AWS Lab 9

Public, Private and Elastic IP

Overview of the lab

In this lab you will learn to how public, private and elastic IP is used and managed

Private IP

It is assigned to the ENI of a resource in aws cloud
It is not routable over the internet
It is retained when instance is stopped

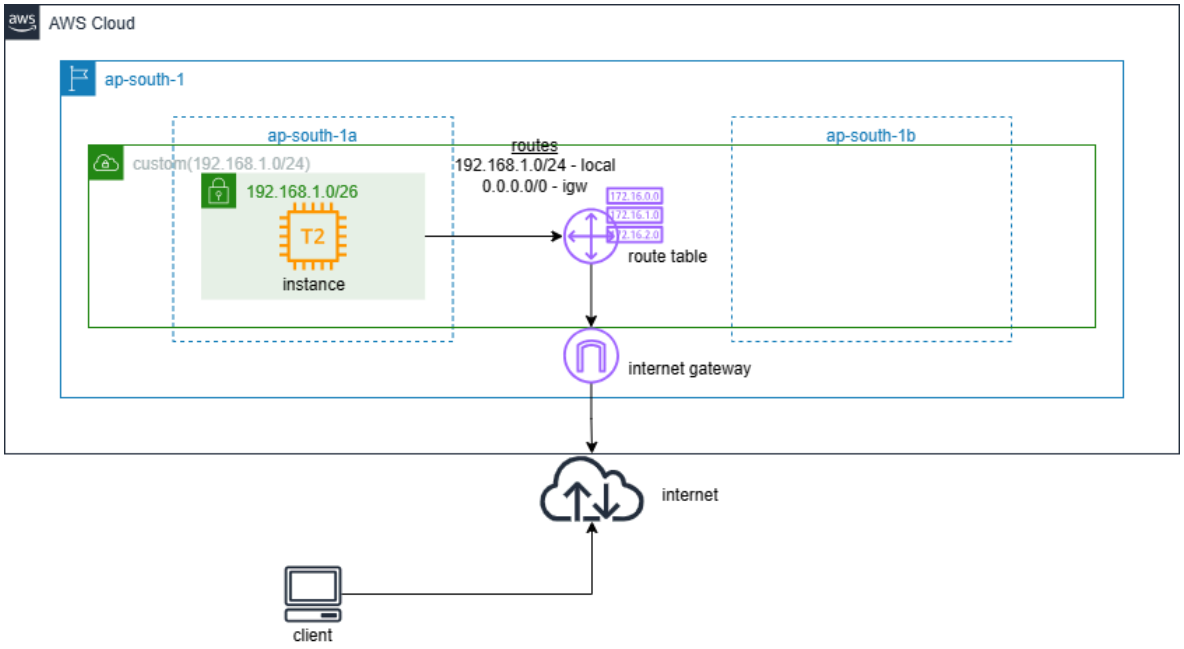
Public IP

It is mapped to the private IP
It is routable over the internet
It will be released when instance is stopped

Elastic IP

It is a static public IP
It will be retained when instance is stopped/terminated
It can be moved to different instance

Architecture



Step by Step Lab (continuation to lab11)

Launch a EC2 instance in custom vpc

1. In EC2 management console, click on launch instance
    a. Name and tag – linux-webserver
    b. Application and OS Images – Amazon Linux
    c. Instance type - t2.micro
    d. Key pair – select the existing keypair
    e. Edit Network settings
        a. VPC - custom-vpc
        b. Subnet – custom-vpc-public1
        c. Auto-assign public IP - Enable
        d. Firewall – select existing security group

e. Common security group names - custom-vpc-demo-sg

2. 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
git clone https://github.com/jerrish/site_particles.git /var/www/html
```

3. Number of instances - 1

   (Leave all other settings as default and launch instance)

4. Once the instance is launched
   a. Wait for instance state – running

(Note: the instance will have public IP and private IP)

Try accessing the website using public IP (public IP will route over the internet)

Try accessing the website using private IP (private IP will not route over the internet)

Stop and Start the EC2 instance

5. Select the instance - in Instance state - Click on Stop instance
6. Once the instance is completely stopped (you can see public IP address is released)
7. Select the instance - in Instance state - Click on Start instance

(Note: private IP address will be same for the instance and there will be new public IP address)

Allocate elastic IP

8. Click on Elastic IPs in Network & Security section
9. Click on Allocate Elastic IP address and click Allocate

Associate elastic IP

10. Click on Associate Elastic IP address
    a. Resource type - instance
    b. Select the instance
    c. Select the private IP address
11. Click on Associate
12. Select the instance and verify the public IP address which is an elastic IP address

Try accessing the website using ElasticIP

Clean Up Step

1. Select the Elastic IPs in Actions click on Disassociate Elastic IP and click Disassociate
2. Again select the Elastic Ips in Actions click on Release Elastic IP address and click Release
3. Select the instance and in Instance state Click on Terminate instance and click terminate