AWS Lab 10

Public and Private Subnets for two tier architecture

Overview of the lab

In this lab you will learn to how to create public and private subnets

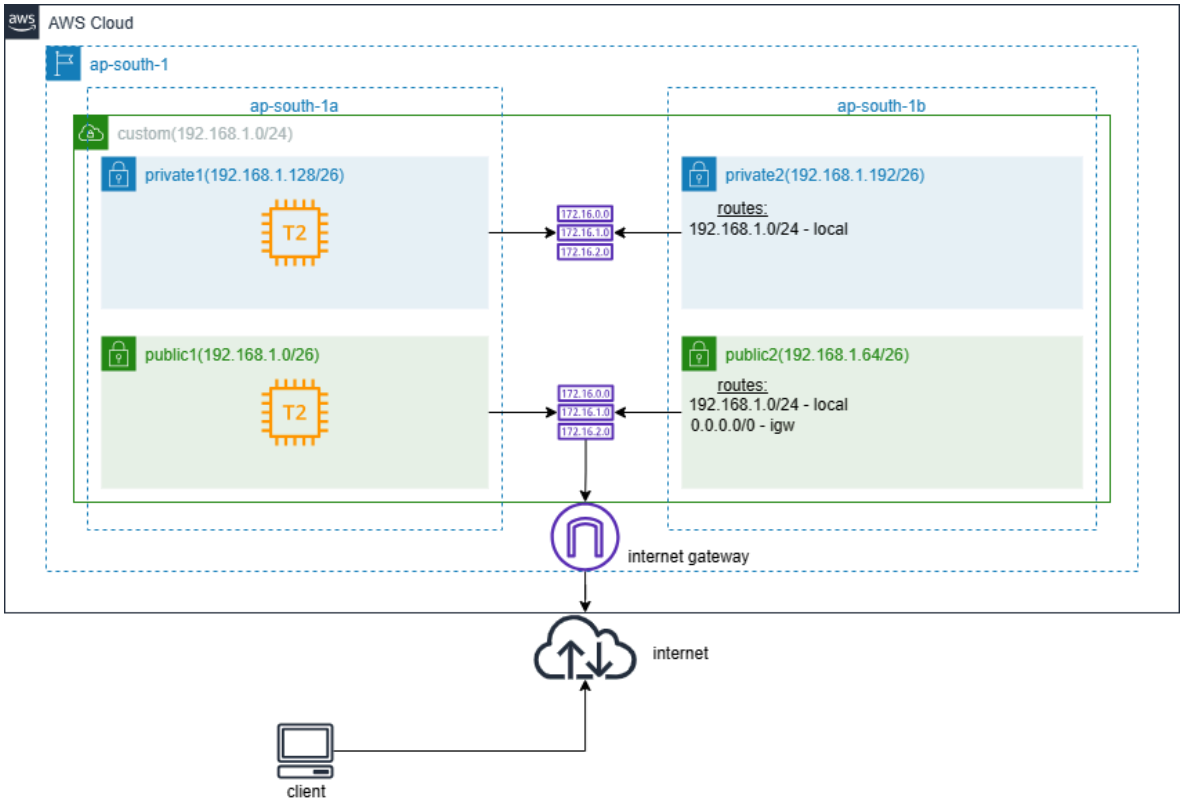
Public Subnet

Resources created in a subnet which is accessible from internet (should have public IP address and proper routes)

Private Subnet

Resources created in a subnet which is not accessible from internet (does not need public IP address)

Architecture



Step by Step Lab

Create 3 more subnets in the existing VPC (continuation to lab11)

1. In VPC management console - Click on Subnets
2. Click on Create Subnet
    a. VPC ID - custom-vpc

Under Subnet Settings

3. Subnet 1 of 1
    a. Subnet name - custom-vpc-public2
    b. Availability Zone - ap-south-1b

   c. IPv4 CIDR block - 192.168.1.64/26
4. Click on Add new subnet
5. Subnet 2 of 2
   a. Subnet name - custom-vpc-private1
   b. Availability Zone - ap-south-1a
   c. IPv4 CIDR block - 192.168.1.128/26
6. Click on Add new subnet
   a. Subnet name - custom-vpc-private2
   b. Availability Zone - ap-south-1b
   c. IPv4 CIDR block - 192.168.1.192/26
7. Click on Create subnet

(newly created subnets will be associated with the main route table by default)

Enable auto assign public IP for custom-vpc-public2

8. In subnets - select the subnet and in Actions Click on Edit subnet settings
9. Check - Enable auto-assign public Ipv4 address
10. Click on Save

Create private route table and associate private subnets

11. Click on Route tables
12. Click on create route table
    a. Name - custom-vpc-private-rt
    b. VPC - custom-vpc
13. Click on Create route table
14. Click on Subnet associations and click on Edit subnet associations

15. Select the two private subnets (custom-vpc-private1 and custom-vpc-private2)
16. Click on Save associations

Launch instance in public subnet with public IP

17. In EC2 management console, click on launch instance
    a. Name and tag – windows-public
    b. Application and OS Images – Windows
    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 groups - custom-vpc-demo-sg
    f. Click on launch instance

Launch instance in private subnet without public IP

18. Again click on launch instance
    a. Name and tag – windows-private
    b. Application and OS Images – Windows
    c. Instance type - t2.micro
    d. Key pair – select the existing keypair
    e. Edit Network settings

i. VPC - custom-vpc
ii. Subnet – custom-vpc-private1
iii. Auto-assign public IP - Disable
iv. Firewall – Select existing security group
v. Common security groups - custom-vpc-demo-sg

f. Click on launch instance

Login to instance in public subnet via RDP using public IP address

Login to instance in private subnet via RDP using private IP address from within public subnet instance (since private IP address is not routable over internet)

Clean Up Step

1. Select both windows-public and windows-private instance and terminate it

(VPC, subnets, route table and internet gateway can be kept for rest of the labs)