Ec2 and EBS

Step 1: Create an EC2 Instance

- Launch a new EC2 instance from the AWS Management Console.
- Choose the required AMI, instance type, and configure settings as needed.
- Make sure to note the **Availability Zone (AZ)** of the instance.

Step 2: Create a New EBS Volume

- Navigate to the **EC2 Dashboard > Elastic Block Store > Volumes**.
- Click **Create Volume** and specify:
  - **Size** as per requirement.
  - **Type** (e.g., gp3, io1).
  - **Availability Zone (AZ)** (must match the EC2 instance AZ).
- Click **Create Volume**.

Step 3: Attach the Volume to the EC2 Instance

- In the **EBS Volumes** section, find the newly created volume.
- Click **Actions > Attach Volume**.
- Select the target EC2 instance and specify a device name (e.g., `/dev/xvdf`).
- Click **Attach Volume**.

Step 4: Mount the Volume

- Connect to your EC2 instance via SSH.
- List available disks:

```
lsblk
```

- Format the new volume (if not already formatted):

```
sudo mkfs -t xfs /dev/xvdf
```

- Create a mount directory:

```
sudo mkdir /mnt/ebs-volume
```

- Mount the volume:

```
sudo mount /dev/xvdf /mnt/ebs-volume
```

- To ensure persistence across reboots, add the volume to `/etc/fstab`:

```
echo "/dev/xvdf /mnt/ebs-volume xfs defaults,nofail 0 2" | sudo tee
```

Step 5: Create an AMI from the EC2 Instance

1. Navigate to **EC2 Dashboard > Instances**.
2. Select the running instance.
3. Click **Actions > Image and Templates > Create Image**.
4. Provide a **name and description** for the AMI.
5. AWS will create a **snapshot** of the attached EBS volume.
6. Click **Create Image**.

Step 6: Copy the AMI to Another Region

1. Navigate to **EC2 Dashboard > AMIs**.
2. Select the newly created AMI.
3. Click **Actions > Copy AMI**.
4. Choose the **destination AWS Region**.
5. Click **Copy AMI**.

Step 7: Launch an EC2 Instance from the Copied AMI

1. Switch to the **destination AWS Region** in the AWS Console.
2. Navigate to **EC2 Dashboard > AMIs**.
3. Locate the **copied AMI**.
4. Select the AMI and click **Launch Instance**.
5. Configure instance settings as required.
6. Click **Launch** to start the EC2 instance.