AWS Lab 8

Creating a custom VPC, Subnet, Internet Gateway and Route Table Route

Overview of the lab

In this lab you will learn to how to create a custom VPC and it's resources and launching instance in custom VPC

VPC

It is a private network in aws cloud similar to on-prem network

Subnet

It is a segment within VPC

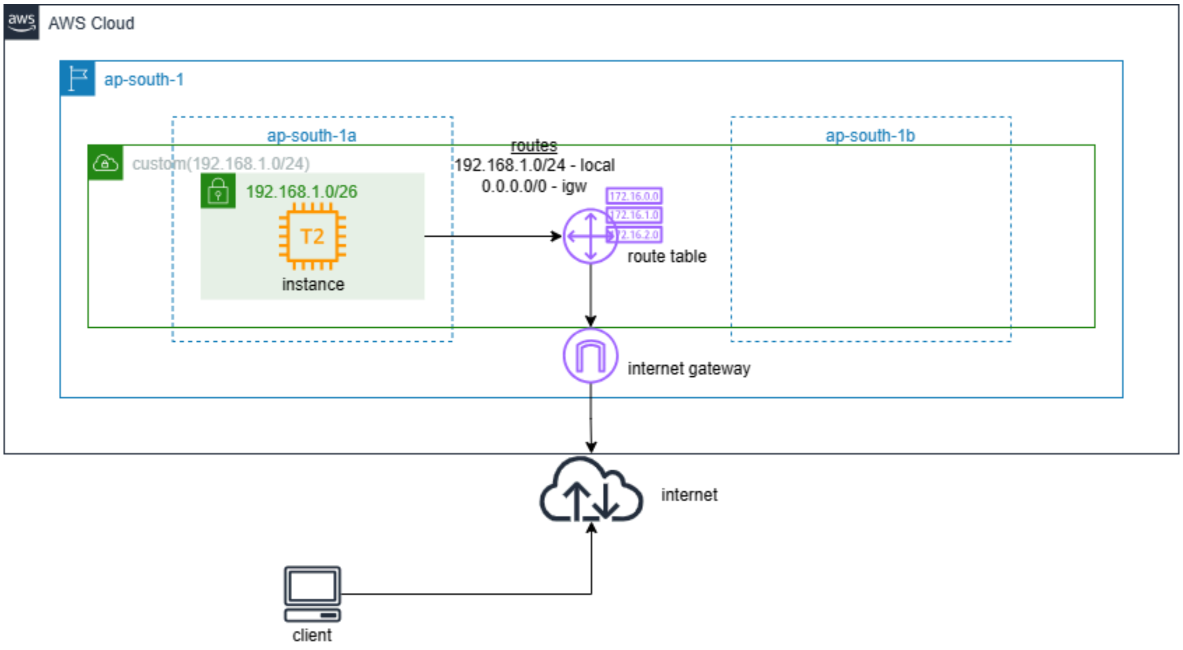
Route Table

It contains routes which decides where traffic should be directed

Internet Gateway

It is a virtual router which allows traffic to and from VPC to internet

Architecture



Step by Step Lab

Create a VPC

1. In VPC management console - Click on your VPCs
2. Click on Create VPC
    a. Resources to create - VPC only
    b. Name tags - custom-vpc
    c. IPv4 CIDR - 192.168.1.0/24
3. Click on Create VPC

(Note: Creating VPC will create a main route table)

Tag the default route table and verify routes

4. Click on Route tables
5. Name tag - custom-vpc-main-rt
6. Click on Routes to verify the local route

Create subnet

7. Click on Subnets
8. Click on Create subnet
    a. Select the VPC ID of custom-vpc
    b. Subnet name - custom-vpc-subnet1
    c. Availability Zone - ap-south-1a
    d. IPv4 CIDR block - 192.168.1.0/26
9. Click on Create subnet

(Newly create subnets will by default explicitly associated with main route)

Create internet gateway and attach it with VPC

10. Click on Internet gateways
11. Click on Create internet gateway
    a. Name tag - custom-vpc-igw
12. Click on Create internet gateway
13. Click on Attach to a VPC
14. Select custom VPC from Available VPC's
15. Click on Attach internet gateway

Add route pointing to internet gateway

16. Click on Route tables and select custom-vpc-main-rt
17. Click on Actions and click on Edit routes
18. Click on Add route
    a. Destination - 0.0.0.0/0
    b. Target - Internet Gateway
19. Click on Save changes

Launch a EC2 instance in custom vpc

20. 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-subnet1
        c. Auto-assign public IP - Enable
        d. Firewall – create security group
        e. Security group name - custom-vpc-demo-sg
        f. Click on add security group rule - allow http - 0.0.0.0/0

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

```
#!/bin/bash
yum install httpd git -y
systemctl start httpd
systemctl enable httpd
cd /var/www/html
git clone https://github.com/jerrish/site_particles.git . #copy with dot
```

22. Number of instances - 1

    (Leave all other settings as default and launch instance)

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

Enable auto assign public IP for subnet

24. In subnets - select the subnet and in Actions Click on Edit subnet settings
25. Check - Enable auto-assign public Ipv4 address
26. Click on Save

Clean Up Step

1. Select the instance and terminate it

(VPC, Subnet, Route table and Internet gateway can be kept for rest of the course)