# EBS - Associating EBS volume on EC2

* In AWS Console, create EC2 with the default settings
  + Choose the Availability Zone as (us-east-1a)
* Go to Amazon Cloud Shell
  + Issue the following command to elevate privileges
    - “sudo su”
  + Issue the following command to see the list of disks attached
    - “lsblk”
    - Note
      * There must be only one device entry name
      * And the device will be usually mounted on “/” directory
* In AWS Console, Create a new volume
  + Choose the AZ as us-east-1a (the one given for EC2)
  + Make a note of the device name
    - Example
      * “/dev/sdf
* Attach the volume to the EC2
  + Select the EBS Column, Actions -> Attach Volume
  + Choose the EC2 that was created in the previous step
* Now, go to the terminal and issue the following command
  + “Lsblk”
  + Note
    - This time 2 entries will show up
* Issue the following command to know the file system information
  + “file -s /dev/xvdf”
    - Assuming that name of the newly created EBS volume is “/dev/xvdf”
    - If the outcome shows as “Data”, then it means that the file system is a raw file system, that needs to be partitioned and mounted before usage
* Issue the following command to create a file system
  + “mkfs -t ext4 /dev/xvdf”
    - Assuming that the name of the volume is “/dev/xvdf”
* Once the operation is successful, again issue the following command
  + “file -s /dev/xvdf”
    - Note
      * This time instead of 'data' some other information will be shown
      * This indicate that the file system is correctly created
* Create a directory for mounting purposes
  + Example
    - “mkdir /disk2”
* Use the mount command to mount the disk to the newly created folder
  + “mount /dev/xvdf /disk2”
* Create files/folders in newly created volume
* Once done, unmount the device using the command
  + Go to the root directory
    - “cd /”
  + Issue the umount command
    - “umount /dev/xvdf”
* Again issue the command to list down the attached devices
  + “lsblk”
  + Note
    - This time it will list down the disk information, but will not show the mount information
* In AWS Console, detach the volume from EC2
  + Select the volume and then use ‘Detach’
  + Note that the status of volume changes from ‘In-use’ to ‘Available’
* Go to the terminal again and issue the command
  + “Lsblk”
  + Note
    - This time, there will be only 1 entry (as the additional EBS volume is detached from EC2)
* Cleanup
  + Remove the newly created volume
  + Remove the EC2

# EBS - Create EBS from a snapshot

* Perform all the steps from the previous section till ‘detach the EBS from EC2’
* Go to AWS Console, select the volume and create a Snapshot
* Go to Snapshots section to see the newly created snapshot
* Create a volume from Snapshot
  + On the snapshot, use the option 'Create Volume from Snapshot'
  + For this volume, the size cannot be less than the snapshot volume
  + Make sure the AZ matches with the EC2's AZ (that is going to be attached at a later stage)
* Attach this new volume to the EC2
  + Make a note of the device name
    - Example - '/dev/sdg'
* Issue lsblk command
  + Make sure that the new device is present
* Issue the 'file -s <device\_name> command'
  + This time, it should not show 'data', as the volume is created from a snapshot
* Create a mount folder
  + Issue the following command
    - “mkdir /disk3”
* Use the following mount command
  + mount <device\_name> /disk3”
* Examine the contents of the folder to see that the files/folders that was retained from the previous EBS volume

# S3 Activities

* In the AWS Console,
  + Create a bucket
    - Example ‘12345-media-content’
    - Make sure to provide a name that is globally unique
  + Create few more folders and files
    - /movies
    - /videos
    - /music
    - /movies/my-movies.txt
    - /music/my-music.text
* Go to the AWS Cloudshell and issue the following command
  + Command to list all buckets created in the logged in account
    - “aws s3 ls”
  + Command to list down the contents of bucket
    - aws s3 Is [bucket]
    - Example
      * “aws s3 ls s3://12345-media-content”
  + To copy the content
    - aws s3 cp [file] s3://[bucket/folder/file]
    - Example
      * “aws s3 cp ./music.txt s3://12345-media-content/music/music.txt”
  + Remove file
    - aws s3 rm s3:/ /[bucket/file]
    - Example
      * “aws s3 rm s3://12345-media-content/music/music.txt