AWS Lab 19

File sharing with Elastic File System

Overview of the lab

In this lab you will learn to how to create an EFS File System and attach it with ec2 instances

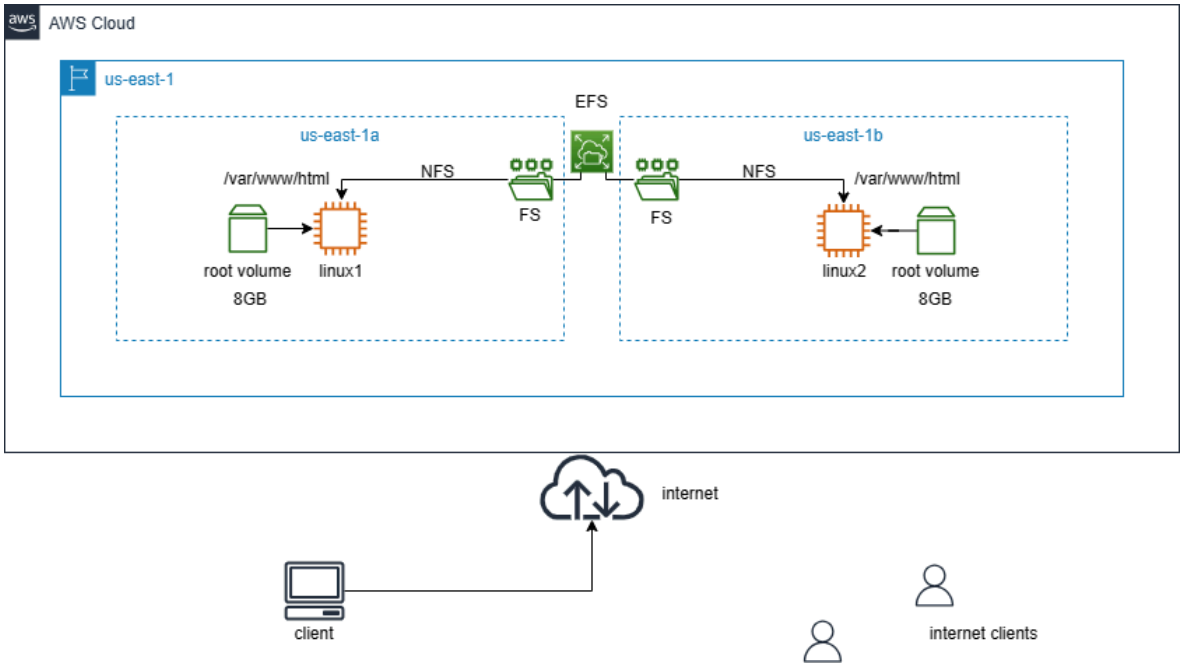
EFS

It is a highly available file system in aws cloud uses NFS protocol to share files to linux systems running anywhere

Document Root

The default path of the website content (/var/www/html)

Architecture



Step by Step Lab

Launching linux instance with apache web server via userdata without webpage (us-east-1a)

1. Login to aws cloud account via the aws management console
2. Select us-east-1 region (you can choose any region of your choice)
3. Search for EC2 and in EC2 management console, launch instance
    a. Name and tag – linux-webserver1
    b. Application and OS Images – Amazon Linux
    c. Instance type - t2.micro

d. Key pair – select the existing keypair

e. Edit Network settings

a. Subnet – subnet in us-east-1a

b. Firewall – select existing security group

4. In Advanced Details(scroll down to bottom), copy the below bash script in userdata section

```
#!/bin/bash
dnf install httpd git -y
systemctl start httpd
systemctl enable httpd
```

5. Number of instances - 1

   (Leave all other settings as default and launch instance)

6. Once the instance is launched

   a. Wait for instance state – running

   b. Try accessing the website

Launching linux instance with apache web server via userdata without webpage (us-east-1b)

7. Launch instance

   a. Name and tag – linux-webserver2

   b. Application and OS Images – Amazon Linux

   c. Instance type - t2.micro

   d. Key pair – select the existing keypair

   e. Edit Network settings

c. Subnet – subnet in us-east-1b
d. Firewall – select existing security group

8. In Advanced Details(scroll down to bottom), copy the below bash script in userdata section

```
#!/bin/bash
dnf install httpd git -y
systemctl start httpd
systemctl enable httpd
```

9. Number of instances - 1

   (Leave all other settings as default and launch instance)

10. Once the instance is launched
    a. Wait for instance state – running
    b. Try accessing the website

Create an Elastic File System

11. Search for EFS and click on create file system
    a. Name - demo-efs-website-data
12. Click on Create

Create a security group with NFS allowed in inbound direction

13. In EC2 click on security group
    a. Security group name and description - EFS-sg
    b. Add rule - Type - NFS and source - 0.0.0.0/0
14. Click on create security group

Map the security group to EFS file system

15. In EFS click on file system name
16. In network click on manage
17. Remove the default security group and map the EFS-sg (for 1a and 1b AZ) and click on save

Mount the share directory on both linux instances

18. Login to linux-webserver1 and linux-webserver2 in two different terminal
19. In EFS click on file system name
20. Click on attach and copy the mount command (using the nfs client) replace efs with /var/www/html and execute it on both instance

```
sudo mount -t nfs4 -o
nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,nores
vport fs-08daaf4116e282423.efs.ap-south-1.amazonaws.com:/
/var/www/html
```

Place the website in linux webserver1

21. In linux-webserver1 clone the website in /var/www/html and it will sync on linux-webserver2

    sudo git clone https://github.com/jerrish/site_particles.git /var/www/html

22. Try accessing website on both instances since website content is sync on both instance

Clean Up Step

1. Select the instances and terminate it