🧪 AWS EFS Lab: Multi-AZ Setup with EC2 and Mounting

✅ Objective:

- Launch 2 EC2 instances in **different AZs**.
- Create **EFS** and mount it on both instances.
- Configure **security groups** to allow **NFS (port 2049)**.

🧱 Prerequisites:

- AWS account
- VPC with at least 2 subnets in different AZs
- IAM role with EC2 and EFS access (optional but preferred)

🗒️ Step 1: Create EFS File System

1. Go to **EFS Console** → **Create file system**
2. Select your **VPC**
3. Enable **automatic mount targets** for **both AZs** (select 2 subnets)
4. Enable encryption (default)
5. Create the file system

📌 **Note the EFS File System ID**: fs-xxxxxxxx

🛡️ Step 2: Configure Security Group for EFS

Create a new EFS-SG:

- Inbound Rule:
  - **Type:** NFS
  - **Protocol:** TCP
  - **Port:** 2049
  - **Source:** Security group of your EC2 instances (e.g., EC2-SG)

Example:

Type	Protocol	Port	Source
NFS	TCP	2049	EC2-SG

Apply **this SG to all EFS mount targets**.

🖥️ Step 3: Launch EC2 Instances (2x)

- Launch two EC2 instances (Amazon Linux 2 preferred)
- Place them in **different subnets/AZs** (e.g., us-east-1a and us-east-1b)
- Assign them the **same EC2-SG** security group
- Ensure they can connect to each other and to EFS (use same VPC)

#Once the instances are launched
#Connect the Elastic File System with the Servers

#Before we try to connect
#We need to configure security-groups for the EFS

- Go to VPC
- Go to SG
- Create SG
- Inbound rule - 2049

#Once the SG is created
- Go to EFS
- Select file-sys
- Go to network
- Manage network
- Delete default SG
- Add efs-nfs SG

#Once the SG is configured, Now efs can be connected to the Vm's
#To connect efs

- Go to EFS
- Go to attach
- Copy EFS address

#Go to vm
- Create a folder - efs
- Mount the EFS with folder

#Once the EFS is mounted, the data stored on efs folder will be replicated across all ec2 instances where EFS is connected.