

Project 6: Build Amazon VPC with Public and Private Subnets

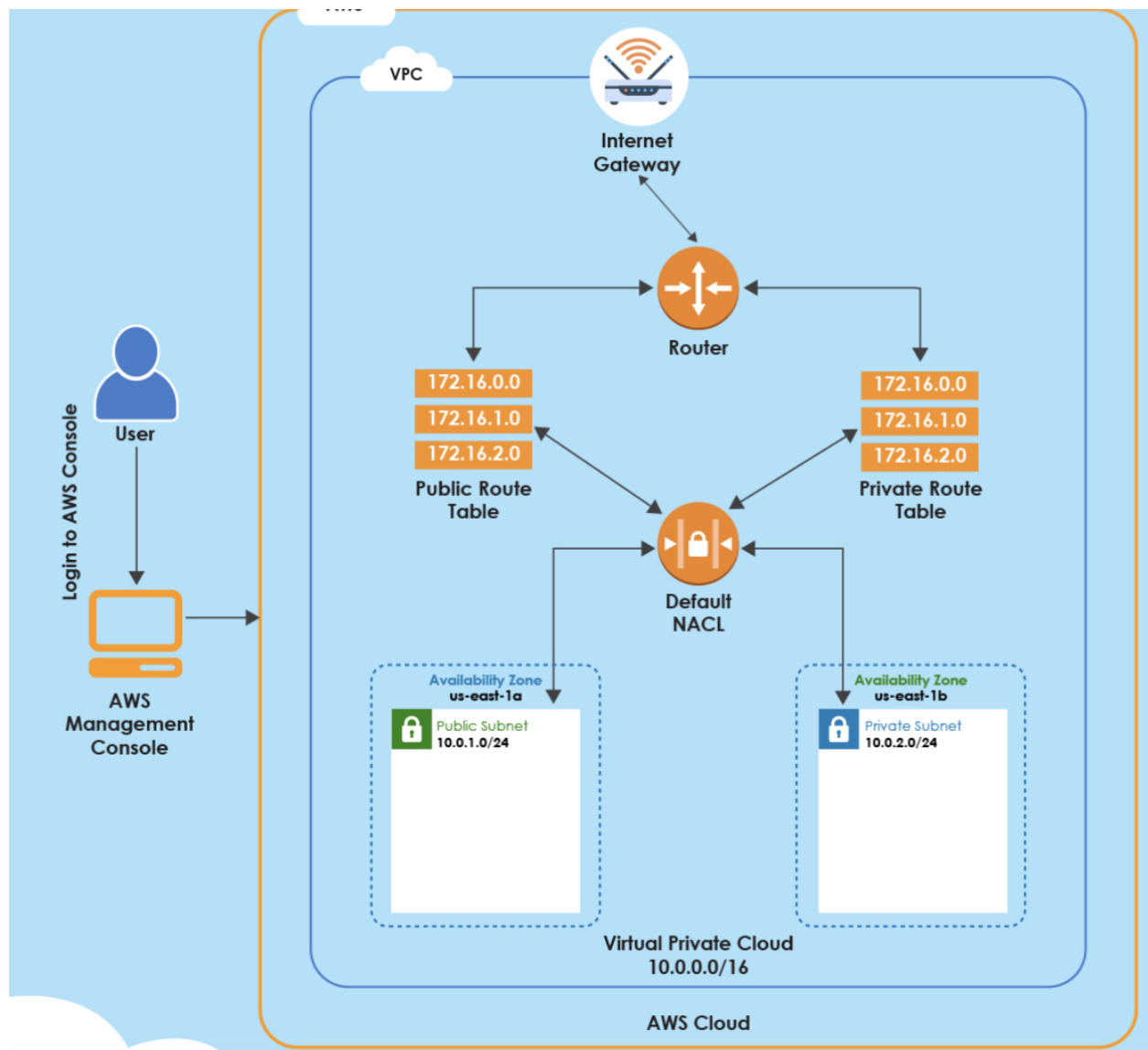
What is VPC?

- It stands for Virtual Private Cloud. It is a custom-defined virtual network within the AWS cloud where users can logically create their personal network, designing and implementing a separate and independent network that would operate in AWS Cloud.

Objective for this project:

- We will be building both public and private subnets from scratch.

Architecture Diagram:



Step 1: Creating New VPC

- We start with creating a new VPC in which the IPv4 CIDR Block is defined as 10.0.0.0/16

VPC settings

Name tag - *optional*

Creates a tag with a key of 'Name' and a value that you specify.

IPv4 CIDR block [Info](#)

IPv6 CIDR block [Info](#)

- ☒ No IPv6 CIDR block
- ☐ Amazon-provided IPv6 CIDR block
- ☐ IPv6 CIDR owned by me

Tenancy [Info](#)

<input type="checkbox"/>	newVPC	vpc-03a453da58bf64c22	✓ Available	10.0.0.0/16
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Step 2: Creating Subnets

Once we create the VPC, we then create one public subnet and a private subnet in us-east-1a and us-east-1b respectively.

Here, we start with creating the public subnet

Subnet 1 of 1

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

MyPublicSubnet

The name can be up to 256 characters long.

Availability Zone [Info](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

No preference

IPv4 CIDR block [Info](#)

10.0.1.0/24

▼ **Tags - optional**

Key

Name

Value - optional

MyPublicSubnet

Remove

Add new tag

You can add 49 more tags.

Remove

☐ MyPublicSubnet subnet-03de27275d2b2c081 Available vpc-03a453da58bf64c22 | ne... 10.0.1.0/24

And secondly, the private subnet.

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

MyPrivateSubnet

The name can be up to 256 characters long.

Availability Zone [Info](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

US East (N. Virginia) / us-east-1b

IPv4 CIDR block [Info](#)

10.0.2.0/24

▼ **Tags - optional**

Key

Name

Value - optional

MyPrivateSubnet

Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

☐ MyPrivateSubnet subnet-0a698bb096d516c43 Available vpc-03a453da58bf64c22 | ne... 10.0.2.0/24

Step 3: Create and Configure Internet Gateway




We then create an Internet Gateway that helps connect the VPC to the internet.

Name tag

Creates a tag with a key of 'Name' and a value that you specify.

MyInternetGateway

We then attach the Internet Gateway to the VPC.

Internet gateway ID	State	VPC ID	Owner
 igw-0c0937df14f6ebd8a	 Attached	vpc-03a453da58bf64c22 newVPC	 624830504698

Step 4: Create Route Tables

Once we are done with creating the Internet Gateway, we then create and configure route tables, both public and private. The objective is to associate the public subnet with the public router and the private subnet with the private router. We then connect the public router to the Internet Gateway.

We start with creating both public and private route tables

<input type="checkbox"/>	PublicRouteTable	rtb-0a7cb362d8adc1bca	-	-	No
<input type="checkbox"/>	PrivateRouteTable	rtb-079a5a2dd067cf798	-	-	No

We then attach the route tables to their respective subnets.

PublicRouteTable	rtb-0a7cb362d8adc1bca	subnet-03de27275d2b2...	-
PrivateRouteTable	rtb-079a5a2dd067cf798	subnet-0a698bb096d51...	-

And lastly, we connect the public router to the Internet Gateway.

0.0.0.0/0	igw-0c0937df14f6ebd8a	 Active	No
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