# DEPLOYMENT OF VPC IN AWS

An **Amazon VPC** is your private network in AWS. You choose its IP range and carve it into **subnets**

(public/private). You attach an **Internet Gateway (IGW)** for internet access, create **route tables** to control

traffic flow, and secure workloads with **Security Groups** (stateful, per-ENI) and **Network ACLs** (stateless,

per-subnet).

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**Objective:**

- To understand the concept of Amazon Virtual Private Cloud (VPC) and its components.
- To learn how to design and deploy a custom VPC with subnets, internet gateway, and route tables.
- To gain practical knowledge of securing and managing workloads using Security Groups and Network ACLs.

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**Pre-requisite:**

- An active AWS account with permissions to create and configure VPC resources.
- Basic understanding of networking concepts (IP addressing, subnets, routing).
- Familiarity with AWS Management Console navigation.
- Knowledge of EC2 instances for later testing connectivity inside the VPC.

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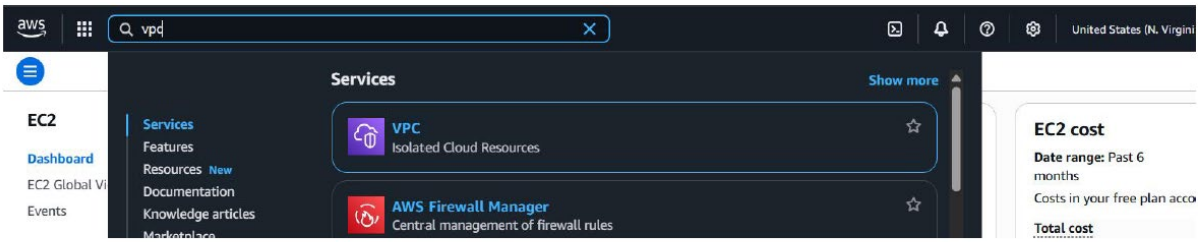
**Procedure:**

**To Create VPC in AWS :**

Open **VPC** → **Your VPCs** → **Create VPC**.




Fill in:

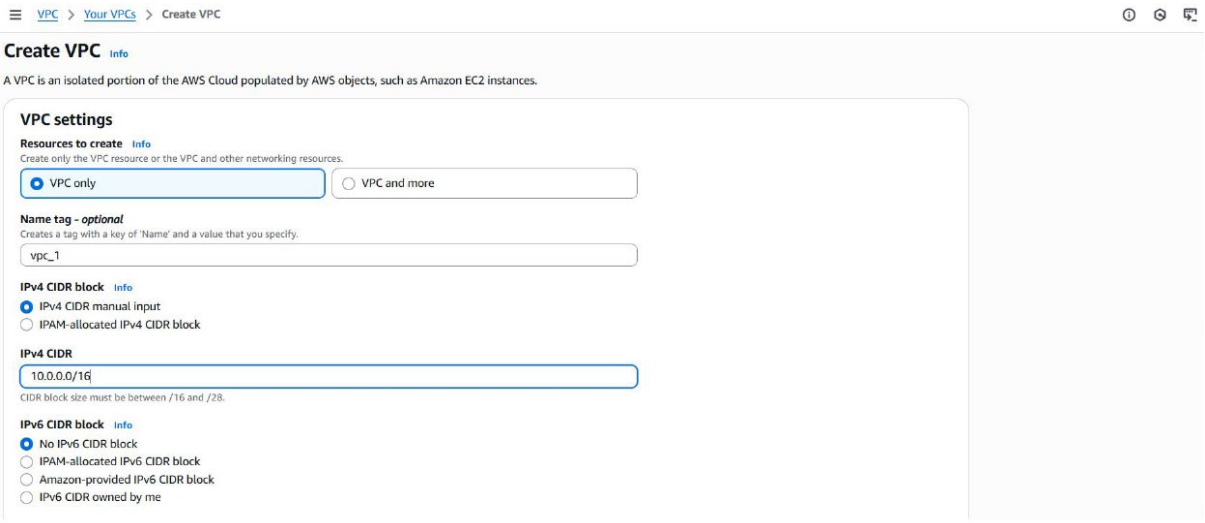
**Name tag:** vpc_1

**IPv4 CIDR block:** 10.0.0.0/16

**IPv6 CIDR:** None (for this lab)

**Tenancy:** Default

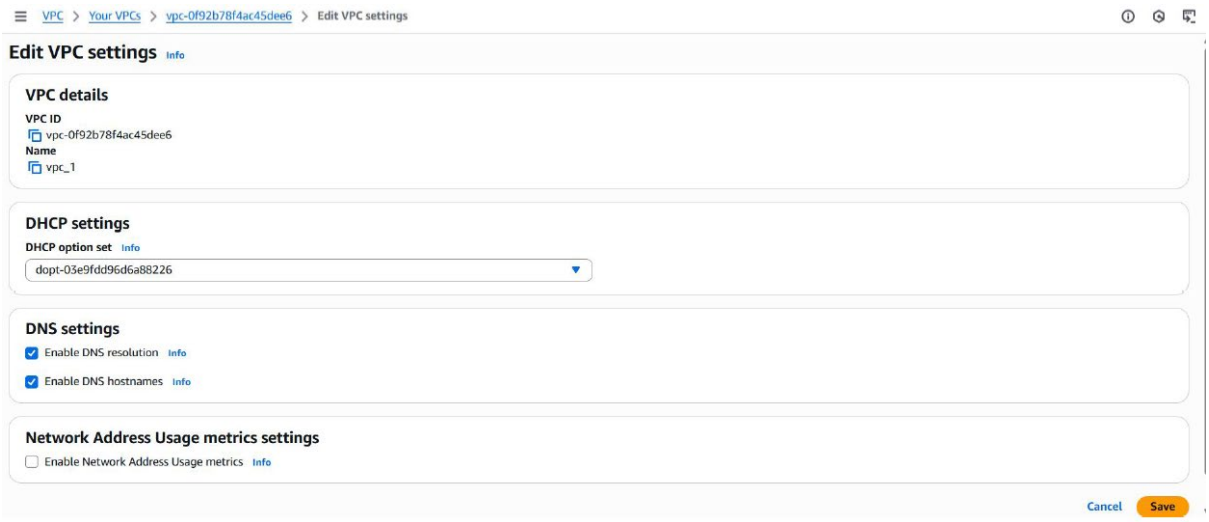
Create the VPC.




After it appears, select **vcp_1** → **Actions** → **Edit VPC settings** (or **Edit DNS hostnames** depending on UI) and ensure:

**Enable DNS hostnames: ON**

**Enable DNS resolution: ON**

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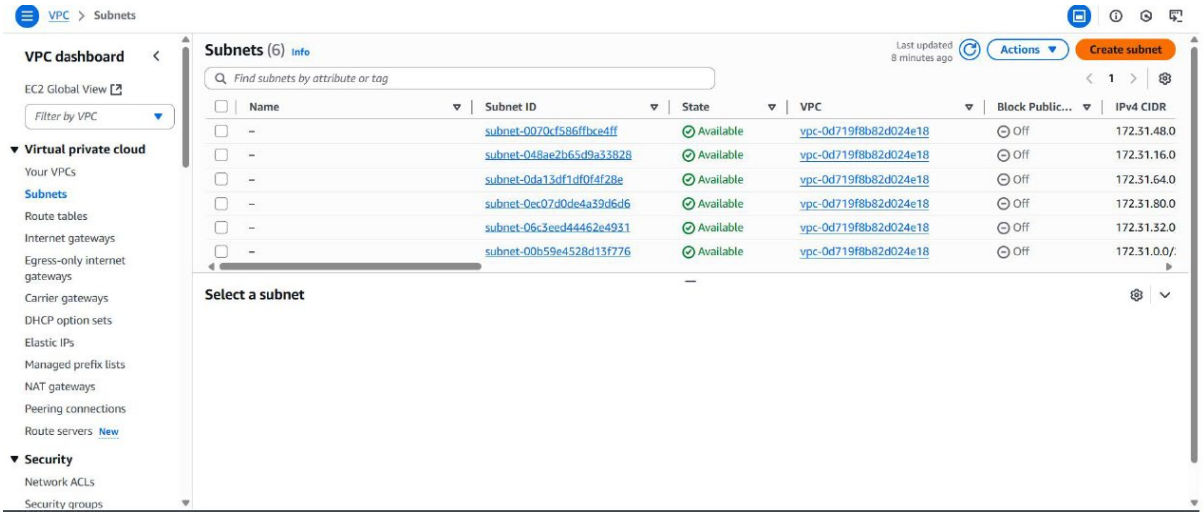
**TO CREATE SUBNET :**

go to **vpc → subnets → create subnet**




settings for **public subnet**:

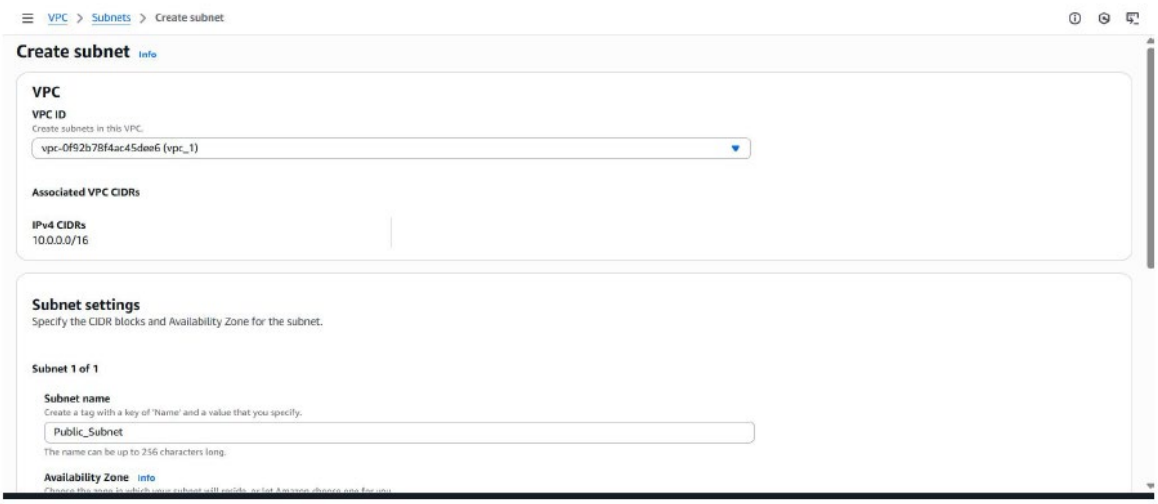
**vpc id:** select MyLabVPC

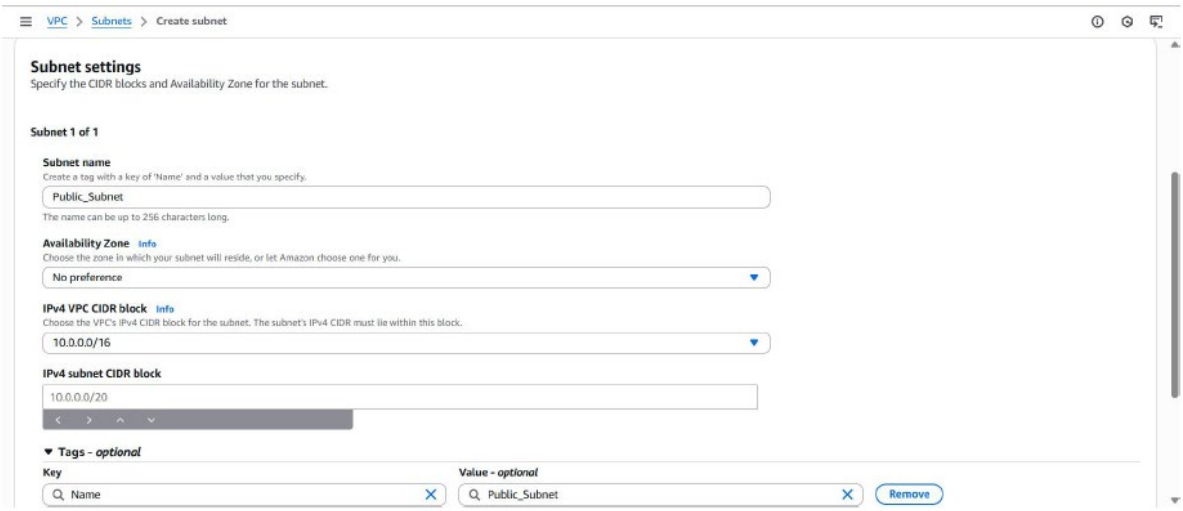
**subnet name:** Public-Subnet

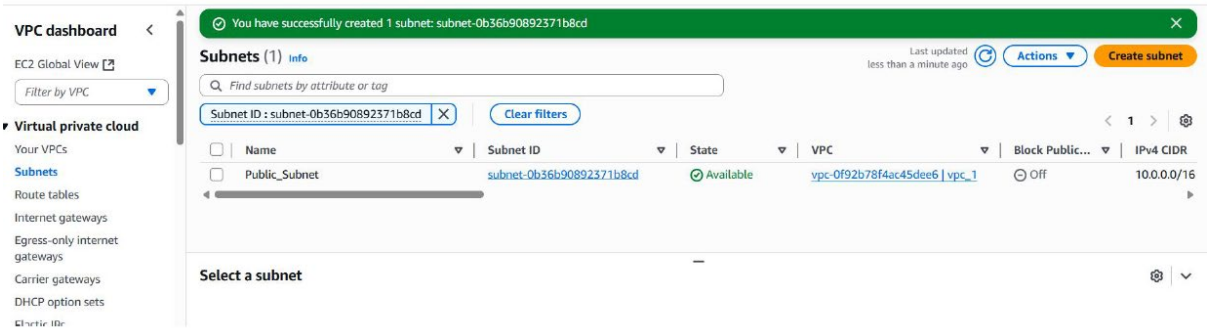
**availability zone:** pick one (e.g. ap-south-1a)

**ipv4 cidr block:** 10.0.1.0/24

click **create subnet**

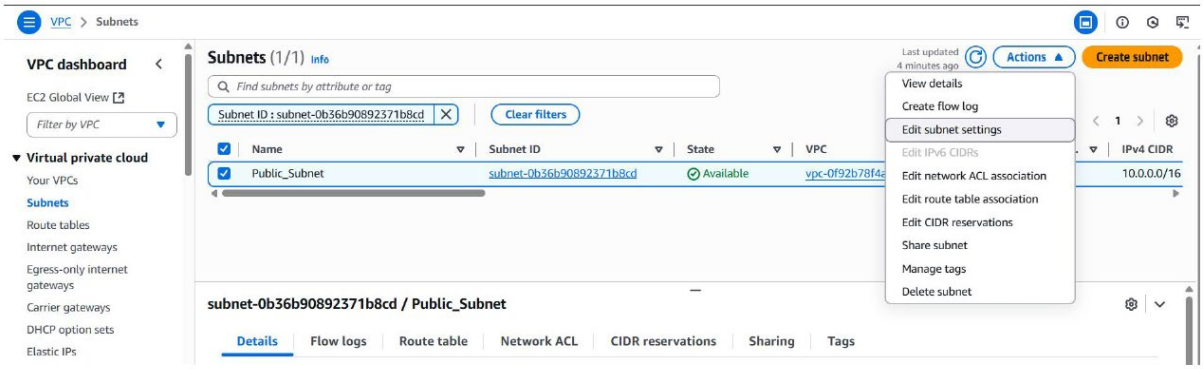


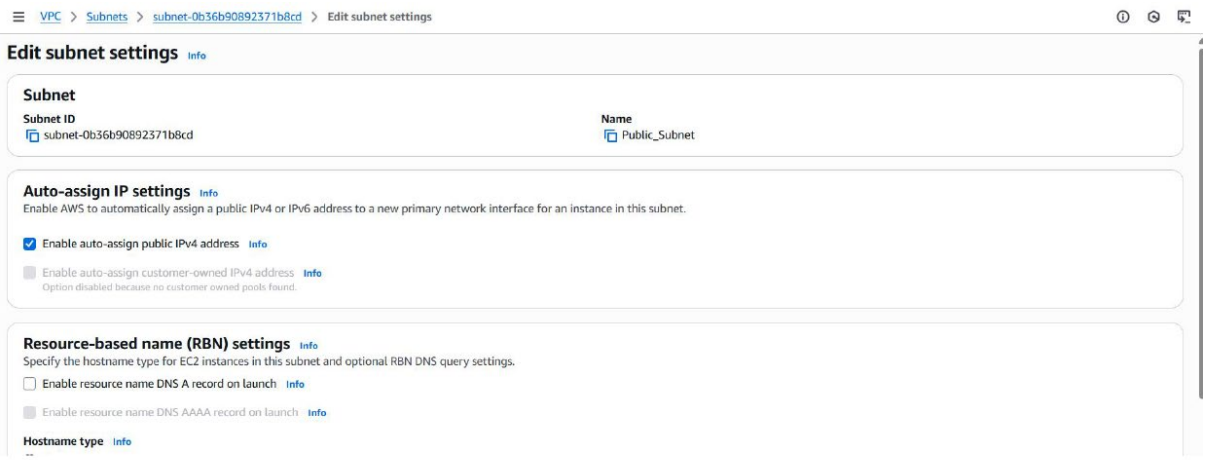




after creation, select **public-subnet** → **actions** → **edit subnet settings**

turn **auto-assign ip settings** → enable *auto-assign public ipv4 address*

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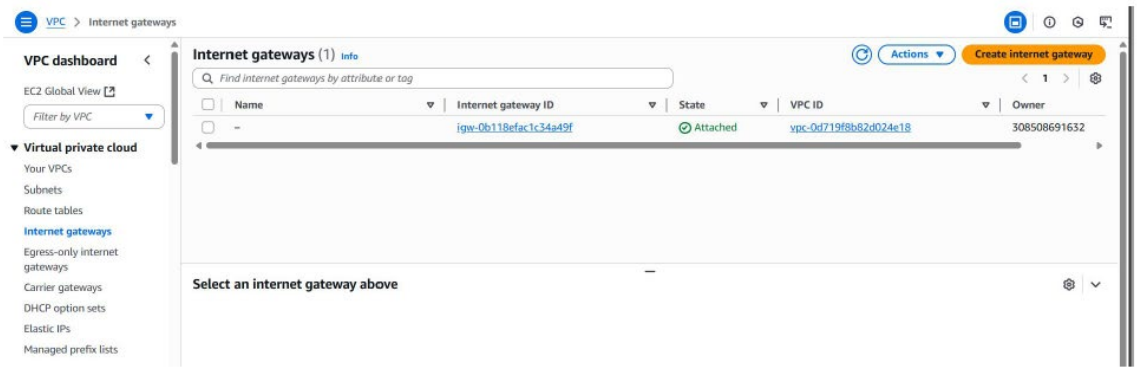
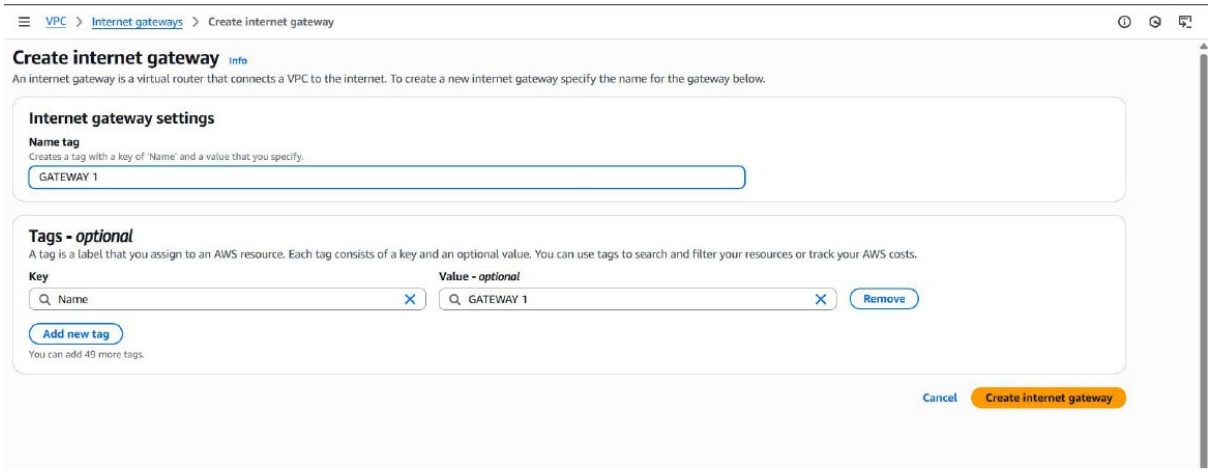
**TO CREATE INTERNET GATEWAY**

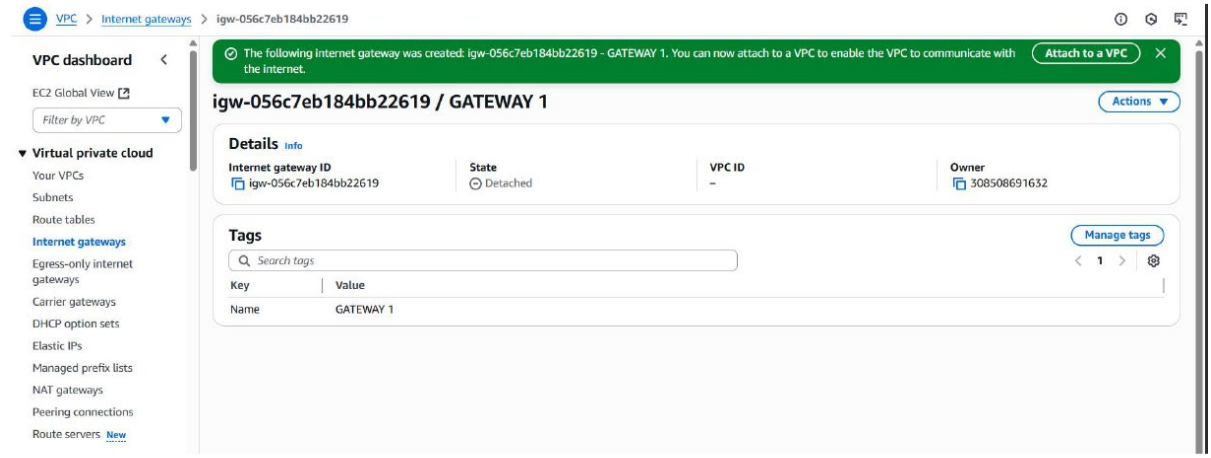
go to **VPC → internet gateways → create internet gateway**

name: GATEWAY 1

create



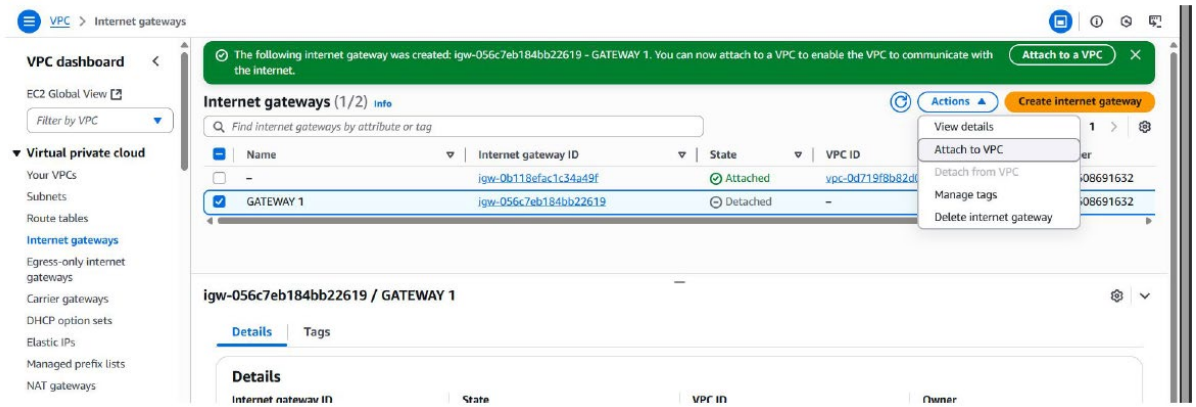



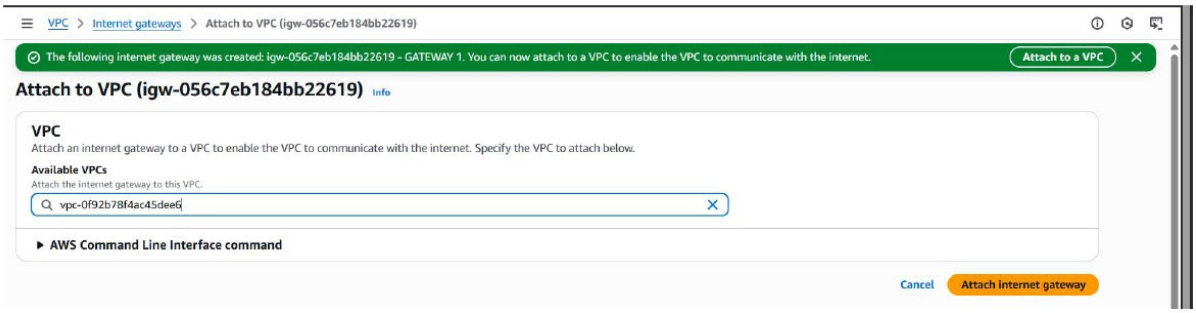




**attach IGW to vpc**

select GATEWAT 1

**actions → attach to vpc** → choose vpc_1




**CONFIGURE ROUTE TABLE**

in **route tables**, find the one automatically created for your vpc

rename it to Public-RT (for clarity)

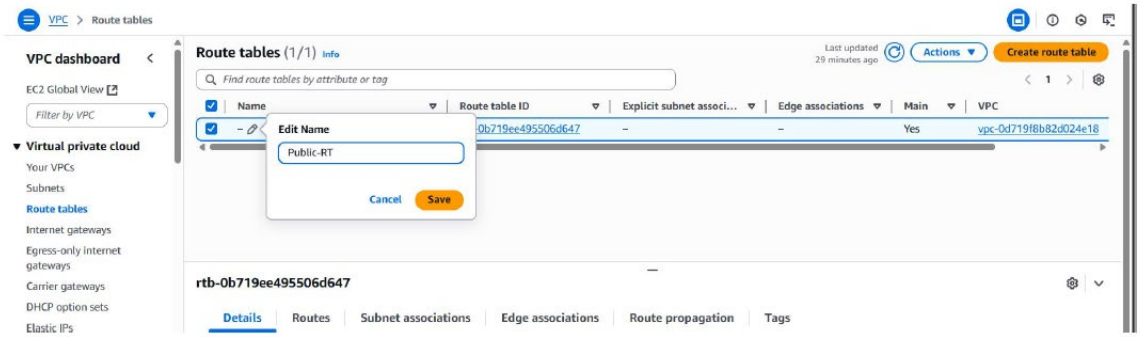
select Public-RT → **routes** → **edit routes**

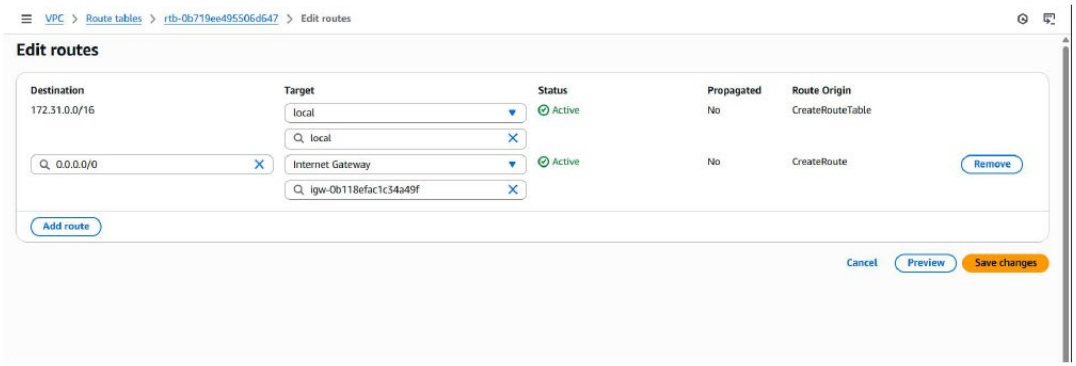
add route:

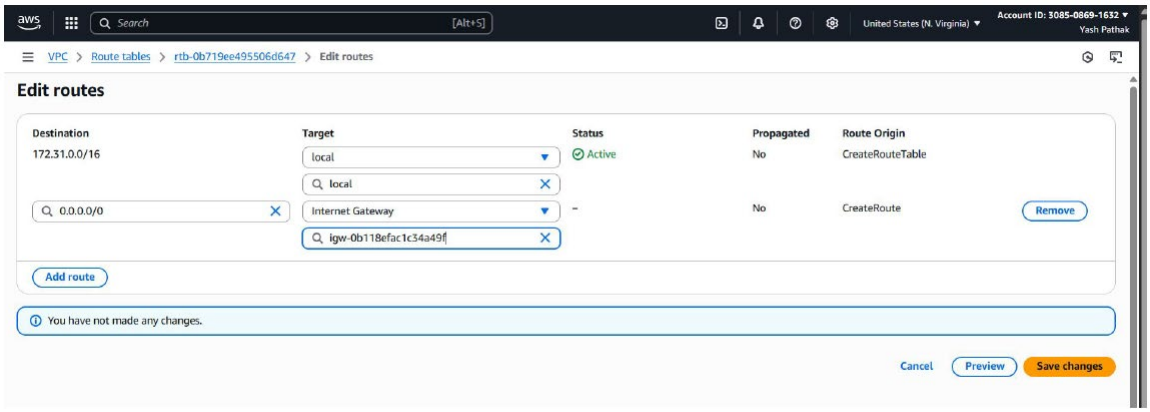
destination: 0.0.0.0/0

target: GATEWAY 1

Save changes

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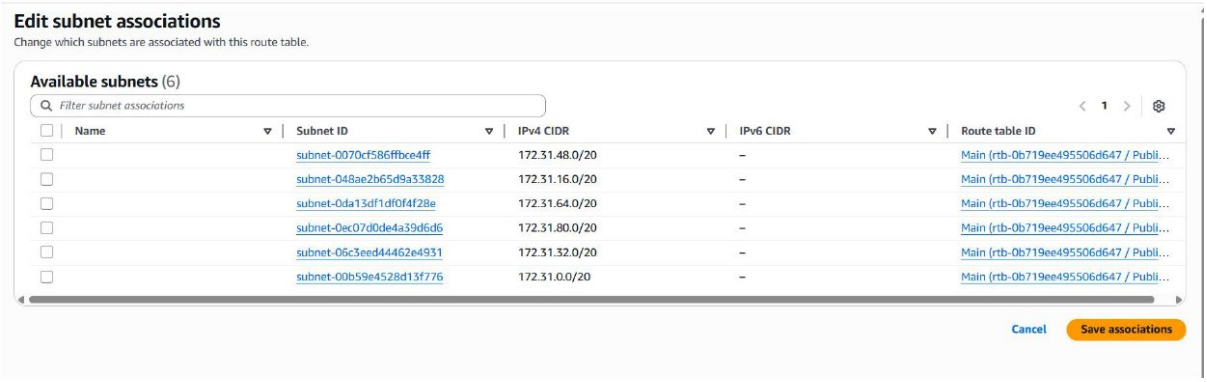
**ASSOCIATE PUBLIC SUBNET WITH PUBLIC-RT**

in same route table → **subnet associations** → **edit subnet associations**

select Public-Subnet

Save

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**Conclusion:**

In this lab, we successfully deployed a Virtual Private Cloud (VPC) in AWS by creating a custom IP range, subnets, an internet gateway, and route tables. The VPC setup provides a secure and isolated networking environment where resources can be managed efficiently. This exercise highlights the flexibility of AWS networking, enabling users to design architectures tailored to application requirements while maintaining security and control over traffic flow.