# VPC Creation Assignment

## Problem Statement:

Working for an organization, you are required to provide them with a safe and secure environment for the deployment of their resources. They might require different types of connectivity. Implement the following to fulfill the requirements of the company.

## Tasks To Be Performed:

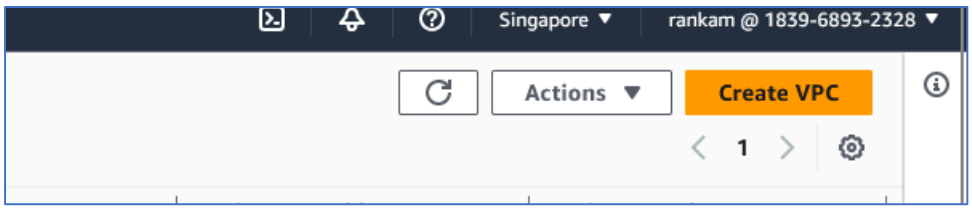
1. Create a VPC with 120.0.0.0/16 CIDR block.

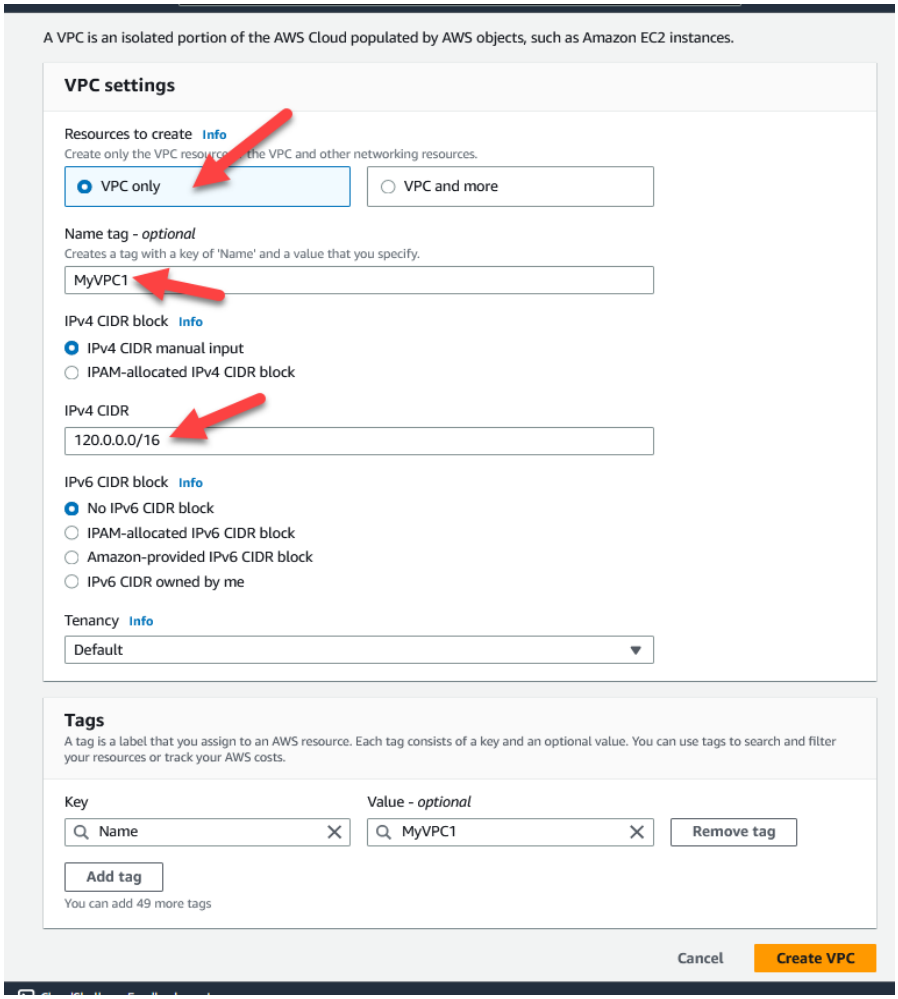
2. Create 1 public subnet and 2 private subnets and make sure you connect a NAT gateway for internet connectivity to a private subnet

**Answer:**

Login to the AWS Management console

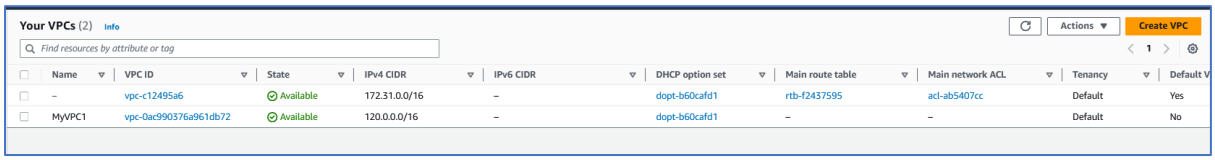
Services select **VPC → Create VPC**






1. Select VPC Only option to create VPC with customized options
2. Provide a VPC name
3. Select IPv4 CIDR manual input (Currently we are targeting for IPv4 only)
4. Select Default tenancy (Shared resources)

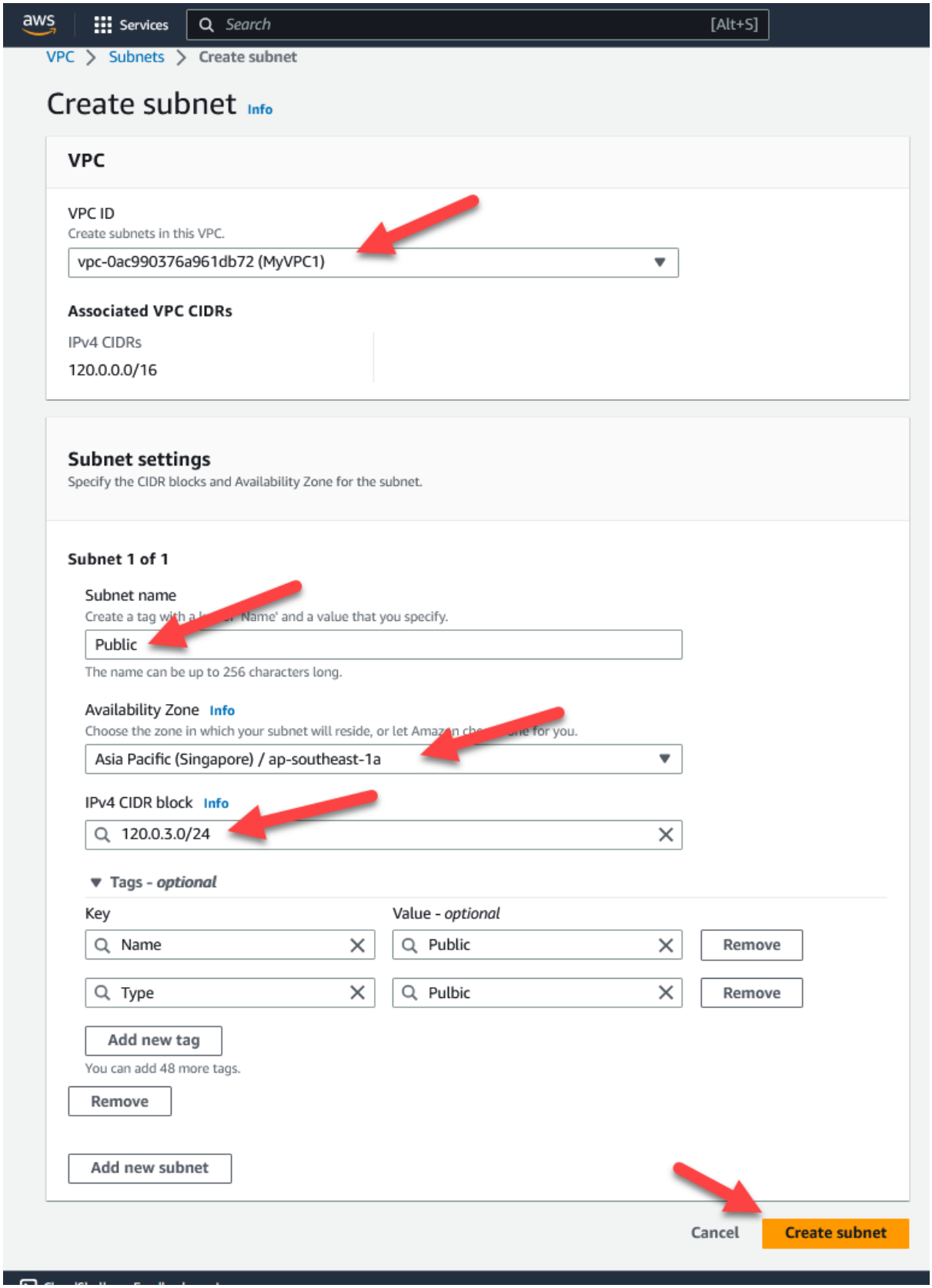
Click "**Create VPC**"




**MyVPC1** is created successfully. Now create the subnets as per the requirement.

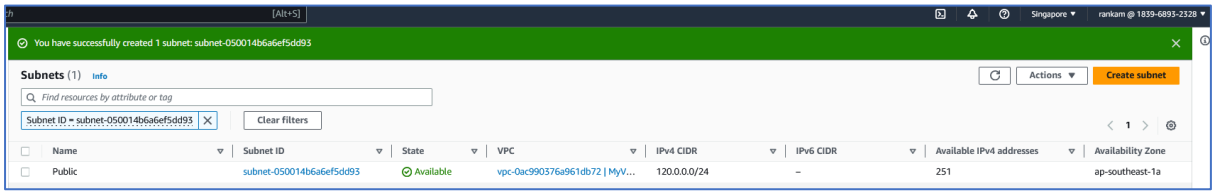
## Creating Subnets

In **VPC service → Click on subnets → Create subnet**

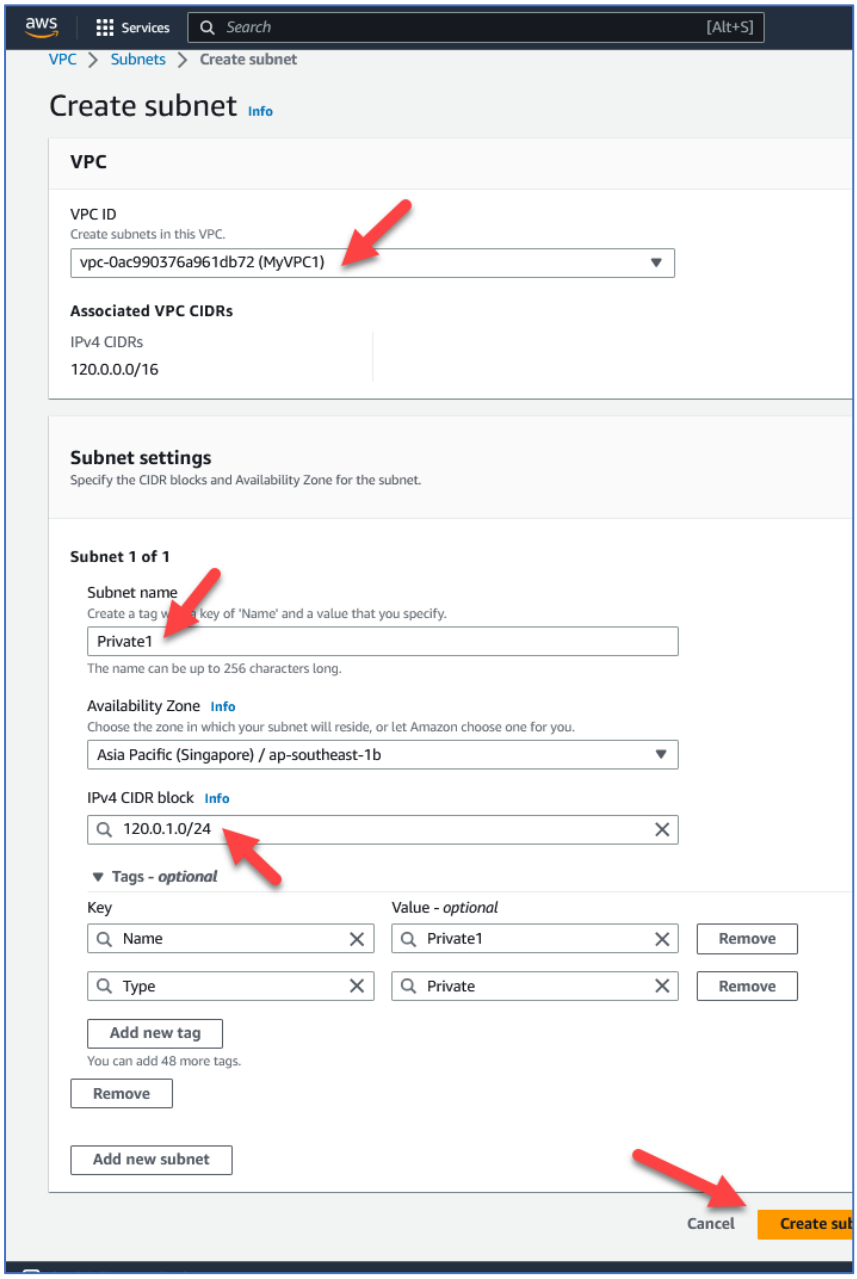



1. Select the correct VPC.
2. Provide a subnet Name i.e., Public
3. Assign the IPv4 CIDR block for this subnet 120.0.3.0/24.
4. Provide Tags for easy tracking and identification.

Click "**Create subnet**"




The public subnet has been created successfully.

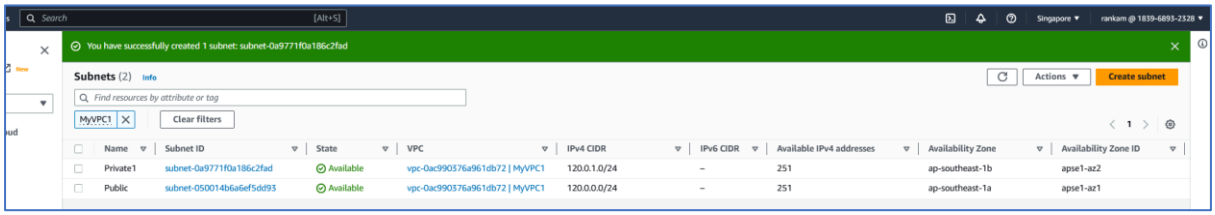



Click "**Create subnet**"

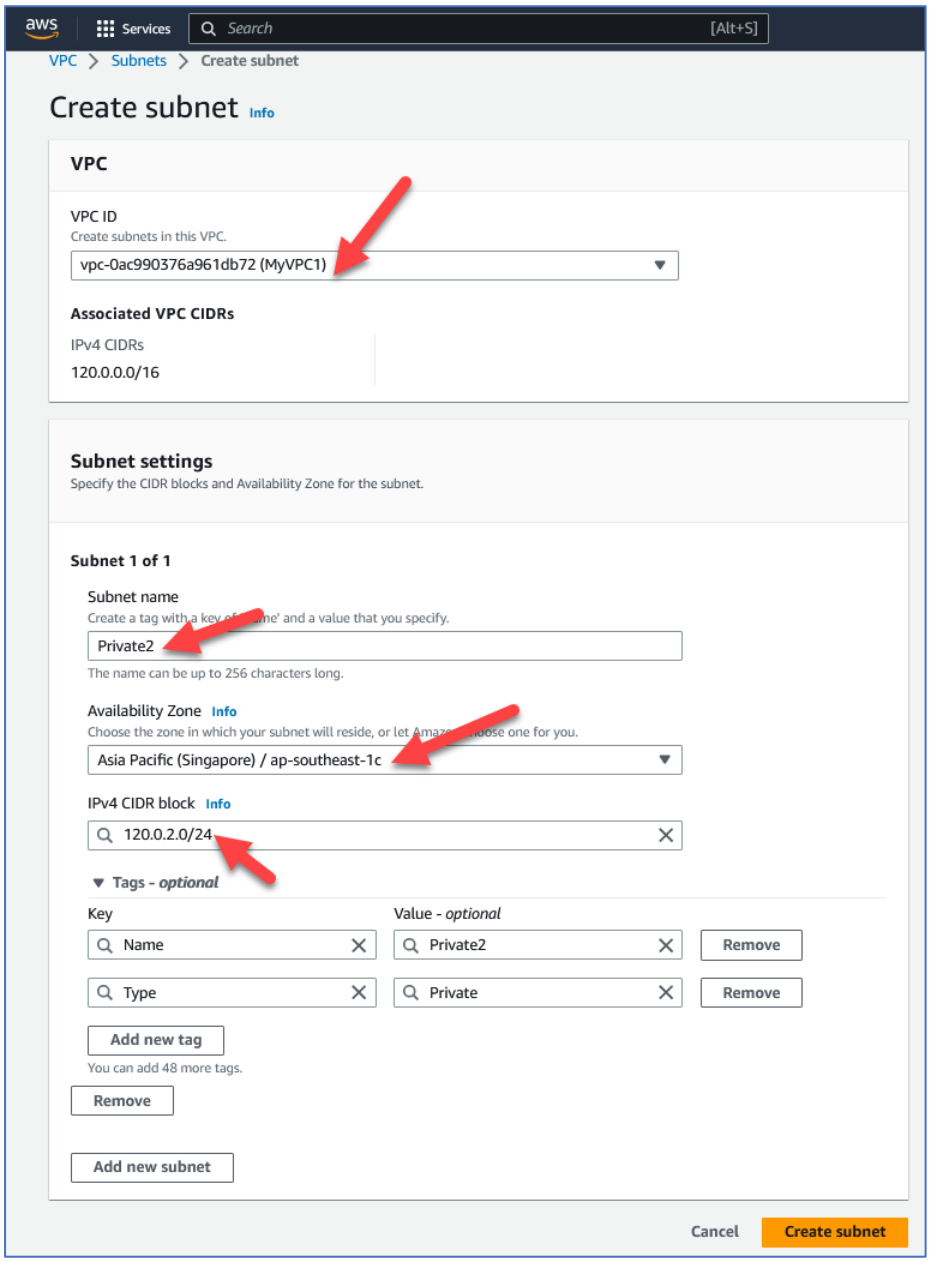
1. Select the appropriate VPC.
2. Provide a subnet name i.e., Private1.

3. Select the AZ (Availability Zone) and select a different AZ than another subnet for redundancy.
4. Provide IPv4 CIDR block i.e., 120.0.1.0/24.

Click "**Create subnet**"



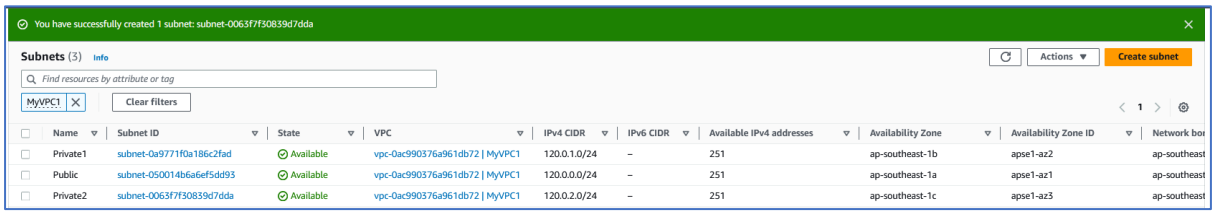

Private1 subnet created successfully.



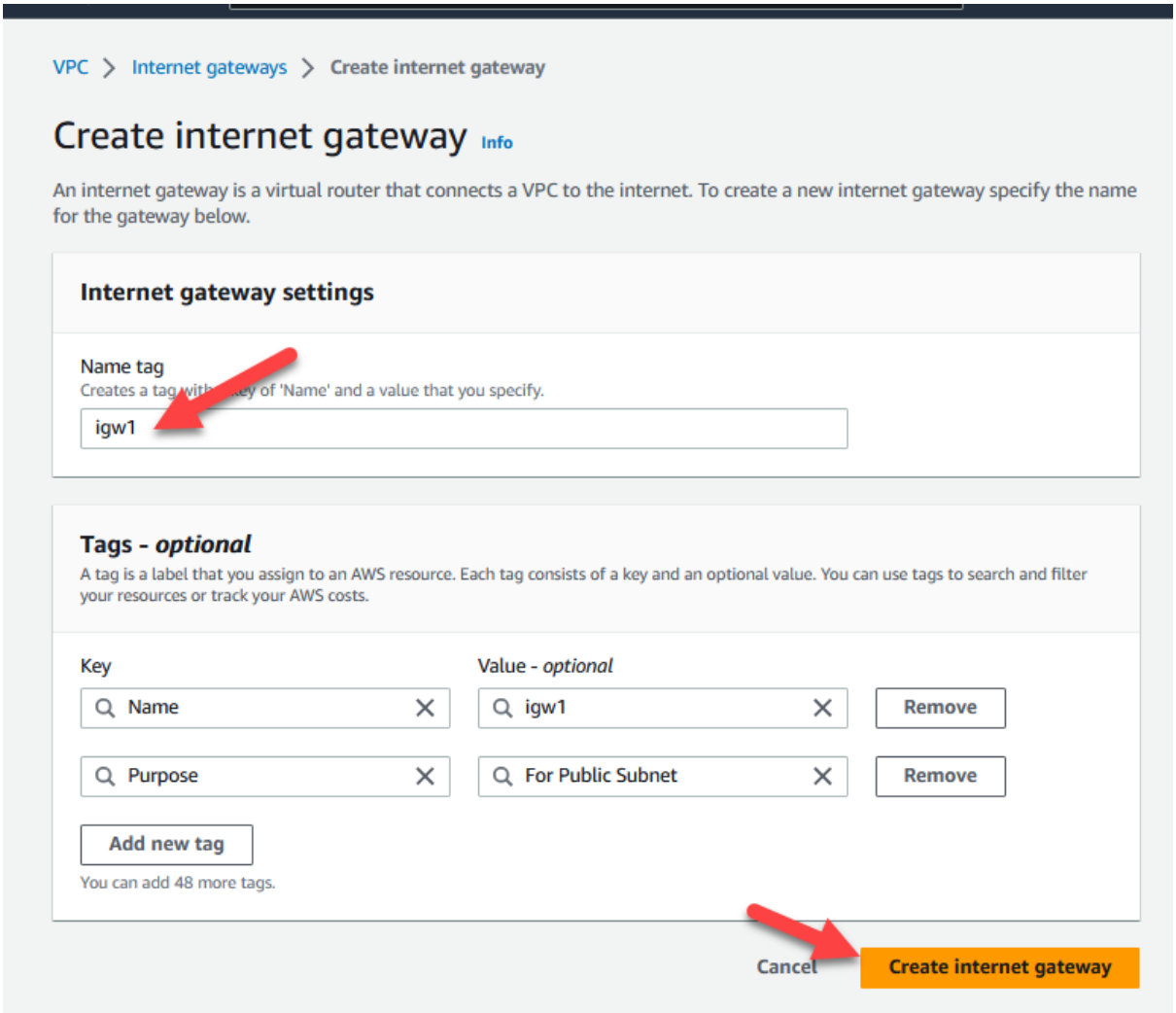

Click Create subnet

1. Select appropriate VPC,
2. Provide a subnet name i.e., Private2.
3. Select the AZ (Availability Zone) and select a different AZ than another subnet for redundancy.
4. Provide IPv4 CIDR block i.e., 120.0.2.0/24.

Click "**Create subnet**"




## Create Internet Gateway

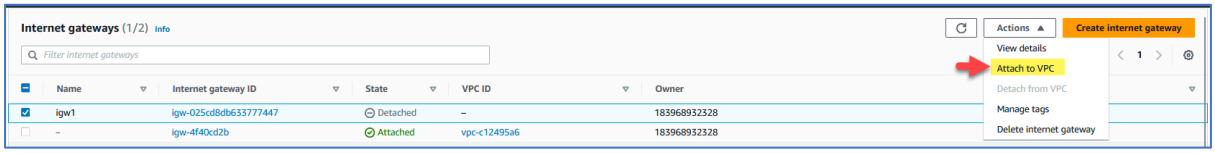



Click on "Create Internet Gateway"

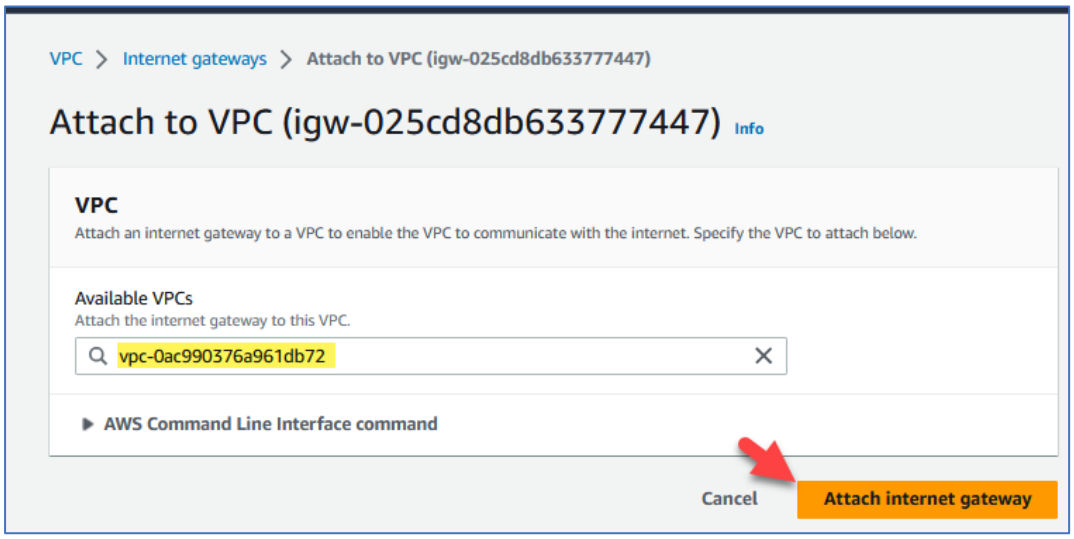
a. Provide a Internet Gateway a Name "**igw1**"
b. Provide Tags for later identification

Click "**Create internet Gateway**"

IGW is created successfully.




Select the "igw1" which is newly created, **Actions → Attach to VPC**



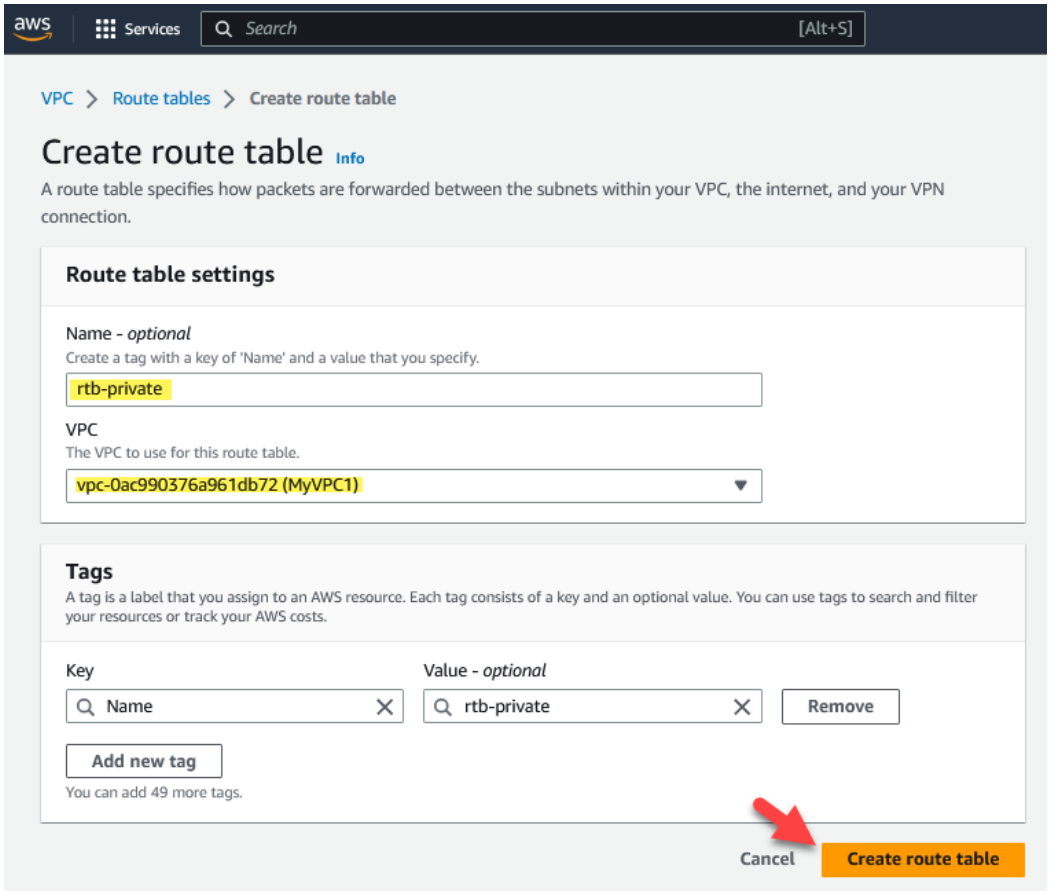

Select "MyVPC1" which is a newly created then click on "**Attach internet gateway**"

## Enable Internet Route to Public Subnet

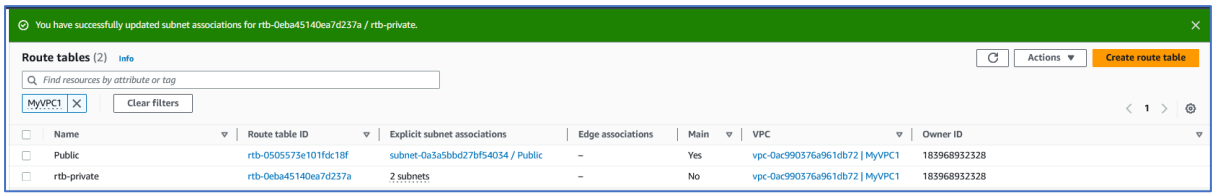
We require multiple route tables to add routes to them. Since we have a single route table I am going to create another route table for the private subnet.

1. De-associate private subnets from existing subnets (to avoid having IGW and route table)
2. Associate private subnets to the "rtb-private" subnet to have different routes.

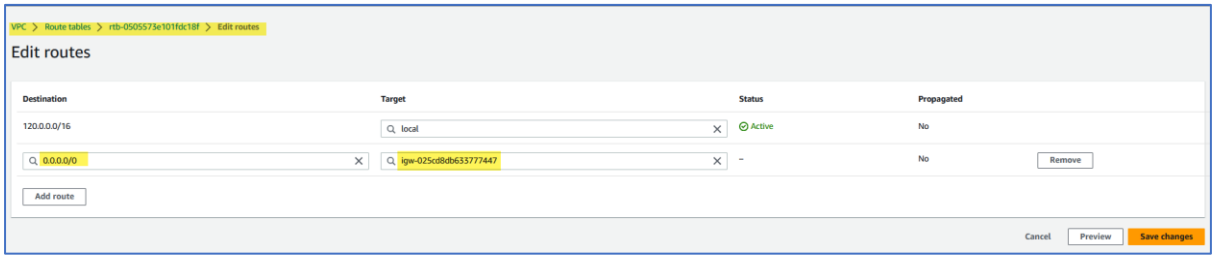
In **VPC service → route tables → Create route table**



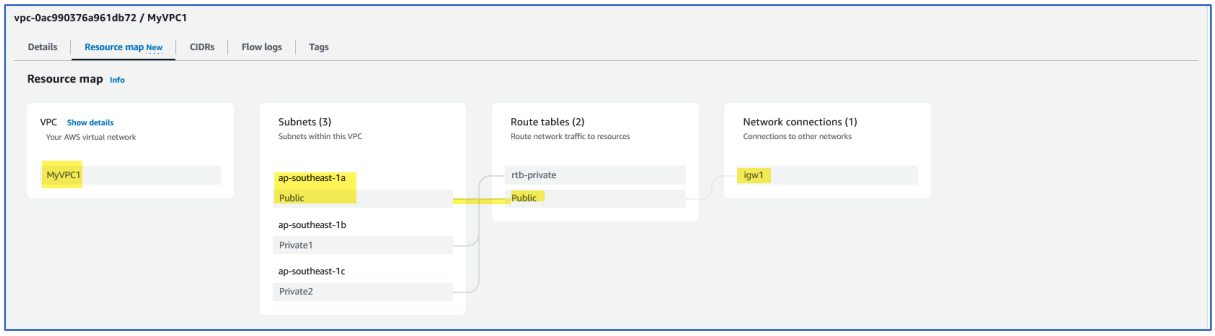

Click "**Create route table**"




Edit Public route table and add internet route

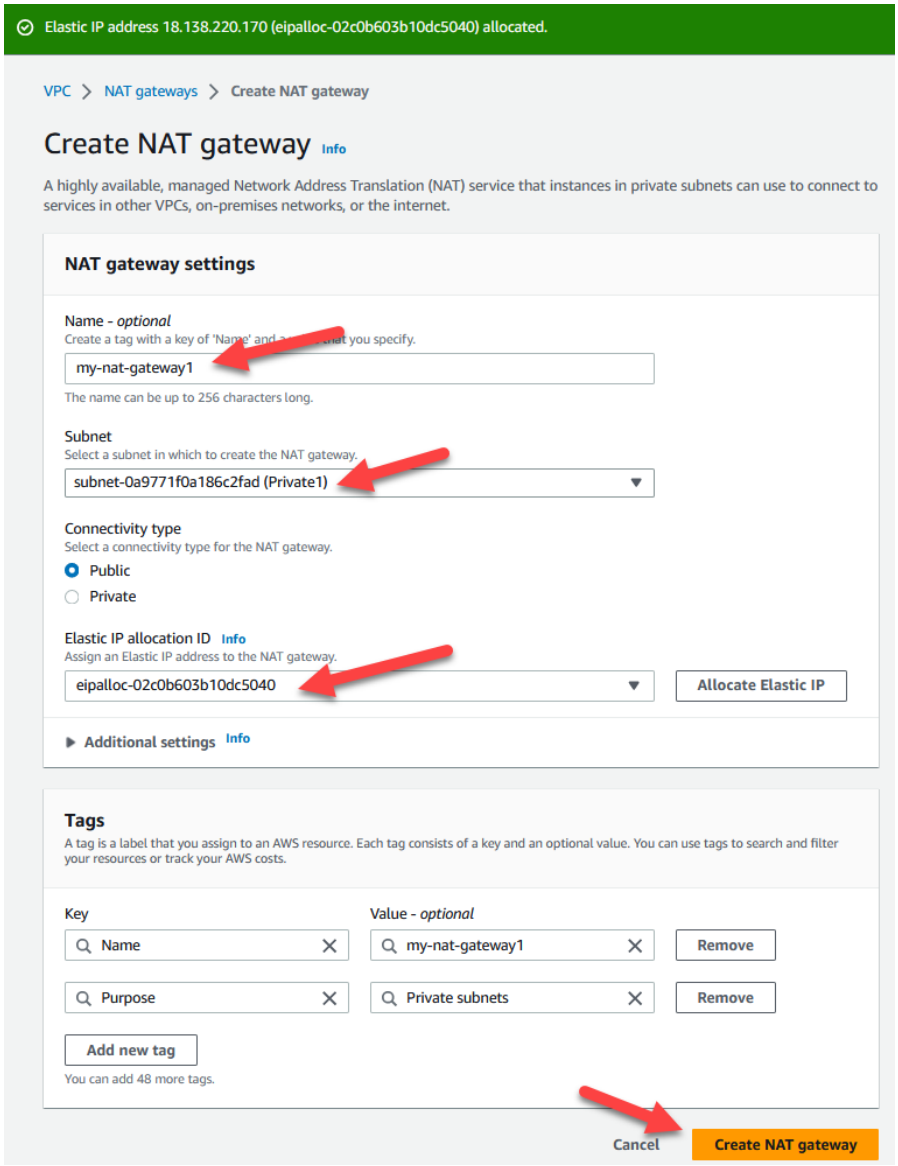



Now Public subnet have internet access.



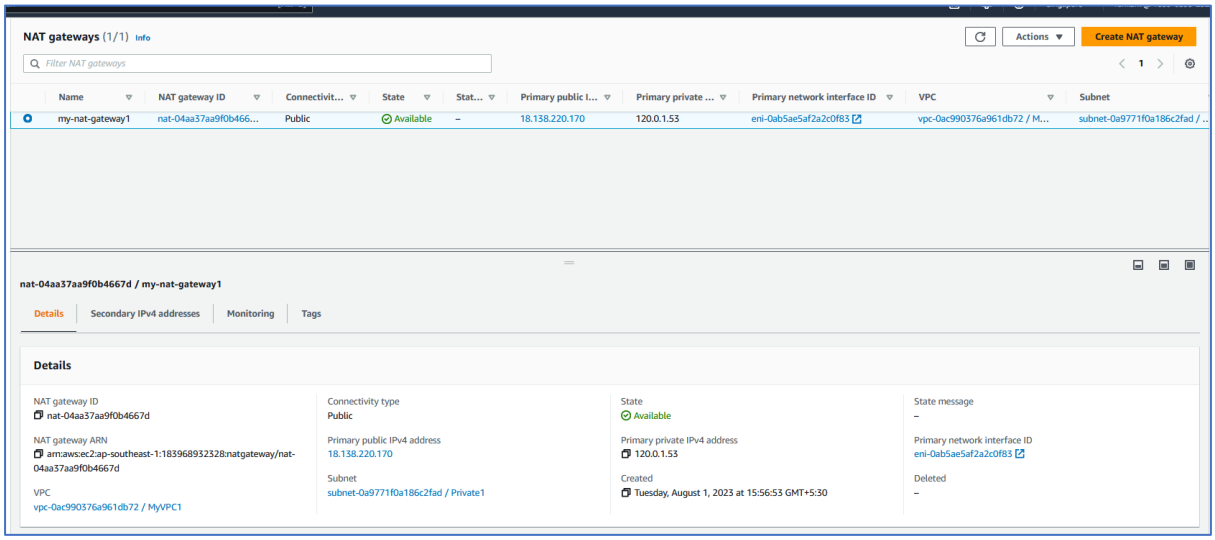

# Create NAT Gateway

VPC Service → NAT gateways → Create NAT gateways →



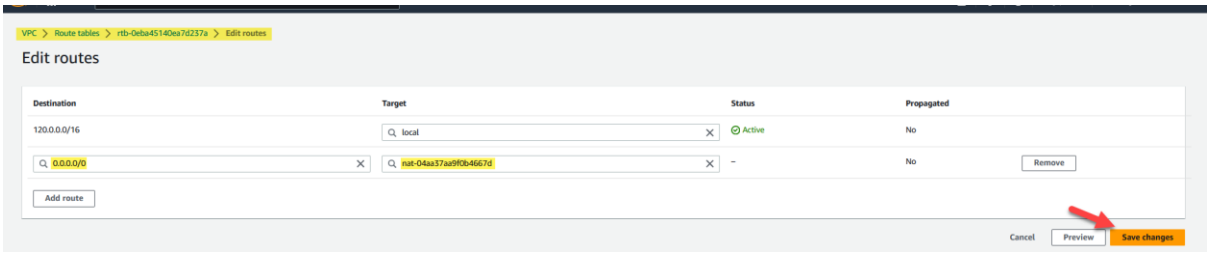

a. Provide a NAT gateway name i.e., my-nat-gateway1.
b. Select the subnets.
c. Connectivity type Public
d. Assign Elastic IP

Click "**Create NAT Gateway**"




NAT Gateway is created successfully.

VPC Service → Route tables → Select Private route table → Edit route table

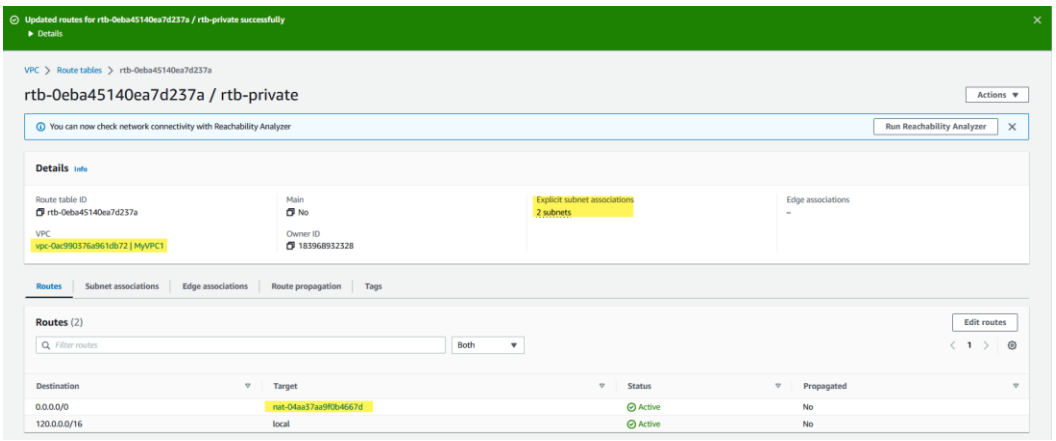



Add another route

Destination: 0.0.0.0/0

Target: NAT-GATEWAY

Click "**Save Changes**"




Activity Completed.