AWS Lab 24

Transit Gateway

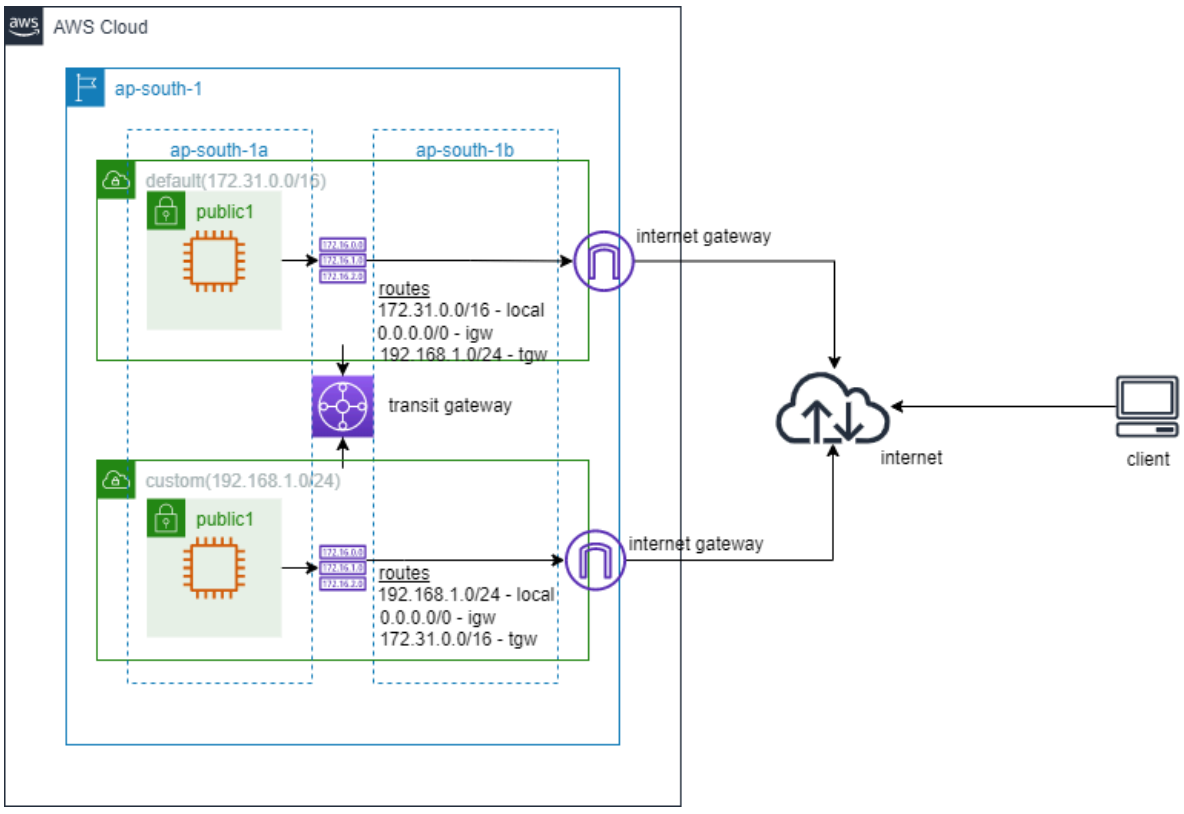
Overview of the lab

In this lab you will learn to how to create transit gateway for two or more VPC's

Transit Gateway

It is a network transit hub, that connects multiple VPC's, VPN and Direct connect

Architecture



Step by Step Lab

Launch instance in default-vpc in ap-south-1(mumbai) region

1. In EC2 management console, click on launch instance
    a. Name and tag – default-vpc-instance
    b. Application and OS Images – Windows
    c. Instance type - t2.micro
    d. Key pair – select the existing keypair
    e. Edit Network settings
        a. VPC - default-vpc
        b. Subnet – default-vpc-subnet1
        c. Auto-assign public IP - Enable
        d. Firewall – Select existing security group
        e. Common security groups - default-vpc-sg
    f. Click on launch instance

(while it is getting launched)

Launch instance in custom-vpc in ap-south-1(mumbai) region

2. In EC2 management console, click on launch instance
    a. Name and tag – custom-vpc-instance
    b. Application and OS Images – Windows
    c. Instance type - t2.micro
    d. Key pair – select the existing keypair
    e. Edit Network settings

f. VPC - custom-vpc
g. Subnet – custom-vpc-public1
h. Auto-assign public IP - Enable
i. Firewall – Select existing security group
j. Security group name - custom-vpc-sg

(leave all other settings as default)

f. Click on launch instance

Connect(Login) to both instances(default-vpc & custom-vpc) instances from local computer(since both are launched in public subnet with public IP address enabled - It will work)

Connect to custom-vpc instance from default-vpc instance using public IP address (It will work)

Connect to custom-vpc instance from default-vpc instance using private IP address (It will not work)

Create Transit Gateway (It will not come under free tier)

3. In VPC Management Console - Transit gateways
4. Click on Create transit gateway
    a. Name tag - demo-tgw
    b. Description - demo
5. Click on Create transit gateway (it takes some time to create)

Create Transit gateway attachments

6. In VPC Management Console - Click on Transit gateway attachments
    a. Create transit gateway attachment
        i. Name tag - attachment1
        ii. Transit gateway ID - demo-tgw
        iii. Attachment type - VPC
        iv. VPC ID - default-vpc
        v. Subnet IDs - select the public subnets
        vi. Click on create transit gateway attachment
    b. Create transit gateway attachment
        i. Name tag - attachment2
        ii. Transit gateway ID - demo-tgw
        iii. Attachment type - VPC
        iv. VPC ID - custom-vpc
        v. Subnet IDs - select the public subnets
        vi. Click on create transit gateway attachment

Manage route table (default-vpc-main-rt)

7. Click on Route tables and select the default-vpc-main-rt
8. Click on Actions and click on Edit routes
9. Click on Add route
    a. Destination - 192.168.1.0/24 (custom VPC CIDR)
    b. Target - Transit gateway
10. Click on Save changes

Manage route table (custom-vpc-maint-rt)

11. Click on Route tables and select the custom-vpc-main-rt
12. Click on Actions and click on Edit routes
13. Click on Add route
    a. Destination - 172.31.0.0/16 (default VPC CIDR)
    b. Target - Transit Gateway
14. Click on Save changes

Connect to custom-vpc instance from default-vpc instance using private IP address (It will work now)

Clean Up Step

1. In EC2 Management console - Select the instances (custom-vpc & default-vpc) and terminate it
2. In VPC Management console -
    a. Click on Transit gateway attachments -
        i. Select attachment1 - in Actions - click on Delete transit gateway attachment
        ii. Select attachment2 - in Actions - click on Delete transit gateway attachment
    b. Click on Transit gateways - Select the transit gateway - in Actions - Click on Delete transit gateway