Practical Tasks EBS Volumes

**Task1 – Create EC2 instance(s)**

1. Go to **EC2** console and click on **Launch Instance**.
2. Select the **Amazon Linux 2 AMI**
3. Select the **t2.micro** and click on **Next** three times
4. Add **Tags, Name=EBSTest** and click **Next**
5. Click **Review** and then **Launch**
6. Select **your** key pair because SSH access will be necessary to the instance and click on **Launch Instance**

**Task 2 – Create EBS volume and mount it to EC2 instance**

1. Open **EC2** console and click **Volumes**
2. Create a new volume of your preferred size and type (Make sure the EBS volume and the instance are in the same zone.)
3. Select the created volume, right-click and select the “**attach volume**” option.
4. Select the instance from the instance text box which was created in **Task 1**.
5. Login to **your EC2 instance** by **SSH** and list the available disks using the following command:  
   **lsblk**  
   The above command will list the disk you attached to your instance.
6. Check if the volume has any data using the following command:  
   **sudo file -s /dev/xvdf**  
   If the above command output shows “*/dev/xvdf: data“*, it means your volume is empty.
7. Format the volume to the ext4 filesystem using the following command:  
   **sudo mkfs -t ext4 /dev/xvdf**
8. Create a directory of your choice to mount our new ext4 volume. As example “*newvolume*”  
   **sudo mkdir /newvolume**
9. Mount the volume to “*newvolume*” directory using the following command.  
   **sudo mount /dev/xvdf /newvolume/**
10. cd into “*newvolume”* directory and check the disk space for confirming the volume mount.  
    **cd /newvolume**  
    **df –h ./**

**Task3 – Extend the EBS volume**

1. Open **EC2** console and click **Volumes**
2. Select the created **EBS volume** in **Task 2,** right-click and select the “**Modify volume**” option.
3. Increase the volume size by changing **Size** parameter and press **Modify**
4. Login to **your EC2 instance** by SSH
5. To check whether the volume has a partition that must be extended, use the **lsblk** command to display information about the block devices attached to your instance.  
   **lsblk**
6. Use the **growpart** command to extend the partition. Notice that there is a space between the device name and the partition number.  
   **sudo growpart /dev/xvdf 1**
7. To verify that the partitions reflect the increased volume size, use the **lsblk** command again.  
   **lsblk**
8. To verify the size of the file system for each volume, use the df -h command.  
   **df -h**
9. To extend the file system on each volume, use the correct command for your file system, as follows  
   **sudo resize2fs /dev/xvdf1**
10. To verify that each file system reflects the increased volume size, use the df -h command again.  
    **df -h**