Hosting a PHP Web Server on AWS EC2 with EBS Volume

1. Introduction:

This project is about hosting a PHP website on an AWS EC2 instance and storing the website files in an attached EBS volume. This setup helps store data even after rebooting the server.

2. Objective:

- Host a PHP website using EC2.
- Attach and mount an EBS volume.
- Store website files in the EBS volume.
- Learn cloud infrastructure setup.

3. Tools Used:

- AWS EC2
- AWS EBS
- Apache Web Server
- PHP
- Amazon Linux 2 / Ubuntu
- SSH (Terminal or PuTTY)

4. Architecture:

User → EC2 (Apache + PHP) → Mounted EBS (/var/www/html)

5. Steps to Implement:

- Step 1: Launch EC2
- Choose Amazon Linux 2.
- Allow ports 22 (SSH) and 80 (HTTP).
- Launch instance.

Step 2: Attach EBS Volume

- **Create EBS volume in same AZ.**
- **Attach it to EC2 instance.**

Step 3: Mount EBS

lsblk

sudo mkfs -t ext4 /dev/xvdf

sudo mkdir /var/www/html

sudo mount /dev/xvdf /var/www/html

Step 4: Install Apache & PHP

sudo yum update -y

sudo yum install httpd php -y

sudo systemctl start httpd

sudo systemctl enable httpd

Step 5: Host PHP Page

echo "<?php phpinfo(); ?>" > /var/www/html/index.php

Open: http://<EC2_Public_IP>

6. Output:

- **EC2 instance running**
- **EBS volume mounted**
- **PHP page shows successfully**

8. Conclusion:

Successfully hosted a PHP website on EC2 using EBS storage. This project helped understand cloud-based web hosting.