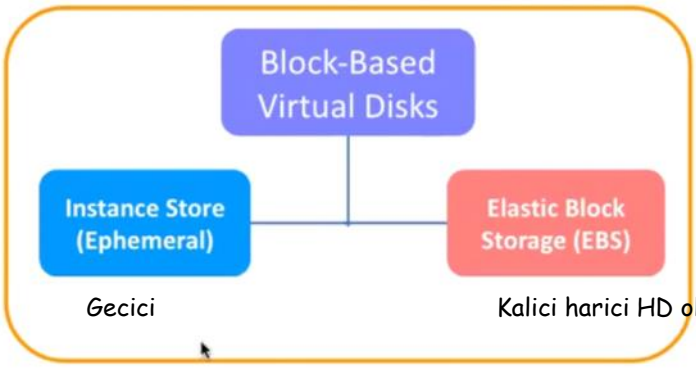
EC2 Volumes 07/03/2021

Sunday, 4 July 2021 1.39

AWS EC2 Volumes

EC2 Volumes

What is Volumes?



Gecici

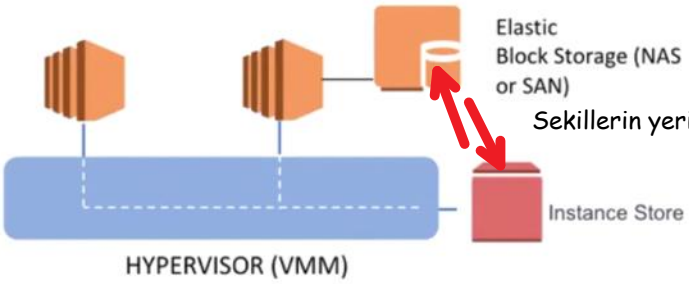
Kalici harici HD olarak dusunebiliriz

- Volumes are durable storage devices (virtual) that can be attached to EC2 instances.
- They are location in which the associated machine stores its data or loads its applications.
- There are two volume types in the block storage category. These are Instance Stores (Ephemeral) and Elastic Block Storage (EBS).

- Volume denildiginde storage yani harddisk algilayabiliriz.
- Block-Based ==> Elimizdeki buyuk parcayi kucuk parcalara boluyoruz. Mesela 32 gb yi 4 e boluyoruz ve elimizde 4 adet 8 gb bulunacak

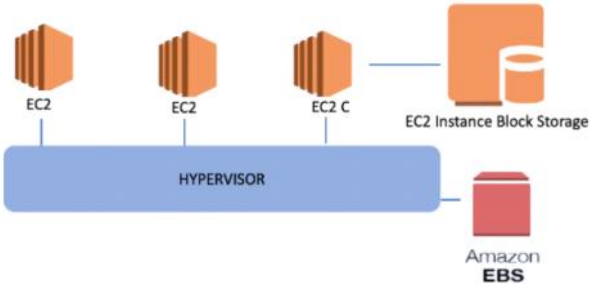
EC2 Volumes

Instance Store and Elastic Block Storage



Sekillerin yeri tam ters sekilde olmali

- The storage connected directly to the hypervisor and accessible to each machine associated with the hypervisor is called the Instance Store.
- Instance Storage can be connected to only one instance. And is the closest storage device to your instance.



EC2 Volumes

Instance Store (Ephemeral) vs. Elastic Block Storage (EBS).

EC2 INSTANCE STORE

- Direct connect to one instance
- Non-persistent data storage
- No replication
- Snapshots are not available
- Both SSD and HDD Backed

Kapattigimizda veri gider

ELASTIC BLOCK STORAGE

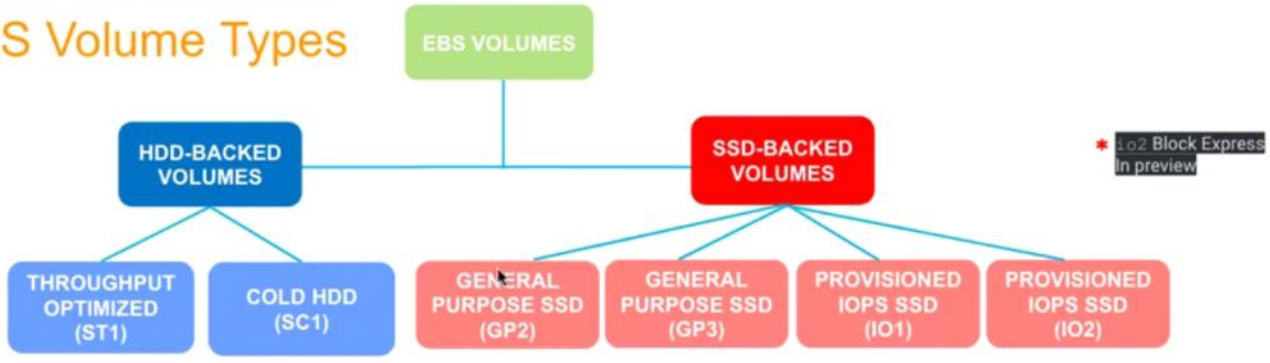
- Connect to all instances
- Persistent data storage
- Replicates data in its own (AZ)
- Snapshots are available
- Both SSD and HDD Backed

Snapshot alinabilir

Image snapshot in bir sonraki hali. Ikea dan gelen koliler snapshot ama kurulum sonrasi ise image olabilir.

EC2 Volumes

EBS Volume Types



- There are 6 types of volumes in 2 categories for the different use cases.
- HDD-backed volumes are used for large streaming workloads where throughput is a better performance measure than IOPS.
- SSD-backed volumes are used for frequent read/write operations where the dominant performance attribute is IOPS.

IOPS

Throughput

IOPS ==> HIZ
THROUGHPUT ==> Debisi yuksek

IOPS is related to the functional **speed** of the disk
Throughput is related to processing **capacity**

EC2 Volumes

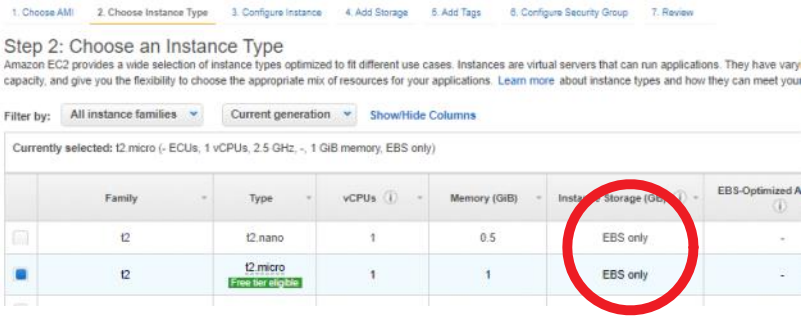
Let's get our hands dirty!

- Managing EBS Volumes on Console and Terminal

  - attaching
  - detaching
  - mounting montaj
  - partition
  - resizing (single-partition)

- Bir volume ayaga kaldiracagiz ve bu volume hem OP de hemde AWS de baglanmasina yonelik hareket edecegiz. Bir instancemiz olacak ve birden fazla volume olacak.

- EC2 instance ayaga kaldiracagiz.



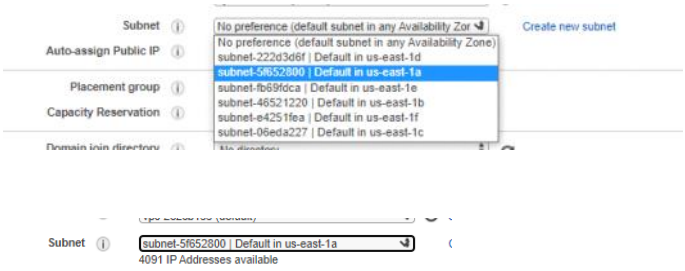
Sadece EBS kullanabilirsin demektedir.

- Yani her cihazin kendisine ait default ozellikleri mevcuttur.

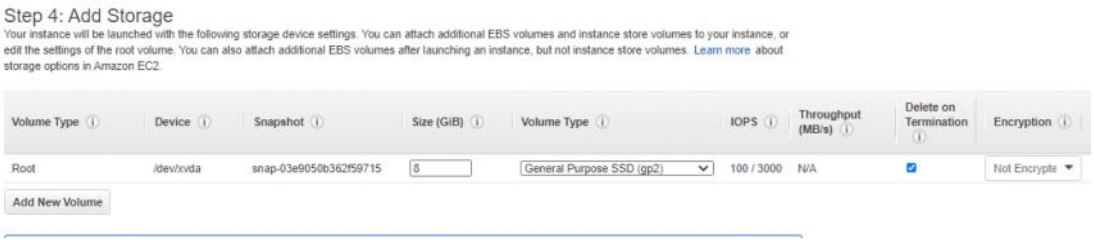
- Hiz ihtiyacimiz varsa ve guvenlik de vazgecilmezse **instance store** kullanilabilir.

- Wifi ile alinan internet **EBS** ama kablolu alinan internet **instance store** olarak betimlenebilir.

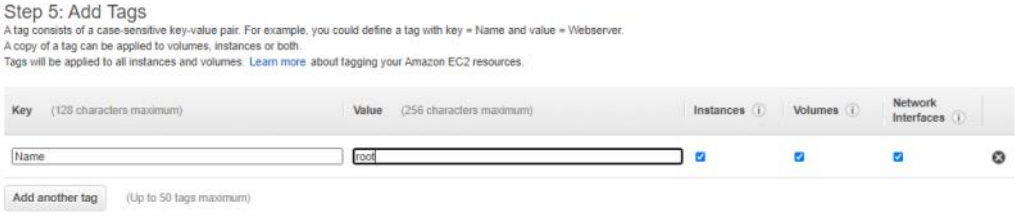
- Volume spesifik bir zone da olusturacagiz. Instance ile volume ayni yerde olmasi gerekir ki bu sayede baglayabilelim. **(US-EAST-1A)**



- Bir instance ve bir volume mutlaka snapshottan yaratilir ve AWS havuzdan alir.

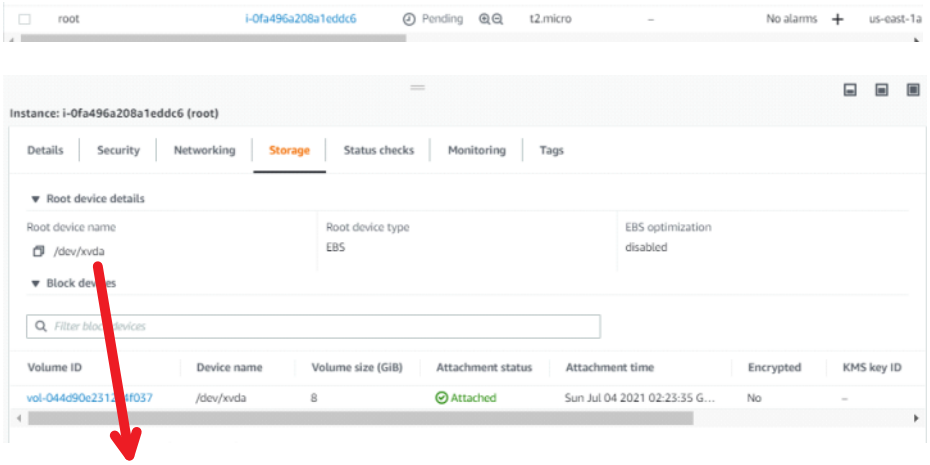


- Root bizim local **c** miz eger add eklersem **d** olur.



- Yukaridaki mavi tiklerin mantigi tag olarak ayni ismi vermektir.

- Instance ekranina geliyoruz.



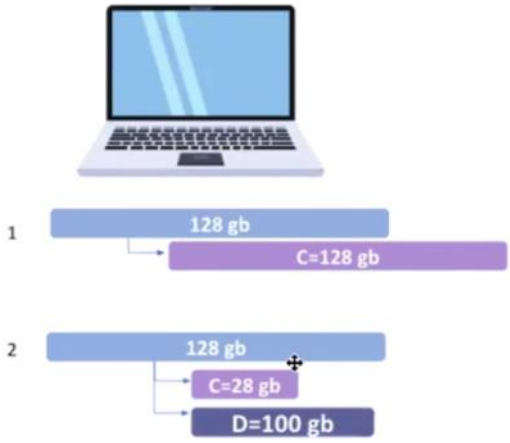
Daha sonra olusturacagi c yi b,c,d,e... Olarak devam edecektir.

- Instance baglantisini yapalim

- **Sudo yum update -y**

- **Lsblk** ==> device olarak hangi volumlerin oldugunu gosterecek

Attach new volume and make Partition



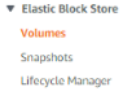
- Hardisk tek part oldugu anlasiliyor

```
[ec2-user@ip-172-31-43-208 ~]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
[ec2-user@ip-172-31-43-208 ~]$
```

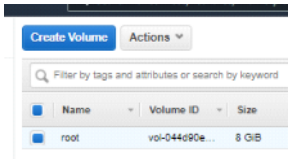
- **Df-h** ==> file sistemin icerisinde ne oldugunu gostermektedir. File sistem kitapliktaki kitaplarin nasil duzenlenecegi seklinde orneklendirilebilir.

```
└─xvda1 202:1    0   8G  0 part /
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  408K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs            99M     0   99M   0% /run/user/1000
[ec2-user@ip-172-31-43-208 ~]$
```

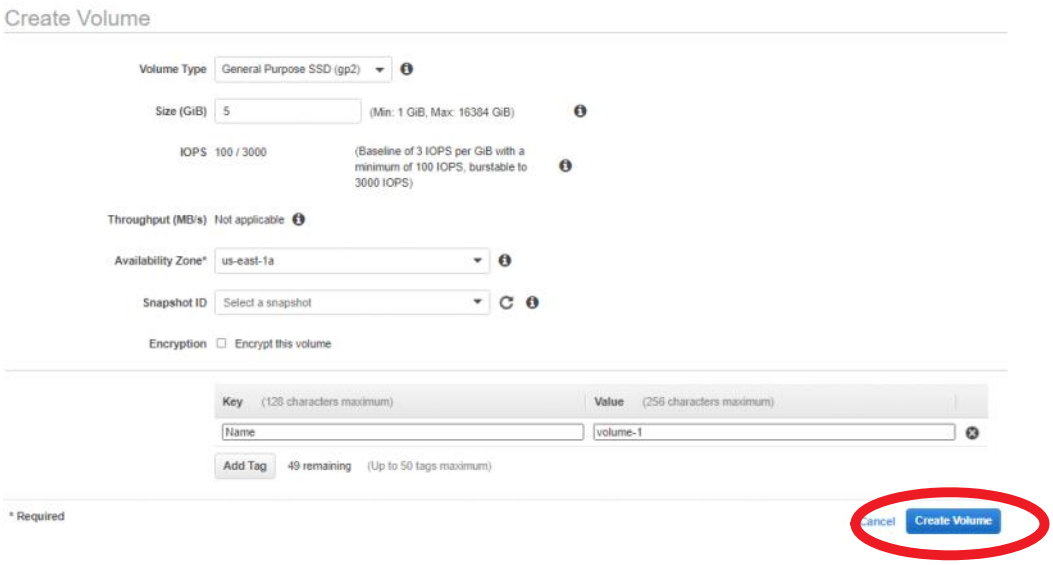
- AWS consolundan extra volume olusturacagiz



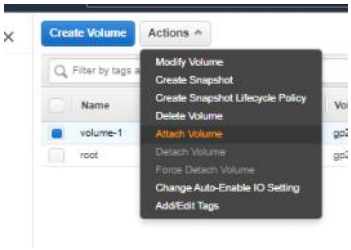
- Istiyoruz ki bir adet **harici harddisk** takacagiz. Bu sebeple create volume diyoruz.



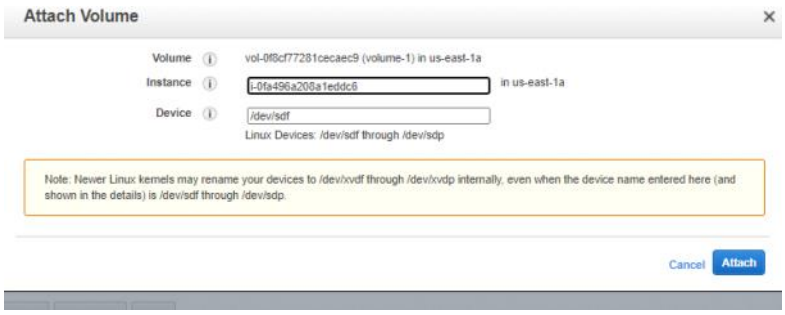
- **Size** 5 olarak belirliyoruz
- Availability ilk instance acarken zone ne sectiysek aynisi olmali yoksa baglanti saglayamayiz.
- Tag kismini da gorsel deki gibi yapacagiz.



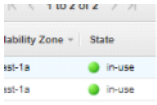
- Olusturdugumuz 5 gb volume attach etmek icin Action menusunden attach volume yi tikliyoruz.



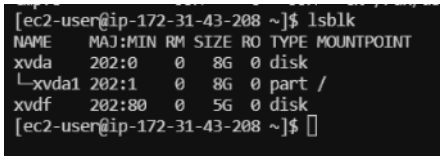
- Bolge uyustugu icin instance kolaylikla bulunacaktir. Asagidaki uyari isimlendirmenin degisebilecegini soylemektedir.



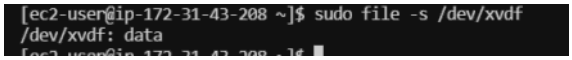
- Attach ve volume in-use olacak



- Tekrar **lsblk** komutunu calistiralim. Yeni volume gorunecek ama bir yere eklenmemis.



- Sudo file -s /dev/xvdf ==> cihazin durumunu sorguluyoruz. Data cikmasi bende bir file sistemi yok demektir. Formatlamadan linux dunyasina atilamaz.



- Asagidaki komutla yeni ekledigimiz volume hakkinda bir sey olmadigi gormus oluyoruz niye formatlanmamis ve mount edilmemis bu sebeple formatlayacagiz.

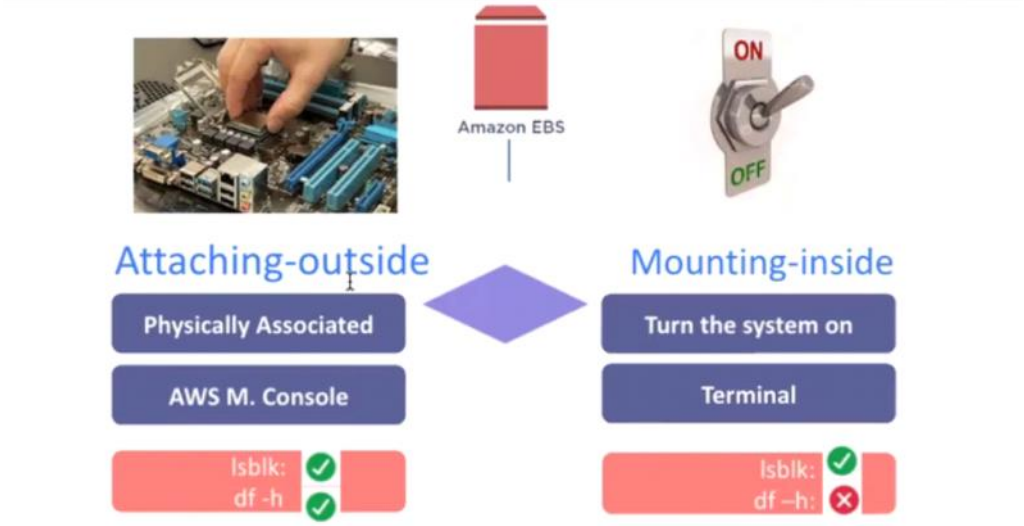
```
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  412K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs            99M     0   99M   0% /run/user/1000
[ec2-user@ip-172-31-43-208 ~]$
```

- Sudo mkfs -t ext4 /dev/xvdf ==> formatlayacagiz.

```
[ec2-user@ip-172-31-43-208 ~]$ sudo mkfs -t ext4 /dev/xvdf
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
```

- **sudo file -s /dev/xvdf**
- **Lsblk**
- **Dh -f**

Biz cihazi formatladik ama file sistemi hala kabul etmedi. Onemli olan mount edilmeli yani prize takma islemini yapmamiz gerekmektedir.



- **sudo mkdir /mnt/mp1**==> create a mounting point path for new volume (volume-1) yeni bir mp1 diye klasor olusturuyoruz.

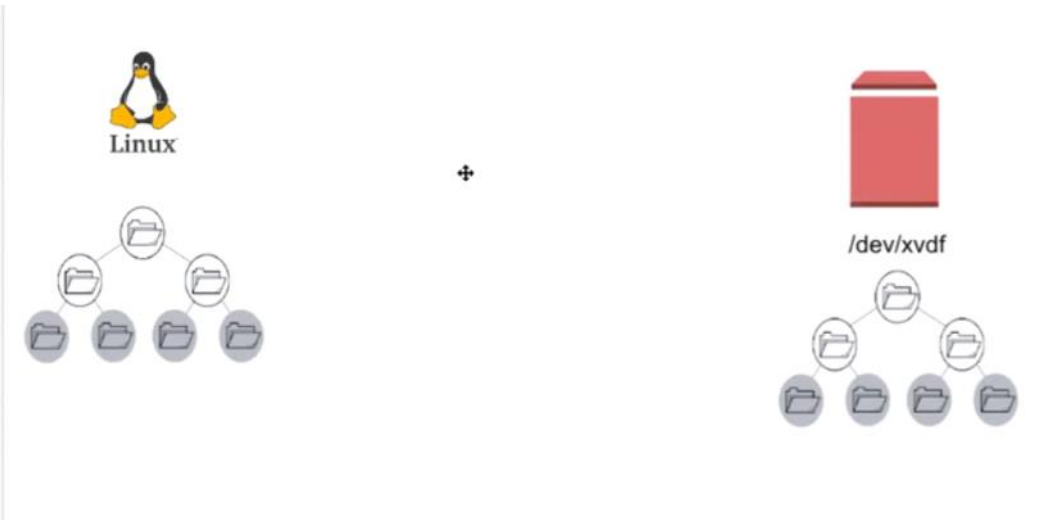
- **sudo mount /dev/xvdf /mnt/mp1/ ==> xvdf cihazini baglama islemini gerceklestirecegiz.**

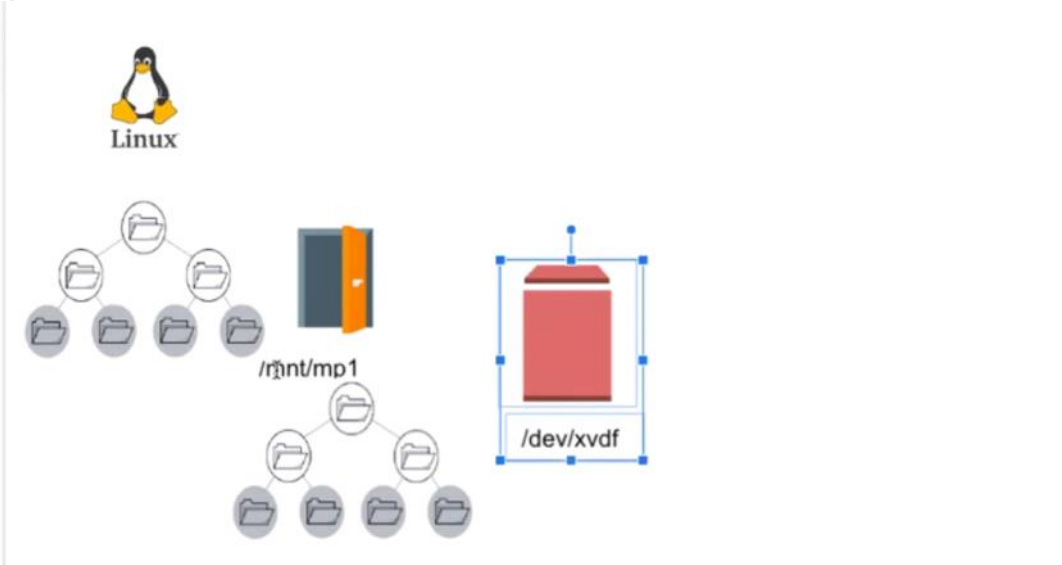
- **Lsblk**

```
[ec2-user@ip-172-31-43-208 ~]$ sudo file -s /dev/xvdf
/dev/xvdf: Linux rev 1.0 ext4 filesystem data, UUID=e7edea01-46b2-458d-b763-55e3c4f5c120 (extent
s) (64bit) (large files) (huge files)
[ec2-user@ip-172-31-43-208 ~]$ sudo mkdir /mnt/mp1
[ec2-user@ip-172-31-43-208 ~]$ sudo mount /dev/xvdf /mnt/mp1/
[ec2-user@ip-172-31-43-208 ~]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   5G  0 disk /mnt/mp1
[ec2-user@ip-172-31-43-208 ~]$
```

- **Df -h ==> cihazi gorecegiz**

```
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  412K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs            99M     0   99M   0% /run/user/1000
/dev/xvdf       4.8G   20M  4.6G   1% /mnt/mp1
[ec2-user@ip-172-31-43-208 ~]$
```



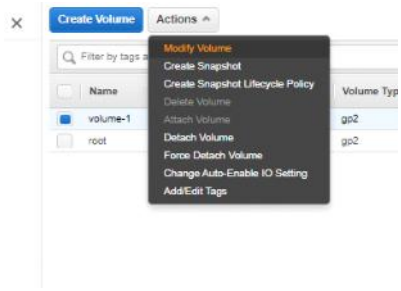


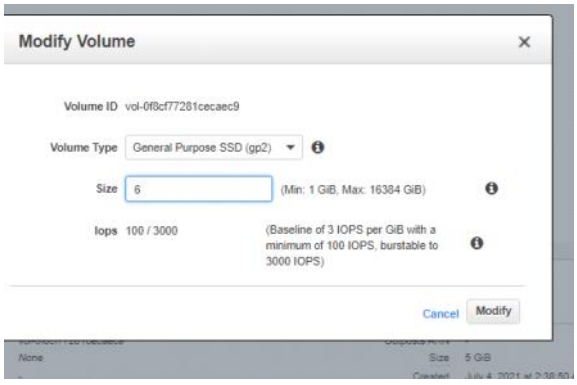
- **cd /mnt/mp1**

- **Ls**
- **sudo touch hello.txt**

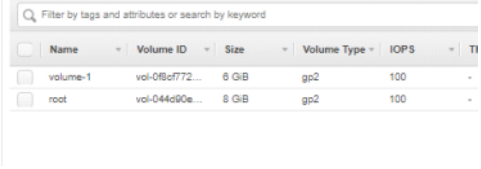
- Ikinci bolume geciyoruz. ==> az onceki volume yetmemesi sebebiyle arttirma islemini gerceklestirecegiz.

- Aws ekrani / volume / volume-1 tikla / actions / modify volume ==> 5 i 6 yapacagiz



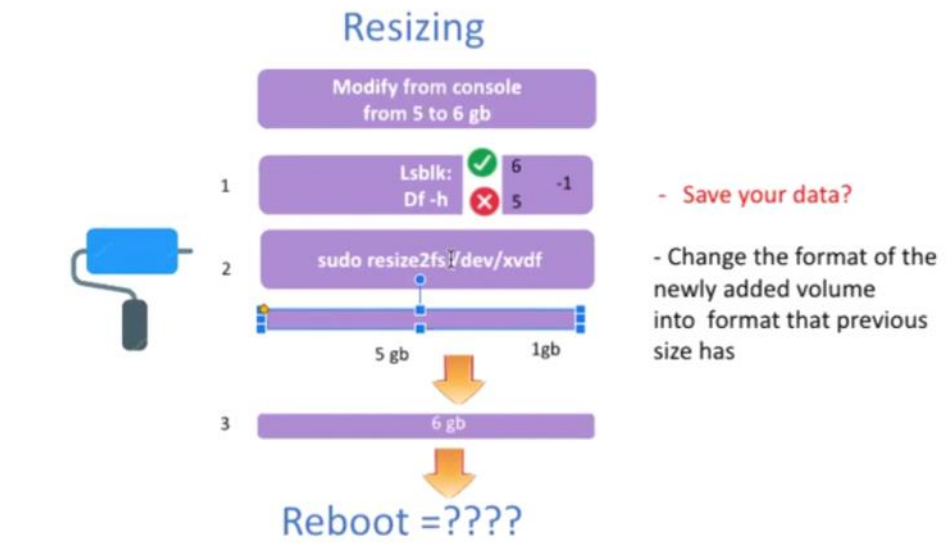


Volume 6 oldugunu gorecegiz



- **Lsblk ==> yeni volume yi gorecek**
- **Df -h ==> raf duzenlemesi olmadigindan 5 gorunecek**

```
[ec2-user@ip-172-31-43-208 mp1]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk /mnt/mp1
[ec2-user@ip-172-31-43-208 mp1]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  468K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs            99M     0   99M   0% /run/user/1000
/dev/xvdf       4.8G   20M  4.6G   1% /mnt/mp1
tmpfs            99M     0   99M   0% /run/user/0
[ec2-user@ip-172-31-43-208 mp1]$
```



- **sudo resize2fs /dev/xvdf**

```
[ec2-user@ip-172-31-43-208 mp1]$ sudo resize2fs /dev/xvdf
resize2fs 1.42.9 (28-Dec-2013)
Filesystem at /dev/xvdf is mounted on /mnt/mp1; on-line resizing required
old_desc_blocks = 1, new_desc_blocks = 1
The filesystem on /dev/xvdf is now 1572864 blocks long.

[ec2-user@ip-172-31-43-208 mp1]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  468K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs            99M     0   99M   0% /run/user/1000
/dev/xvdf       5.8G   20M  5.5G   1% /mnt/mp1
tmpfs            99M     0   99M   0% /run/user/0
[ec2-user@ip-172-31-43-208 mp1]$
```

- **Df -h**
- **Ls /mnt/mp1** ==> daha once olusturdugumuz datanin durup durmadigini gorebiliriz

```
tmpfs            99M     0   99M   0% /run/user/0
[ec2-user@ip-172-31-43-208 mp1]$ ls /mnt/mp1/
hello.txt  lost+found
[ec2-user@ip-172-31-43-208 mp1]$
```

MKDF / RESIZE2FS komutlari farki

- **sudo reboot now** ==> show that mounting point path will be gone when instance rebooted (ayni ssh ile baglanabiliriz ama stop etseydik ssh degisirdi)

- Tekrar ssh ile EC2 ya baglanacagiz

- Statik IP kullanirsak IP degismez ama elastik IP de degisir

- Lsblk
- Df -h

```
[ec2-user@ip-172-31-43-208 ~]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  412K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.5G  6.6G  19% /
tmpfs            99M     0   99M   0% /run/user/1000
```

- Mp1 dosyasini mnt klasorunun icerisinden kontrol edelim.

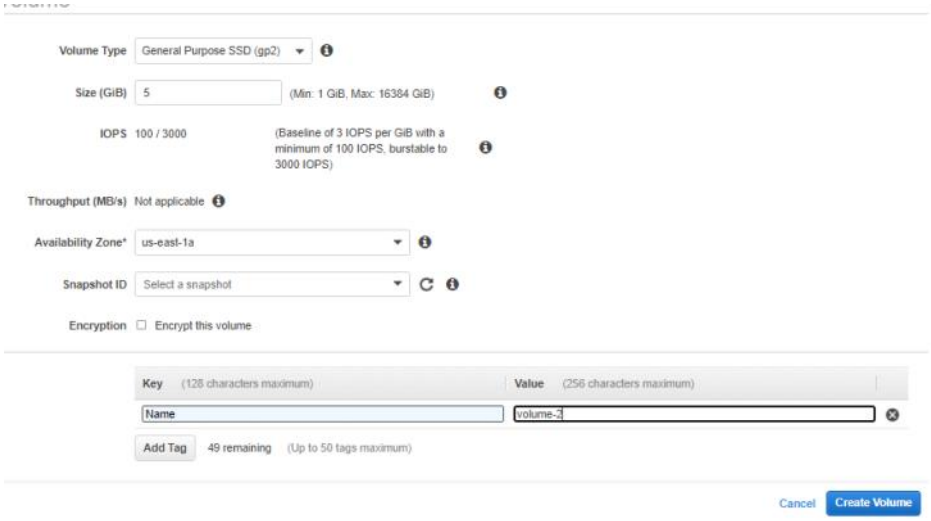
```
[ec2-user@ip-172-31-43-208 mp1]$ ls /mnt
mp1
[ec2-user@ip-172-31-43-208 mp1]$ sudo file -s /dev/xvdf
/dev/xvdf: Linux rev 1.0 ext4 filesystem data, UUID=e7edea01-46b2-458d-b763-55e3c4f5c120 (extent
s) (64bit) (large files) (huge files)
[ec2-user@ip-172-31-43-208 mp1]$
```

- Sudo file -s /dev/xvdf
- Sudo mount /dev/xvdf /mnt/mp1 ==> yeni volumeyi eski yere mount edecegiz
- Lsblk
- Df -h
- Ls /mnt/mp1/ ==> datanin hala olup olmadigini kontrol ediyoruz

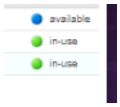
****

- Part 2 bolumundeyiz.

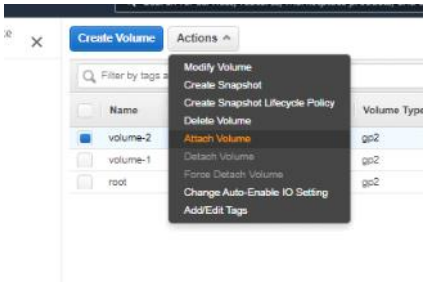
- 5gb lik yeni volume olusturacagiz. Create volume



Volume available ama attach yani fiziksel olarak baglamak gerekmektedir.

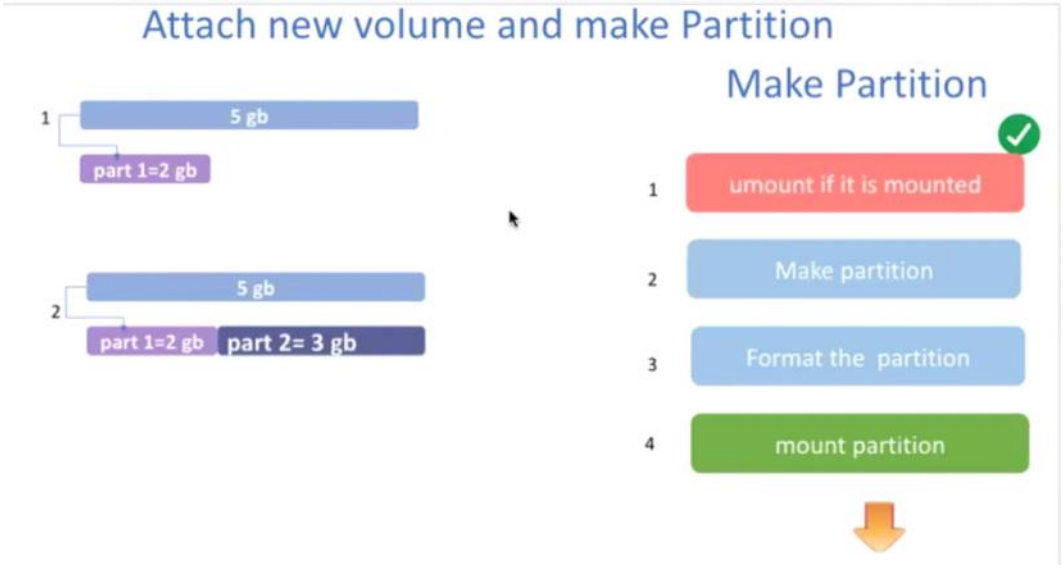


Bu sebeple volume-2 yi secip actions dan attach etmeliyiz

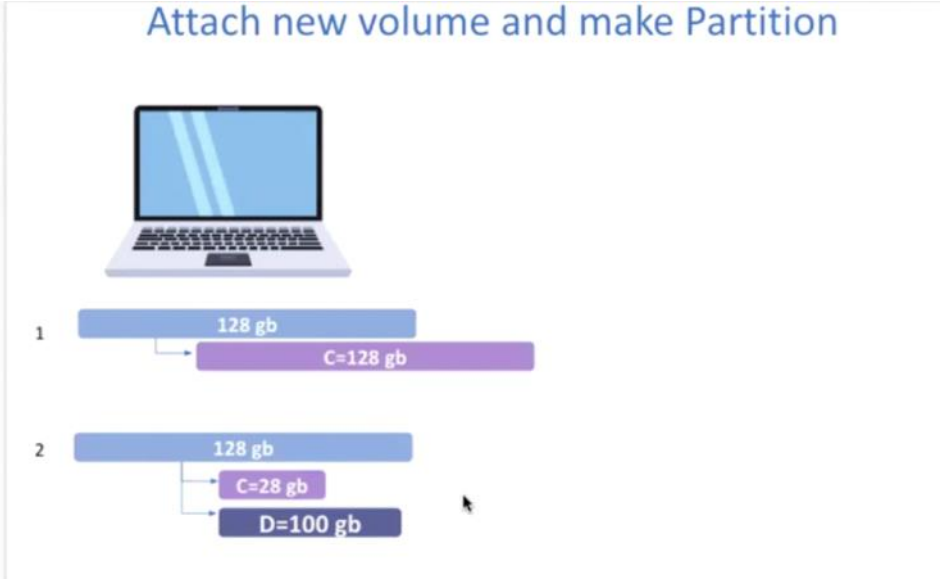


- **Lsblk**
- **Df-h**

```
xvdg    202:96   0   5G  0 disk
[ec2-user@ip-172-31-43-208 mp1]$ df-h
-bash: df-h: command not found
[ec2-user@ip-172-31-43-208 mp1]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  416K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.5G  6.6G  18% /
tmpfs            99M     0   99M   0% /run/user/1000
/dev/xvdf       5.8G   20M  5.5G   1% /mnt/mp1
[ec2-user@ip-172-31-43-208 mp1]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk /mnt/mp1
xvdg    202:96   0   5G  0 disk
[ec2-user@ip-172-31-43-208 mp1]$
```



Kaynakları ihtiyaca gore uyarlama / silinmeye korumak icin

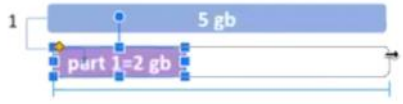


- **sudo fdisk /dev/xvdg** ==> hali hazirdaki harddsiklerin donanimsal olarak gorunusu

```
[ec2-user@ip-172-31-43-208 mp1]$ sudo fdisk /dev/xvdg

Welcome to fdisk (util-linux 2.30.2).
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 0x29ea5894.

Command (m for help):
```

- n ye basiyoruz (Anket mantigi)
- p
- 1 den 4 e bolebilirim der (harddisk araligini olusturmak icin)

```
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 (2048-10485759, default 2048):
```

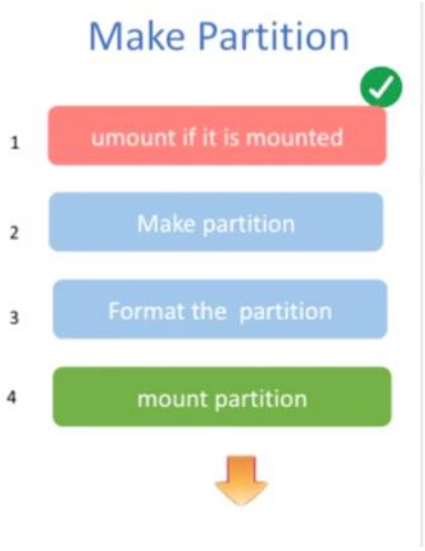


- Nereye kadar uzatmak istedigimizi ve bolunmenin hangi birimde olabilecegini belirleyecegiz (2Gb cinsinden)

```
Partition number (1-4, default 1):
First sector (2048-10485759, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-10485759, default 10485759): +2G
```

2. Partiyi baslatacagiz sirayla ==> n p enter(default) 3 defa otomatik 3gb ayarladi. Ve son olarak w (write) yaziyoruz ve enter

- **Lsblk** ==> 2 ve 3 gb olustugunu gorduk ve format atacagiz
- Df -h



- **Sudo mkfs -t ext4 /dev/xvdg1**

- **Sudo mkfs -t ext4 /dev/xvdg2 sirayla ikisini formatladik**

==> Rafların aralıkları degişiyor ext4 ext2 windowsta ntfs

- Mounting point olusturmamiz gerekmektedir

- **sudo mkdir /mnt/mp2** ==> create a mounting point path for new volume
- **sudo mkdir /mnt/mp3** ==> create a mounting point path for new volume

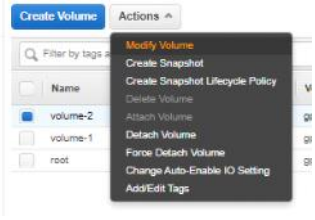
- **sudo mount /dev/xvdg1 /mnt/mp2/** ==> mount the new volume to the mounting point path
- **sudo mount /dev/xvdg2 /mnt/mp3/** ==> mount the new volume to the mounting point path

- **Lsblk**
- **Df -h**

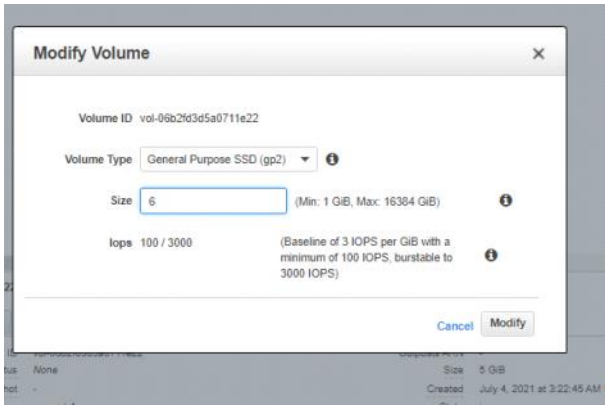
- **sudo touch /mnt/mp3/helloguys.txt** ==> if there is no data on it, create a new file to show persistence in later steps
- **ls /mnt/mp3/**

```
[ec2-user@ip-172-31-43-208 mp1]$ sudo touch /mnt/mp3/helloguys.txt
[ec2-user@ip-172-31-43-208 mp1]$ ls  /mnt/mp3/
helloguys.txt  lost+found
```

- Birinci kisminda volumeyi partitionsuz arttirdik. Burada baska islemler yapmak gerekiyor ve bu sebeple modify edecegiz.



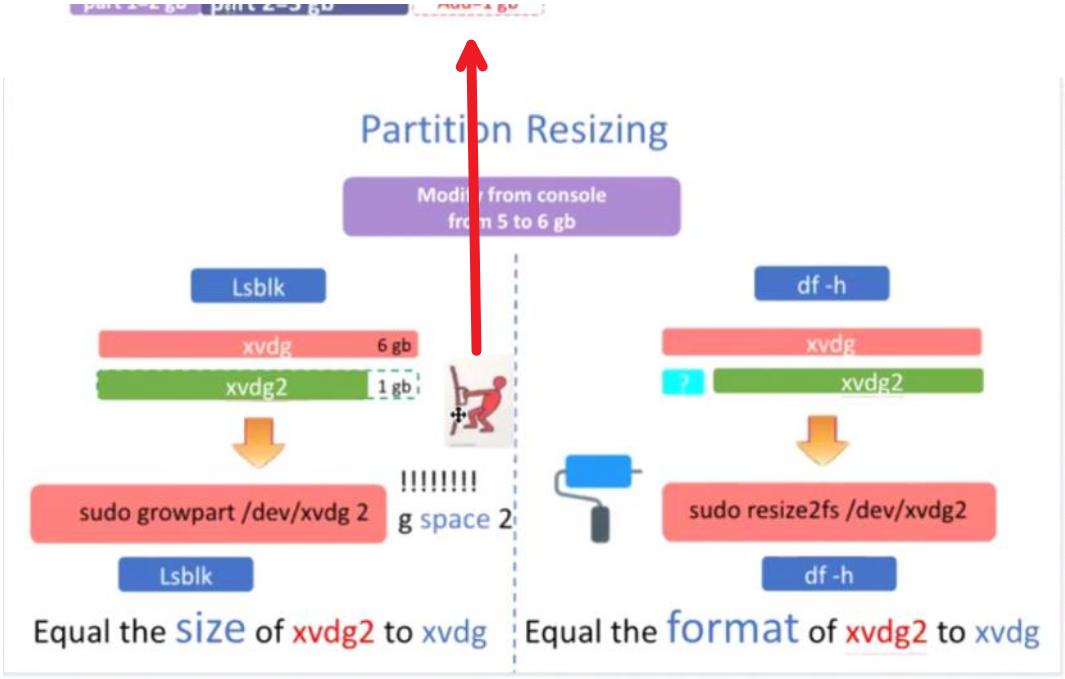
5 ten 6 ya cikardik ==> azaltmayi ve bir kac defa modify etmeyi izin vermez (6 saat kurali)



- Lsblk ==> 6 gb harddiskin 2+3 kismi gornmektedir

```
[ec2-user@ip-172-31-43-208 mp1]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk /mnt/mp1
xvdg    202:96   0   6G  0 disk
├─xvdg1 202:97   0   2G  0 part /mnt/mp2
└─xvdg2 202:98   0   3G  0 part /mnt/mp3
[ec2-user@ip-172-31-43-208 mp1]$
```

- Df -h ==> yine 5 gb olarak gorunmektedir



- **sudo growpart /dev/xvdg 2** ==> extend the partition 2 and occupy all newly available space. Warning for space !!!!!!(# iki nolu kullan demektir yani isimlendirme degil)

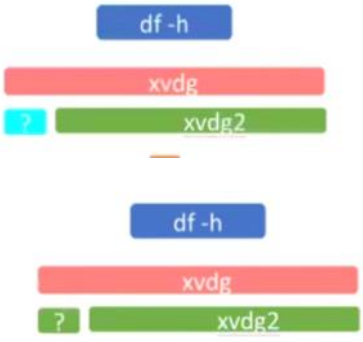
- **Lsblk**

```
xvdg    202:96   0   6G  0 disk
├─xvdg1 202:97   0   2G  0 part /mnt/mp2
└─xvdg2 202:98   0   4G  0 part /mnt/mp3
```

- **Df -h**

```
tmpfs           99M     0   99M   0% /run/user/1
/dev/xvdf      5.8G   20M  5.5G   1% /mnt/mp1
/dev/xvdg1     2.0G  6.0M  1.8G   1% /mnt/mp2
/dev/xvdg2     2.9G  9.0M  2.8G   1% /mnt/mp3
```

- **sudo resize2fs /dev/xvdg2** ==> gorseldeki gibi file sisteme dahil edecegiz



Acik mavi olan alanin formatini kalan kisma benzetecegiz.

- **Df -h**

```
/dev/xvdf      5.8G   20M  5.5G   1% /mnt/mp1
/dev/xvdg1     2.0G  6.0M  1.8G   1% /mnt/mp2
/dev/xvdg2     3.9G   12M  3.7G   1% /mnt/mp3
```

- **ls /mnt/mp3/** ==> dosyamiz yerinde mi kontrol edecegiz

- **sudo reboot now** ==> reboot edecegiz. Mounting pointler gidecek yani goremeyecegiz.

****

Bundan sonra her reboot edilince kayip yasaniyor ve bu sebeple automount etmek gerekmektedir. Hangi volumelerin hangi mountlarda oldugu bilgisi veren dosyaya kayit yaparsak sorun yasamayiz.

- Lsblk
- Df -h

```
[ec2-user@ip-172-31-43-208 ~]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk
xvdg    202:96   0   6G  0 disk
├─xvdg1 202:97   0   2G  0 part
└─xvdg2 202:98   0   4G  0 part
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  480K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.5G  6.6G  19% /
tmpfs            99M     0   99M   0% /run/user/1000
tmpfs            99M     0   99M   0% /run/user/0
[ec2-user@ip-172-31-43-208 ~]$
```

- **sudo cp /etc/fstab /etc/fstab.bak** ==> komutu ile yedekleme yapacagiz. Fstab i fstab.bak icerisine yedekliyoruz

- **sudo nano /etc/fstab** ==> dosyanin icerisinde degisiklik yapacagiz ve kaydedecegiz

universally unique identifier

<device>	<dir>	<type>	<options>	<dump>	<fsck>
UUID=55da5202-8008-43e8-8ade-2572319d9185	/	xfs	defaults,noatime	1	1
/dev/xvdf	/mp3	ext4	defaults,nofail	0	0

option

nofail allows the boot sequence to continue **even if the drive fails** to mount.
noatime will tell the filesystem **not to record the last accessed date** of the file. it increases speed

dump

Enable or disable **backing up** of the device/partition. 0 , disables

fsck

Sets the order for **filesystem checks** at boot time; For the **root device it should be 1. For other partitions** it should be 2, or **0** to disable checking.

0 = Do not check.
1 = First file system (partition) to check; / (root partition) should be set to 1.
2 = All other filesystems to be checked.

```
PROBLEMS 32   OUTPUT   TERMINAL   DEBUG CONSOLE                    1: ssh
  GNU nano 2.9.8                                  /etc/fstab

#
UUID=8562e9fb-f45b-4a09-9778-bde97be4afb3     /          xfs    defaults,noatime  1   1
```

```
/dev/xvdf      mnt/mp1   ext4   defaults,nofail      0     0
 /dev/xvdg1     mnt/mp2   ext4  defaults,nofail      0     0
 /dev/xvdg2     mnt/mp3   ext4  defaults,nofail      0     0
```

```
[ec2-user@ip-172-31-43-208 ~]$ sudo cp /etc/fstab /etc/fstab.bak
[ec2-user@ip-172-31-43-208 ~]$ sudo nano /etc/fstab
[ec2-user@ip-172-31-43-208 ~]$ cat /etc/fstab
#
UUID=8562e9fb-f45b-4a09-9778-bde97be4afb3     /          xfs    defaults,noatime  1   1
/dev/xvdf       mnt/mp1   ext4    defaults,nofail        0       0
 /dev/xvdg1      mnt/mp2   ext4  defaults,nofail        0       0
 /dev/xvdg2      mnt/mp3   ext4  defaults,nofail        0       0
```

- **sudo reboot now** ==> sistemi tekrar reboot edecegiz degisikliklerin kayit edilip edilmedigini kontrol etmek icin
- EC2 ya tekrar baglanalim
- Lsblk

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-43-208 ~]$ lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf    202:80   0   6G  0 disk /mnt/mp1
xvdg    202:96   0   6G  0 disk
├─xvdg1 202:97   0   2G  0 part /mnt/mp2
└─xvdg2 202:98   0   4G  0 part /mnt/mp3
```

- Df -h

```
[ec2-user@ip-172-31-43-208 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        482M     0  482M   0% /dev
tmpfs           492M     0  492M   0% /dev/shm
tmpfs           492M  436K  492M   1% /run
tmpfs           492M     0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.5G  6.6G  19% /
/dev/xvdg1      2.0G  6.0M  1.8G   1% /mnt/mp2
/dev/xvdg2      3.9G   12M  3.7G   1% /mnt/mp3
/dev/xvdf       5.8G   20M  5.5G   1% /mnt/mp1
tmpfs            99M     0   99M   0% /run/user/1000
```

- Ls /mnt/mp1 ==> dosyalarin kontrolu
- Ls /mnt/mp3 ==> dosyalarin kontrolu

```
[ec2-user@ip-172-31-43-208 ~]$ ls  /mnt/mp1/
hello.txt  lost+found
[ec2-user@ip-172-31-43-208 ~]$ ls  /mnt/mp3/
helloguys.txt  lost+found
```

 # NOTE: You can use "sudo mount -a" to mount volumes and partitions after editing fstab file without rebooting.

Instance terminate edelim.
Instance kapaninca root volume olur ama digerlerini delete volume dememiz gerekir
Ama volume leri detach veya force detach volume yapmaliyiz en sonda delete volume :)

Volume ler silinmeseydi hello file lar sabit kalacakti