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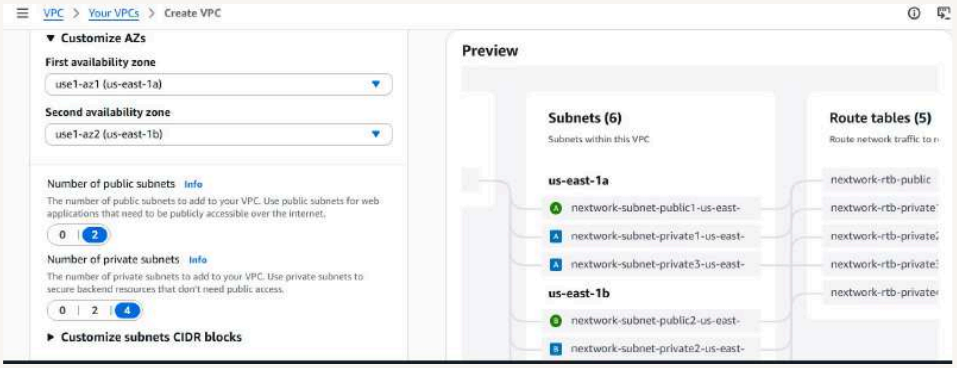
Launching VPC Resources

GA Mohamed Galole



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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is virtual private cloud and it is useful because service that lets you create your own isolated network environment in AWS

How I used Amazon VPC in this project

I used Amazon VPC to Launch an EC2 instance in a public subnet so it can access the internet directly. Launch an EC2 instance in a private subnet to keep it isolated from direct internet access. create VPCs, making network setup fast and organized.

One thing I didn't expect in this project was...

One thing I didn't expect in this project was how quickly the Amazon VPC wizard could create fully functional VPCs with public and private subnets, route tables, and gateways all set up automatically it made the network setup much faster and easier.

This project took me...

This project took me one and half hours.

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Setting Up Direct VM Access

Directly accessing a virtual machine means means connecting to the virtual server itself just like logging in to a physical computer so you can control it, configure it, or run commands inside it.

SSH is a key method for directly accessing a VM

SSH traffic means It’s a network protocol used to securely connect to another computer over the internet or a network especially remote servers like AWS EC2 instances.

To enable direct access, I set up key pairs

Key pairs are set of security credentials used to log in securely to your EC2 instances.

A private key's file format means the type of file and encoding method used to store the private key. My private key's file format was (.pem)

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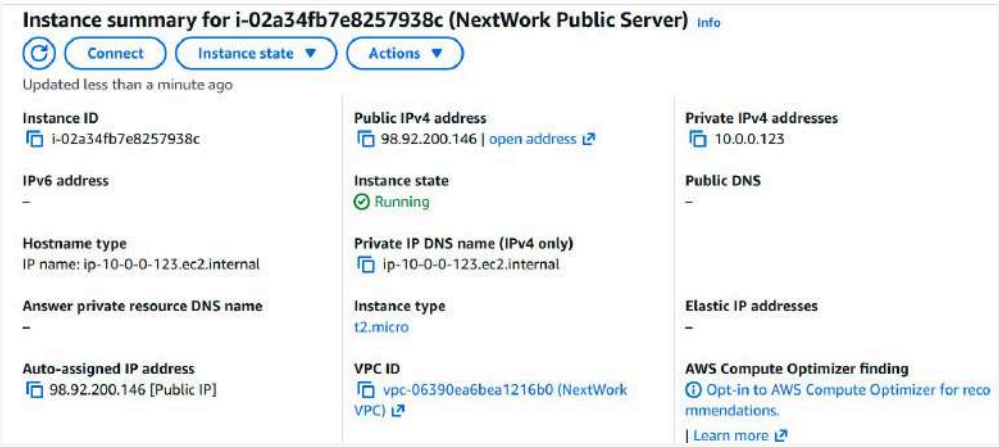
Launching a public server

Start your response with 'I had to change my EC2 instance's networking settings by selecting my own VPC I created, security group and subnet, I also enabled IP auto-assign.



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Launching a private server

My private server has its own dedicated security group because it should only allow traffic from trusted internal sources (like my public server), not directly from the internet. This separation improves security by isolating internal resources.

My private server's security group's source is NextWork Public Security Group which means only resources that are part of the NextWork Public Security Group can communicate with my instance

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Speeding up VPC creation

I used an alternative way to set up an Amazon VPC! This time, I used the setup of VPC and more different from the first one VPC Only.

A VPC resource map in AWS is a visual diagram that shows all the network components inside your Virtual Private Cloud (VPC) and how they’re connected

My new VPC has a CIDR block of 10.0.0.0/16 It is possible for my new VPC to have the same IPv4 CIDR block as my existing VPC because VPCs are isolated networks by default each one exists independently inside AWS.

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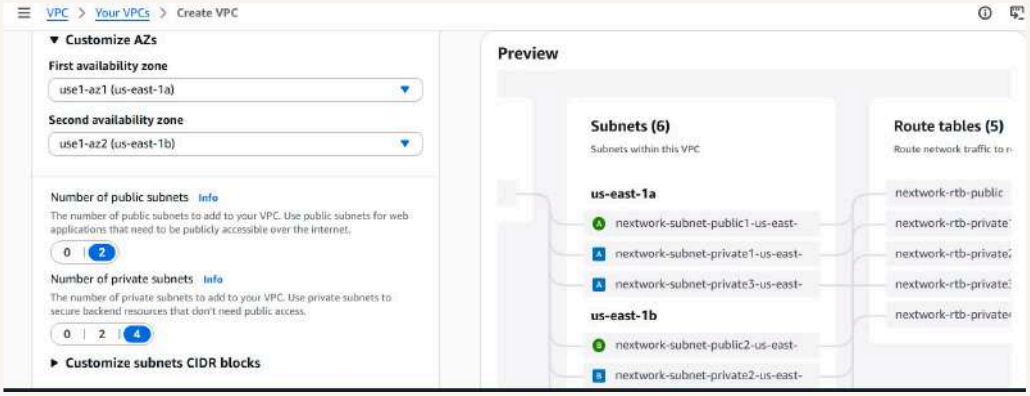
Speeding up VPC creation

Tips for using the VPC resource map

Up to 200 subnets per VPC (by default). When determining the number of public subnets in my VPC, I only had two options: one in each of two Availability Zones. This was because AWS limits the VPC wizard to two AZs for simplicity and best practice

The set up page also offered to create NAT gateways, which are service that allows resources in a private subnet (like private EC2 instances in AWS) to access the internet without exposing them directly to incoming internet traffic



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