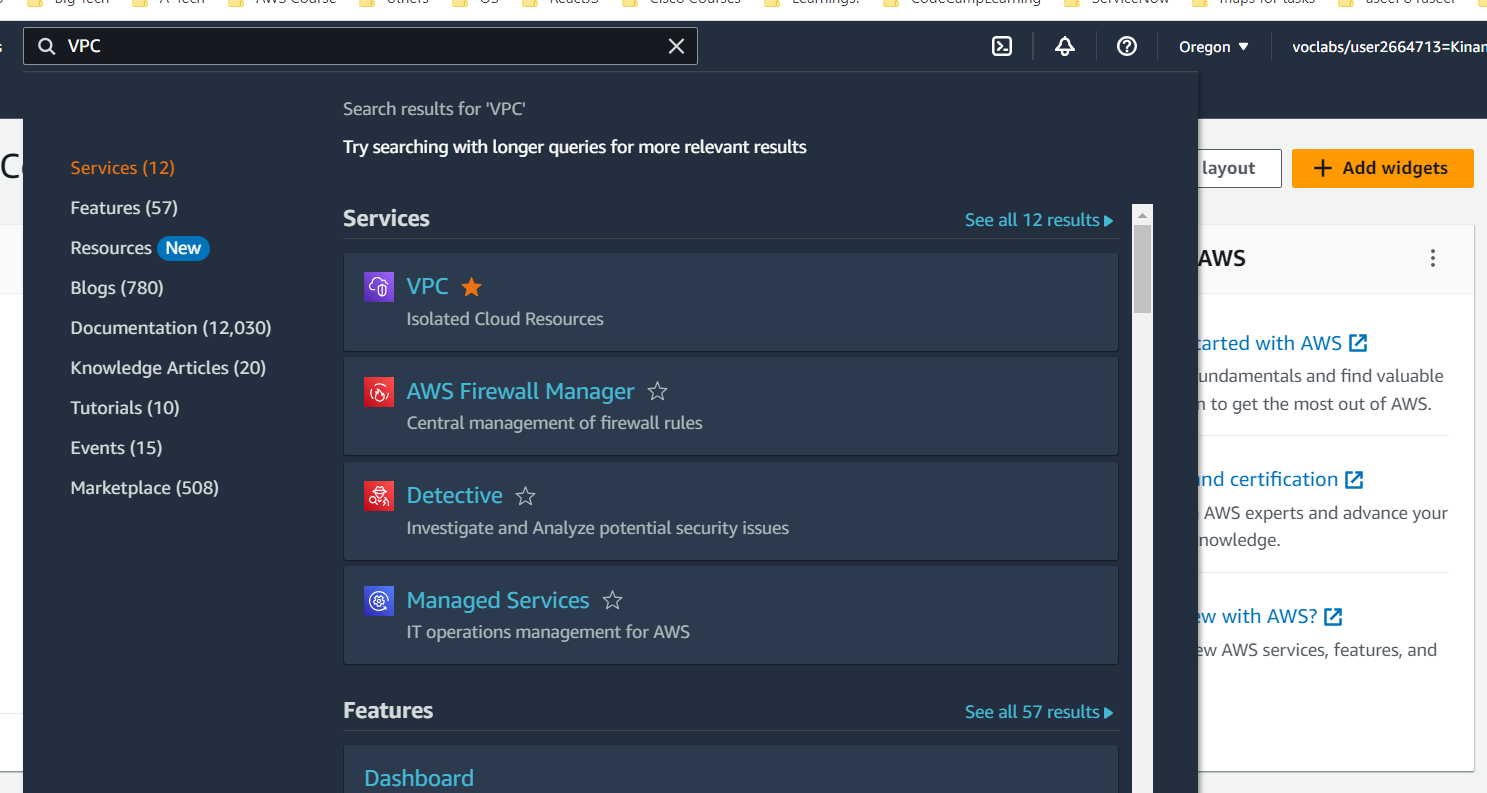
**Virtual Private Cloud (VPC) Setup and Configuration**

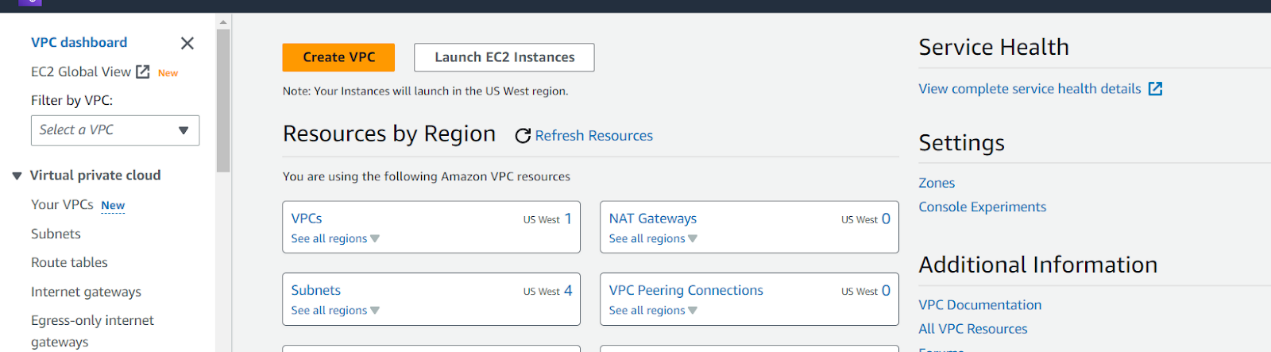
In this document, we walk through the process of setting up a VPC within AWS, configuring subnets, routing tables, and provisioning EC2 instances. The goal is to create a secure environment where an EC2 instance with SSH access can communicate with another EC2 instance hosting a MySQL server, without exposing the database to the public internet.

In order to complete this tutorial you must connect to amazon sandbox

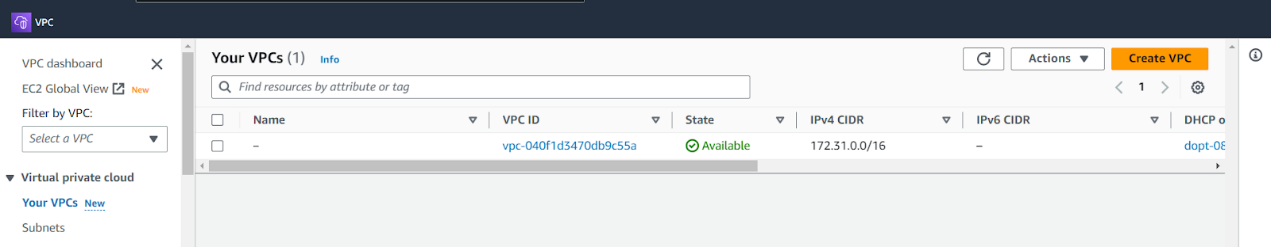
1) Create VPC

1.1) In the search bar, enter **VPC**  and **click** on the first option which is VPC****

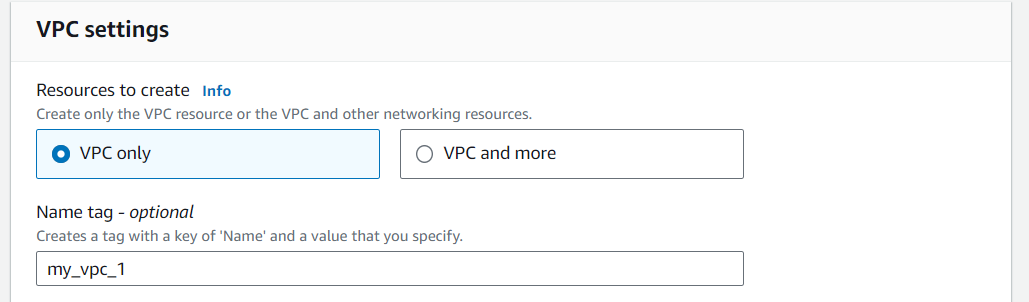
1.2) In the **navigation pane**, click **Your VPCs**. or click **Create VPC** and skip 1.3



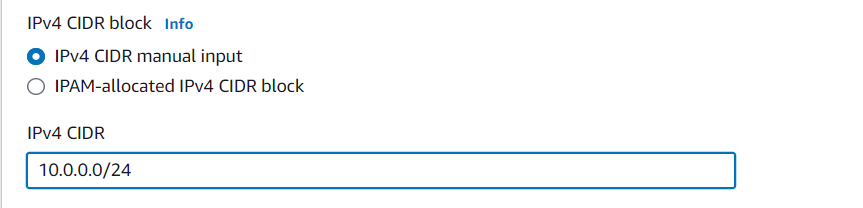
1.3) Click "**Create VPC**".

****

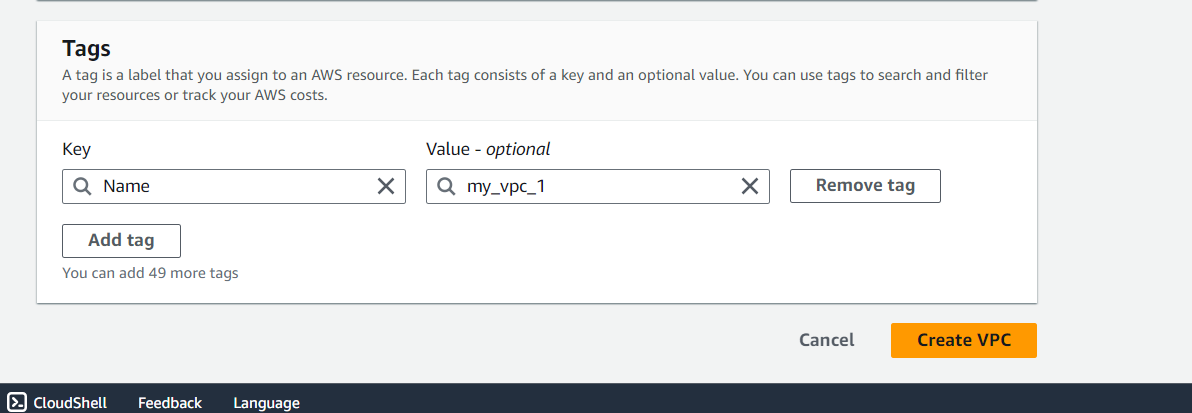
1.4) Enter a name for the VPC.

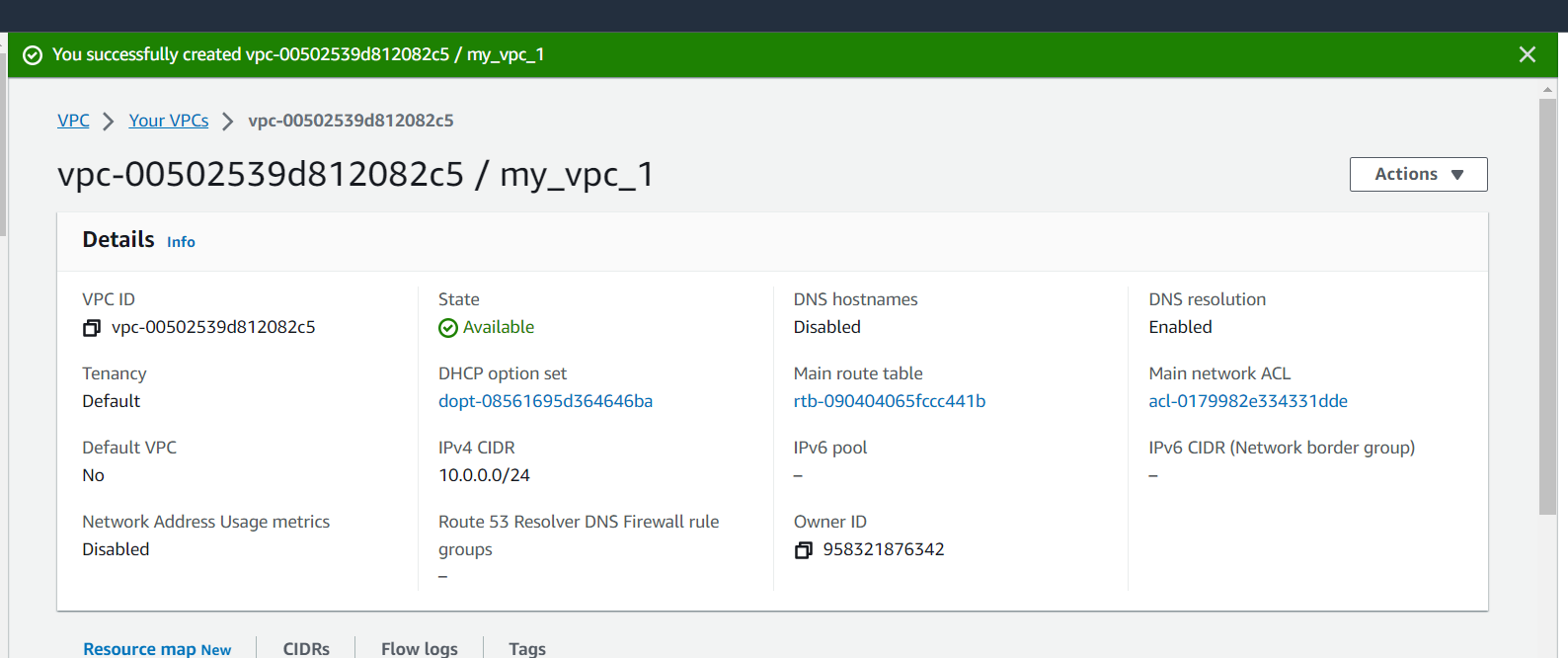


1.5) Specify an IPv4 CIDR block for the VPC.



1.6) Click "Create VPC".

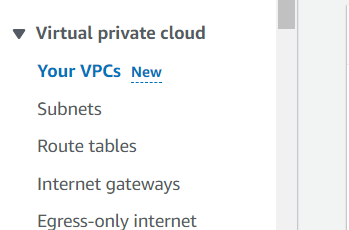
****

1.7) Then your supposed to get this message  


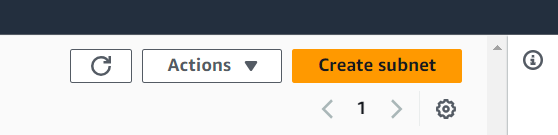
2) Add 4 subnets

2.1) 2 public subnets:

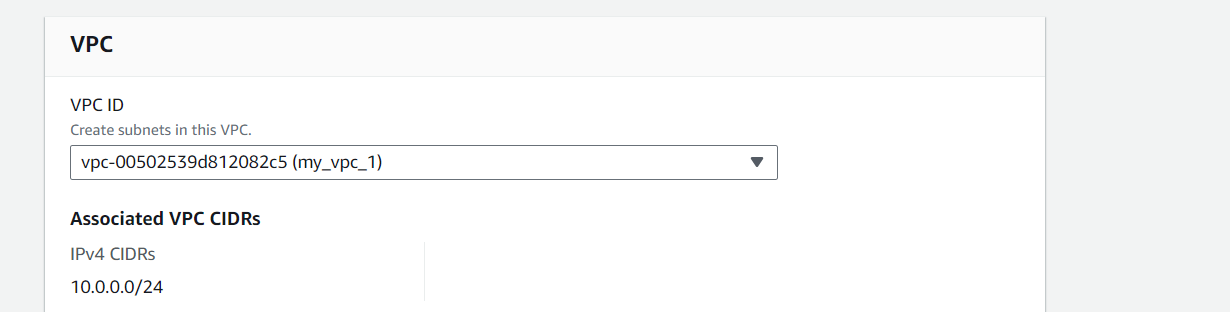
2.1.1) In the VPC Dashboard, click on "Subnets".



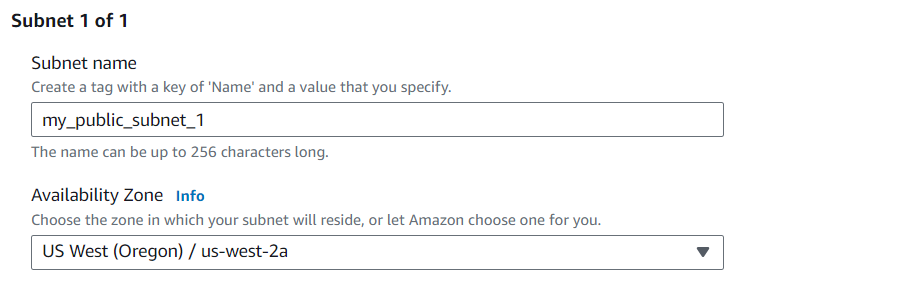
2.1.2) Click **Create subnet**.



2.1.3) Select the VPC you created.



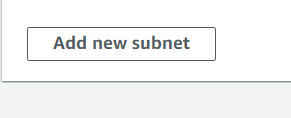
2.1.4) Specify a name and Choose the first Availability Zone

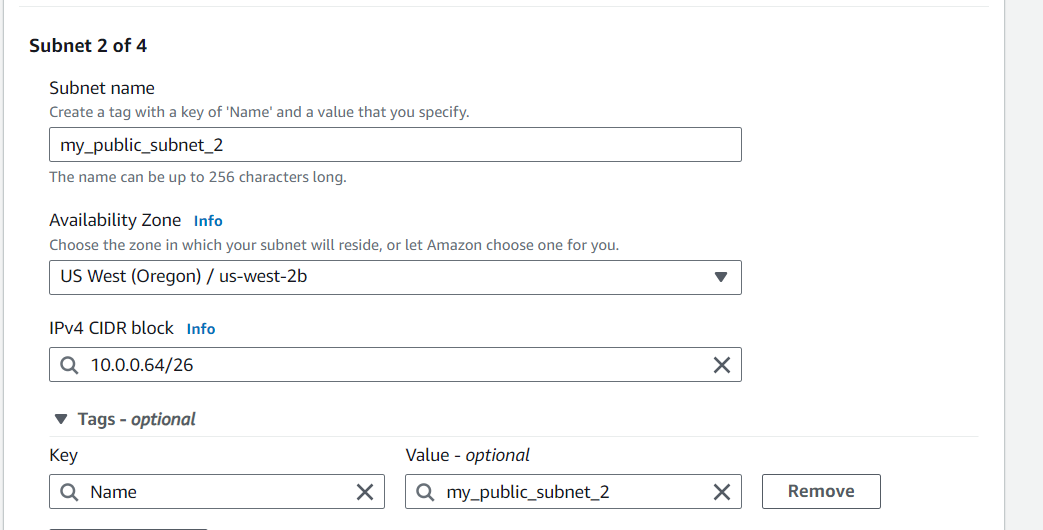


2.1.5) Specify CIDR block for the subnet.



2.1.6) Click add new subnet

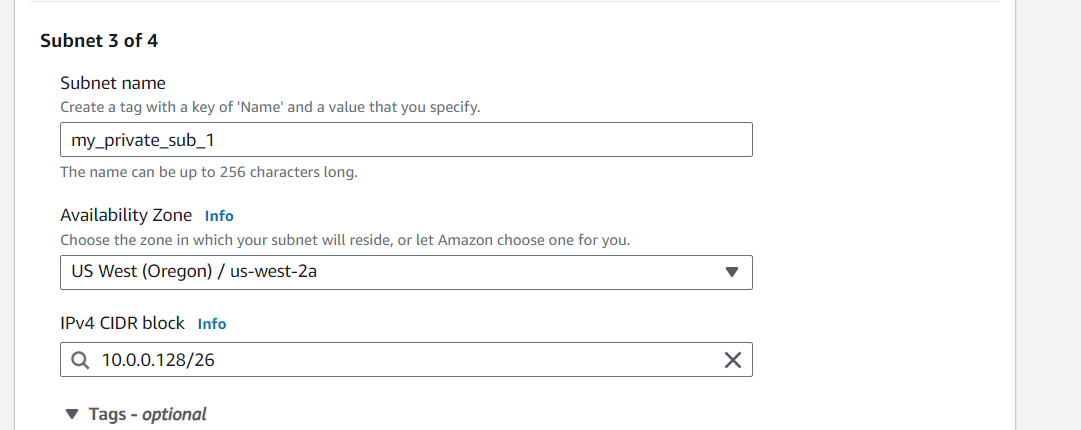


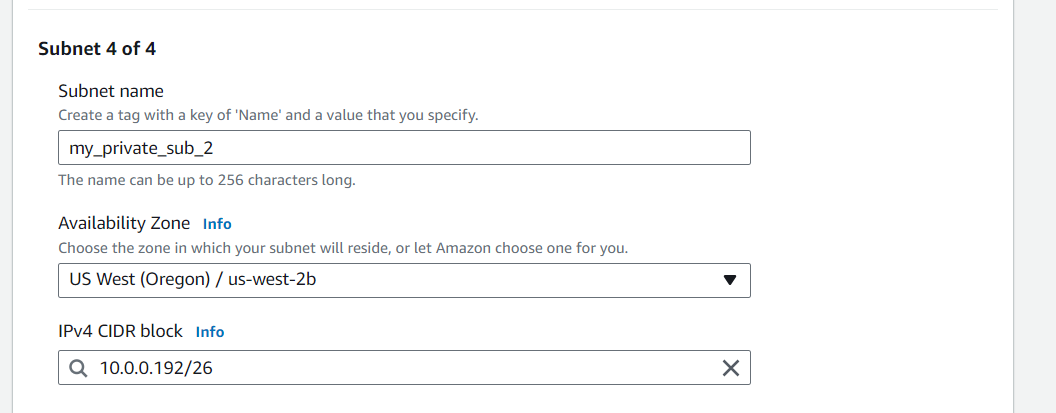
2.1.7) Repeat the process for the second private subnet in a different Availability Zone.  
**\*note the subrouting is done based on the vpc /24 notation chosen, basically we need 4 subnets which mean going done to /26 will do the job and we’ll give each net**  **64 addresses each .0 .64 .128 .192 all of them /26  
**

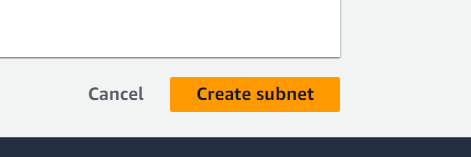
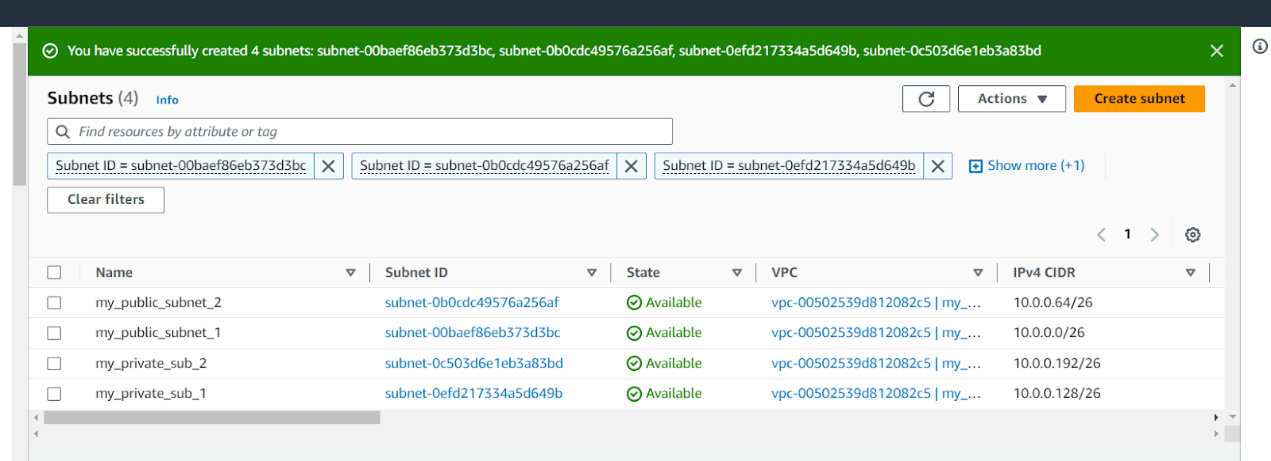
2.2) 2 private subnets:

2.2.1) Repeat the same steps as for the private subnets but choose different CIDR blocks.

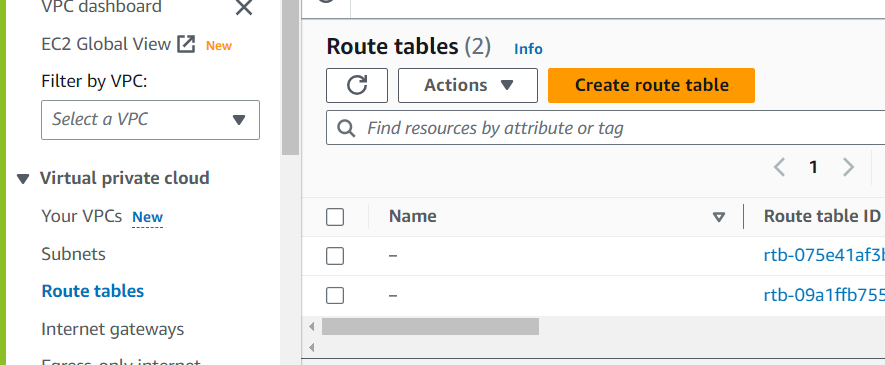
2.2.2) Choose the first Availability Zone for the first private subnet and the second Availability Zone for the second private subnet.





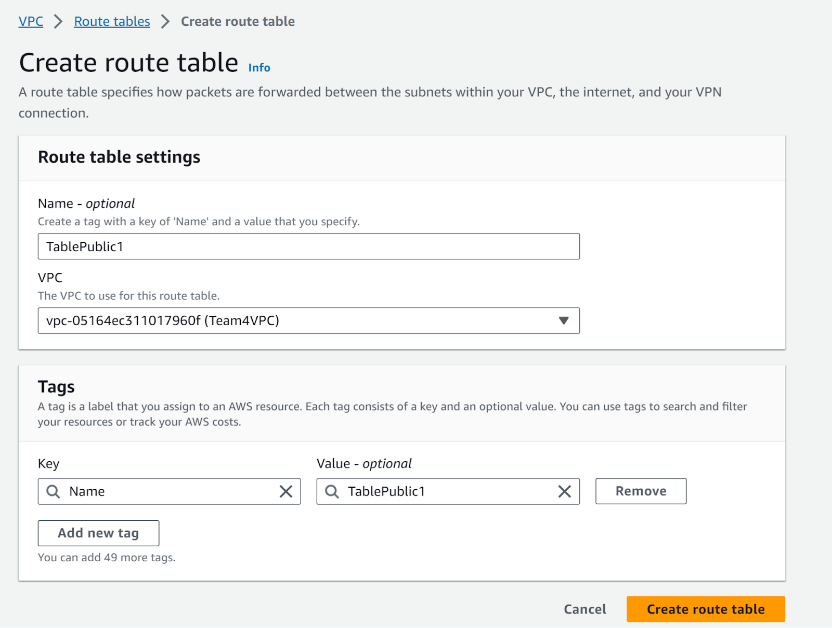
2.3) Click **Create subnet**  
  
This what should happen when finished creating  
  
  
  
3) 2 routing tables:

3.0) Click on the **Route tables left navigation and click on the route tables.**

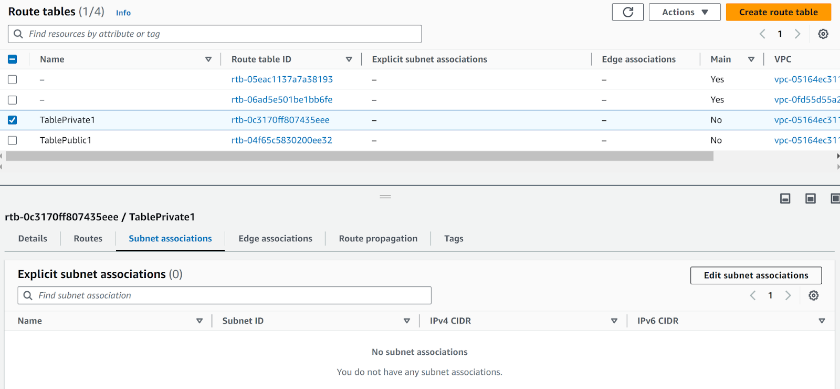


Name your route table. For VPC choose the VPC you’ve created.

Create 2 route tables, 1 for the public subnets, and one for the private subnets.

3.1)  

3.2)  Assign the route tables to their respective subnets.

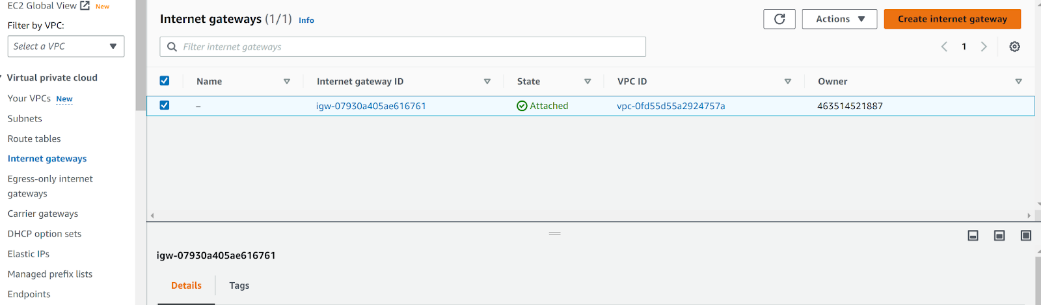
Choose the private subnet and then click on **subnet associations** and then click on **edit subnet association**  
Now click the respective (private) subnets and click **Save associations**תמונה שמכילה טקסט, מספר, גופן, קו

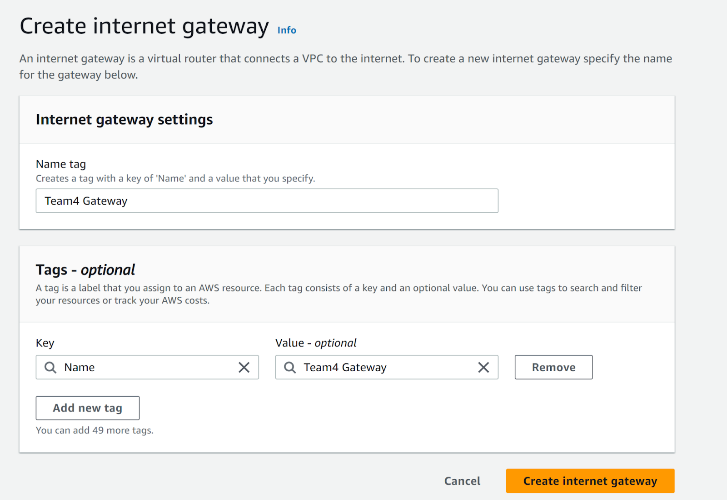
התיאור נוצר באופן אוטומטי

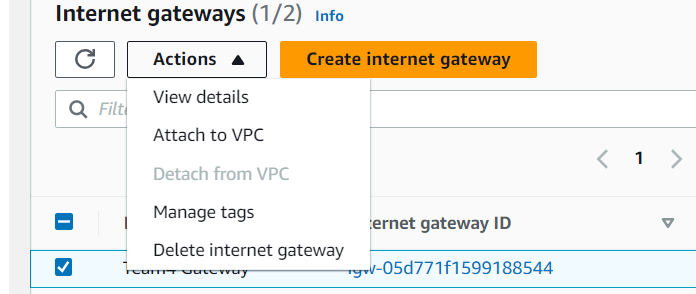
Now do the same thing with the public subnet  
תמונה שמכילה טקסט, צילום מסך, מספר, קו

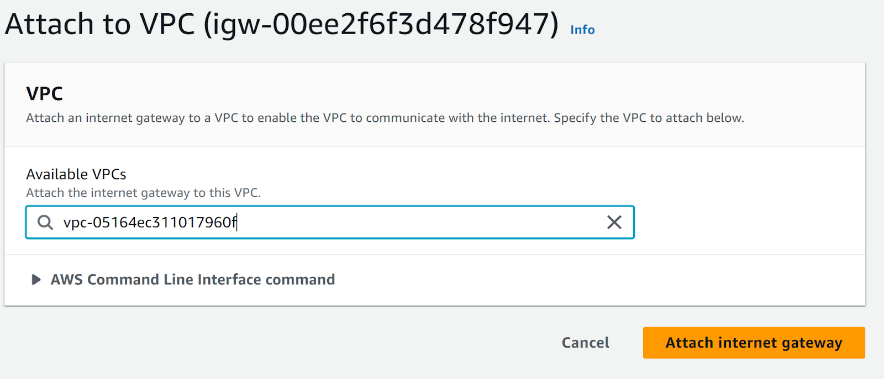
התיאור נוצר באופן אוטומטי

3.3) Create an internet gateway and attach it to the public subnet.  
First click on the **Internet gateways** on the **left nav pane  
תמונה שמכילה טקסט, צילום מסך, גופן, קו

התיאור נוצר באופן אוטומטי**Now Click on the **Create internet gateway**  
  
Choose a name for the gateway

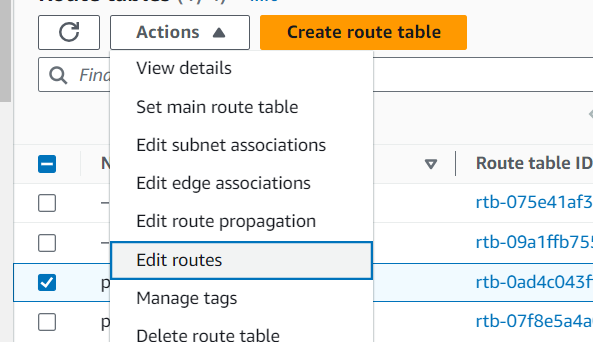


Go back to the **Internet gateways** and choose the new created gateway and then click on the **Attach to VPC**  
  
  
  
3.4) Attach the Gateway to the VPC you’ve created.

  
Now go back to the **route tables  
תמונה שמכילה טקסט, צילום מסך, גופן, עיצוב

התיאור נוצר באופן אוטומטי**

3.5) Attach the Gateway to the public subnet.

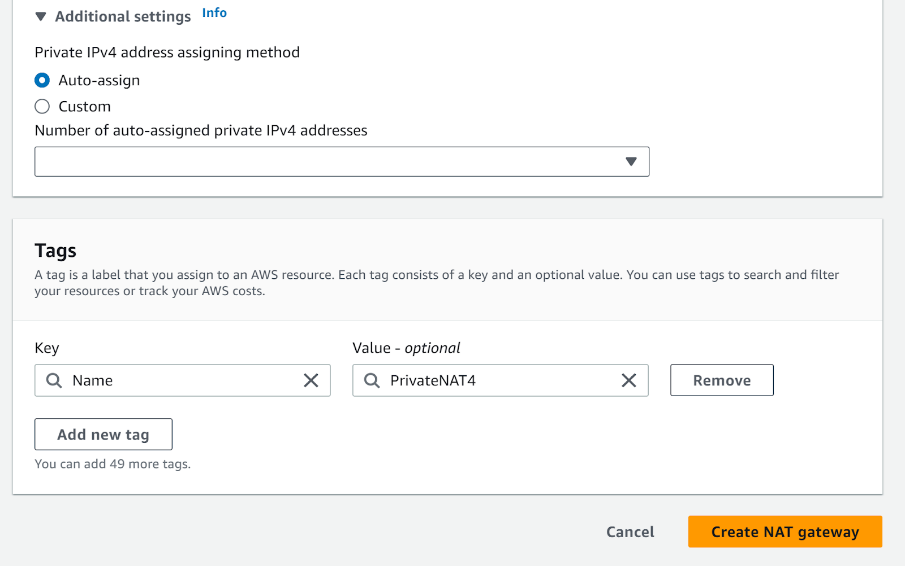
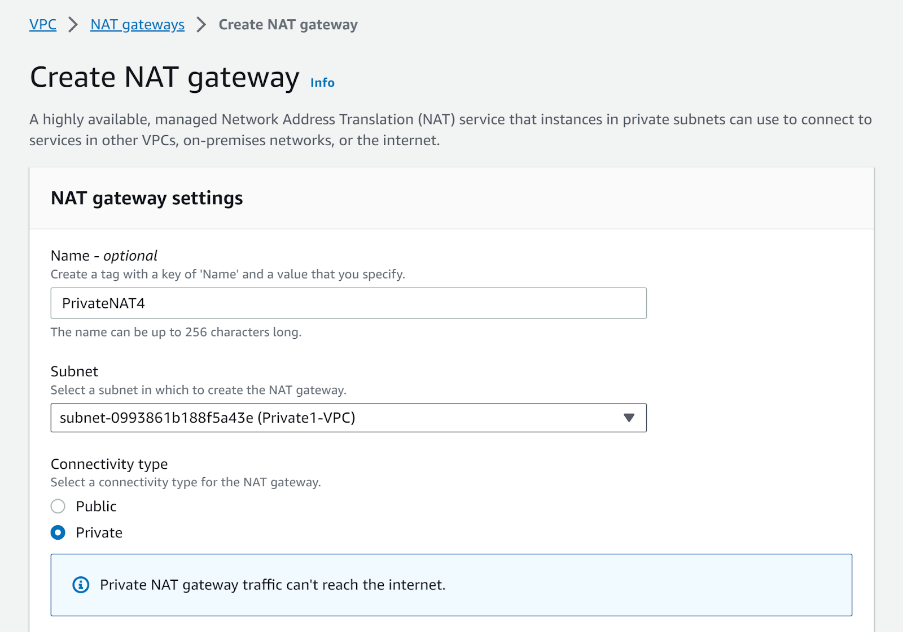
Go to the route table, choose the public route table then click on **edit routes** in the **actions**.  
  
Click on **Add route**  
And the n

תמונה שמכילה טקסט, קו, גופן, מספר

התיאור נוצר באופן אוטומטי

3.6) Create a NAT gateway for your private subnet.תמונה שמכילה טקסט, גופן, קו, צילום מסך

התיאור נוצר באופן אוטומטי



5) Connect to the ssh