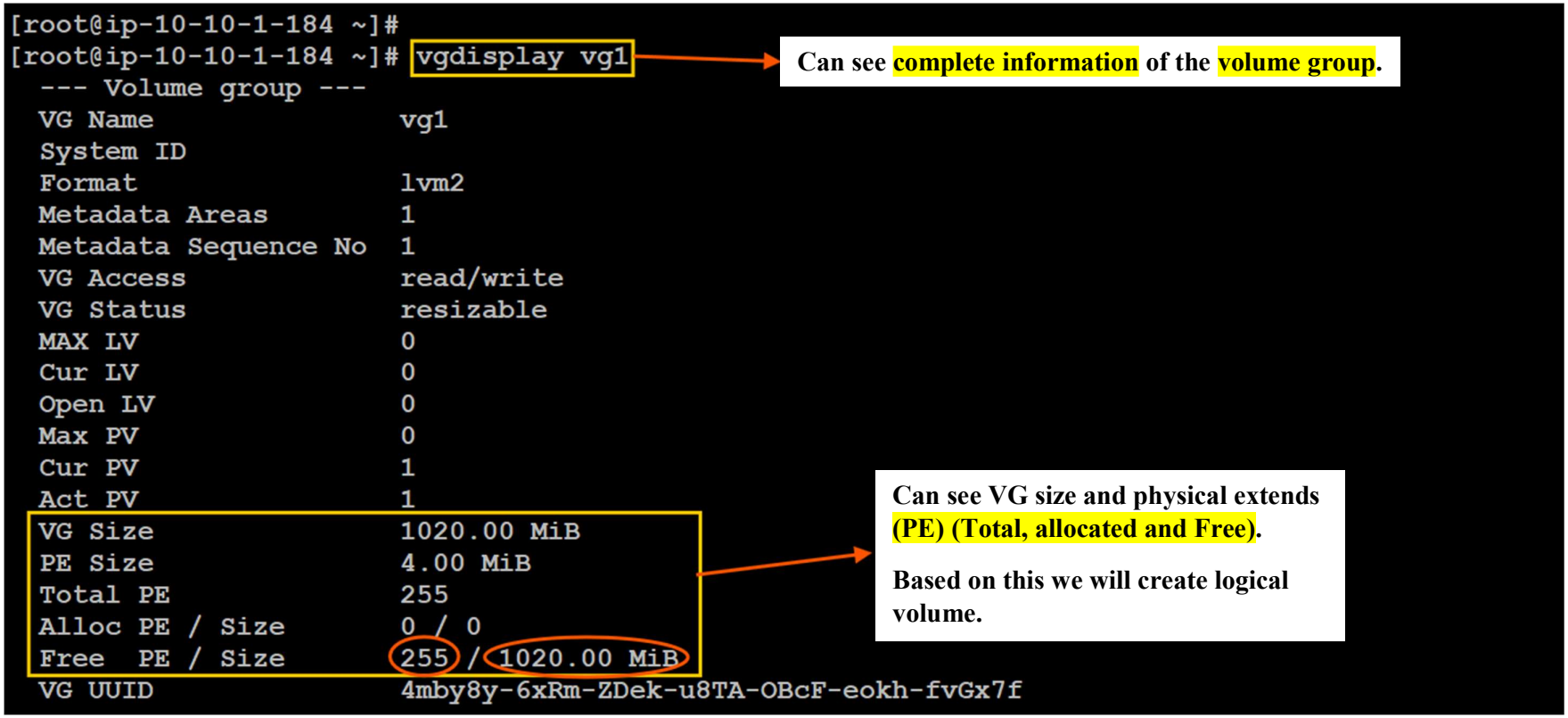
```
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# yum clean all
17 files removed
[root@ip-10-10-1-184 ~]# yum repolist
repo id                          repo name
amazonlinux                      Amazon Linux 2023 repository
kernel-livepatch                 Amazon Linux 2023 Kernel Livepatch repository
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# yum install lvm2 -y
```

Installing LVM package (lvm2) using yum command.

CONCAT LV


[root@ip-10-10-1-184 ~]# pvcreate /dev/xvdb
Physical volume "/dev/xvdb" successfully created.
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# vgcreate vg1 /dev/xvdb
Volume group "vg1" successfully created
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# pvs
PV VG Fmt Attr PSize PFree
/dev/sdb vg1 lvm2 a-- 1020.00m 1020.00m
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# vgs
VG #PV #LV #SN Attr VSize VFree
vg1 1 0 0 wz--n- 1020.00m 1020.00m
[root@ip-10-10-1-184 ~]#
Created physical volume on the added volume
Creating volume group (vg)
Checking the physical volume status.
Checking the volume group status.

CONCAT LV


[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# vgdisplay vg1
--- Volume group ---
VG Name vg1
System ID
Format lvm2
Metadata Areas 1
Metadata Sequence No 1
VG Access read/write
VG Status resizable
MAX LV 0
Cur LV 0
Open LV 0
Max PV 0
Cur PV 1
Act PV 1
VG Size 1020.00 MiB
PE Size 4.00 MiB
Total PE 255
Alloc PE / Size 0 / 0
Free PE / Size 255 / 1020.00 MiB
VG UUID 4mby8y-6xRm-ZDek-u8TA-OBcF-eokh-fvGx7f
Can see complete information of the volume group.
Can see VG size and physical extends (PE) (Total, allocated and Free).
Based on this we will create logical volume.

CONCAT LV

```
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# # lvcreate -L +1020M -n lv1 vg1
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# # lvcreate -l 255 -n lv1 vg1
```

Can create logical volume both in human readable format and physical extends (PE)

```
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# lvcreate -L +1020M -n lv1 vg1
  Logical volume "lv1" created.
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# lvscan
  ACTIVE            '/dev/vg1/lv1' [1020.00 MiB] inherit
```

Creating logical volume both in human readable format.

Check the LV created using lvscan command

CONCAT LV

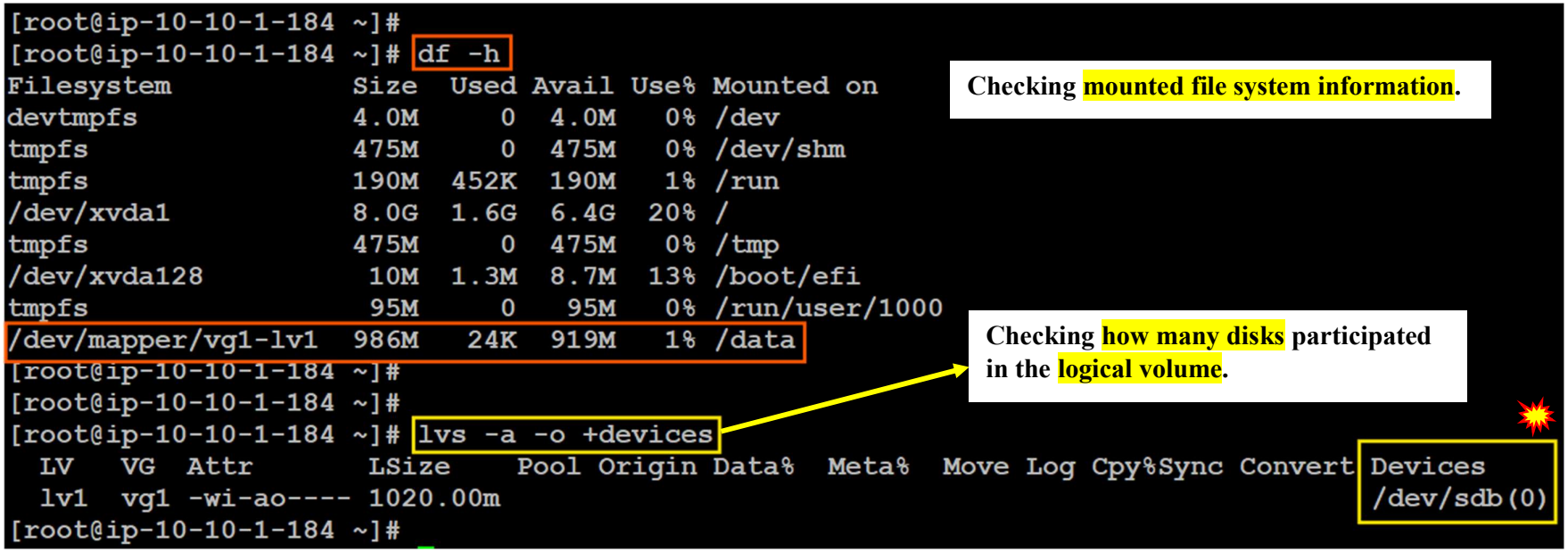
```
[root@ip-10-10-1-184 ~]# mkfs -t ext4 /dev/vg1/lv1
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 261120 4k blocks and 65280 inodes
Filesystem UUID: 2298bb93-e75c-4bf9-bc60-9af34af8cc52
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376

Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done

[root@ip-10-10-1-184 ~]# mkdir /data
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# mount -t ext4 /dev/vg1/lv1 /data
```

Creating file system on the created LV.

Creating mount point.

Temporary mounting of the file system

CONCAT LV


[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# df -h
Filesystem Size Used Avail Use% Mounted on
devtmpfs 4.0M 0 4.0M 0% /dev
tmpfs 475M 0 475M 0% /dev/shm
tmpfs 190M 452K 190M 1% /run
/dev/xvda1 8.0G 1.6G 6.4G 20% /
tmpfs 475M 0 475M 0% /tmp
/dev/xvda128 10M 1.3M 8.7M 13% /boot/efi
tmpfs 95M 0 95M 0% /run/user/1000
/dev/mapper/vg1-lv1 986M 24K 919M 1% /data
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]#
[root@ip-10-10-1-184 ~]# lvs -a -o +devices
LV VG Attr LSize Pool Origin Data% Meta% Move Log Cpy%Sync Convert Devices
lv1 vg1 -wi-ao---- 1020.00m /dev/sdb(0)
[root@ip-10-10-1-184 ~]#
Checking mounted file system information.
Checking how many disks participated in the logical volume.