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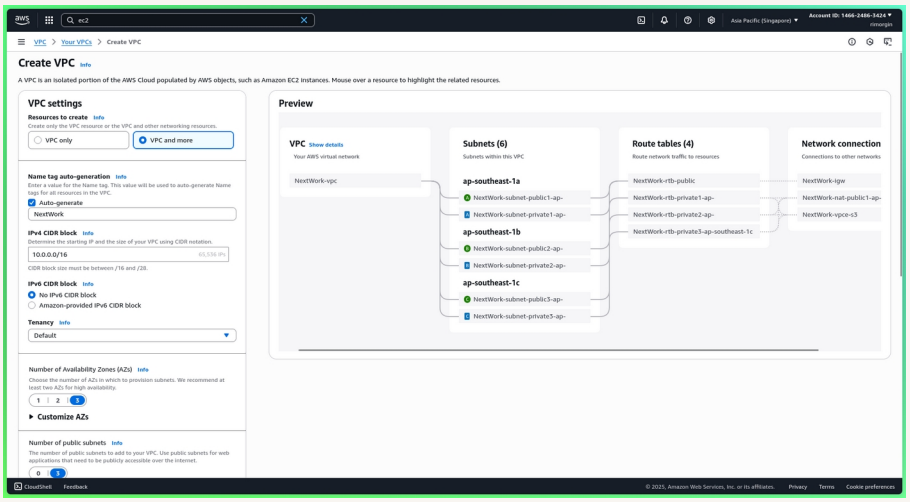
Launching VPC Resources

Sean Calderon



Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is an isolated network in the cloud and it is useful because it allows me to create a my own infrastructure network within seconds and a few clicks.

How I used Amazon VPC in this project

I used Amazon VPC to assign my two EC2 instances to have different environments of public and private.

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

One thing I didn't expect in this project was creating a VPC can be taken with a few clicks.

This project took me...

This project took me 45 minutes. It's rewarding to see my setup of public and private is fully working when I tested it through pinging the public server and ssh to it. Since public server is allowed to ssh on private server, I tested it and worked.

Setting Up Direct VM Access

Directly accessing a virtual machine means I don't have to login to my AWS management console, go to the instances tab and connect to that instance. By setting up key pairs eliminates these extra steps.

SSH is a key method for directly accessing a VM

SSH means secure shell and is a way for accessing devices remotely and securely by encrypting traffic instead of plaintext. SSH is recommended for remote access instead of telnet, which is plaintext and no encryption for confidentiality.

To enable direct access, I set up key pairs

Key pairs are a way for engineers to directly access a resource as an authentication.

A private key's file format means a presentation of data for a specific use. My private key's file format was .pem

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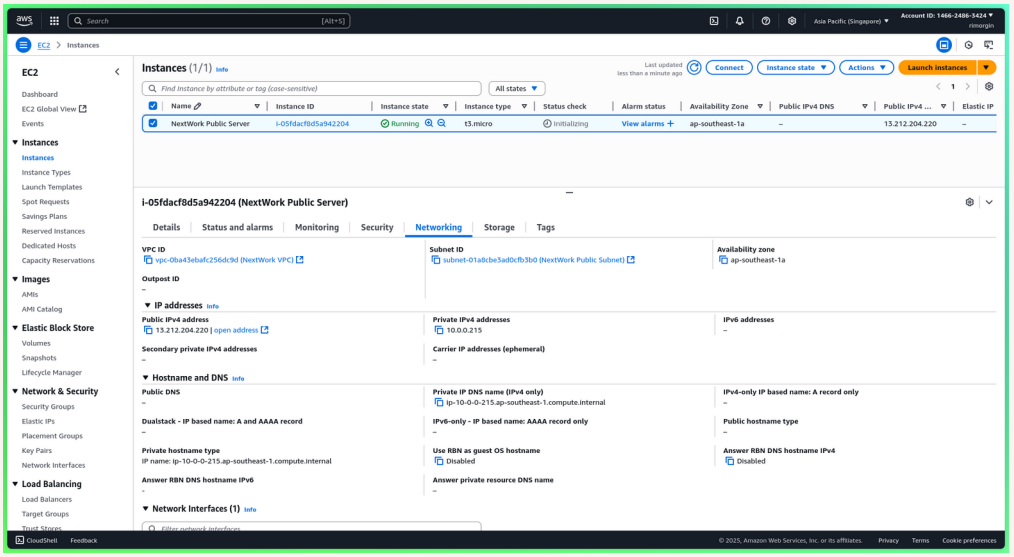
Launching a public server

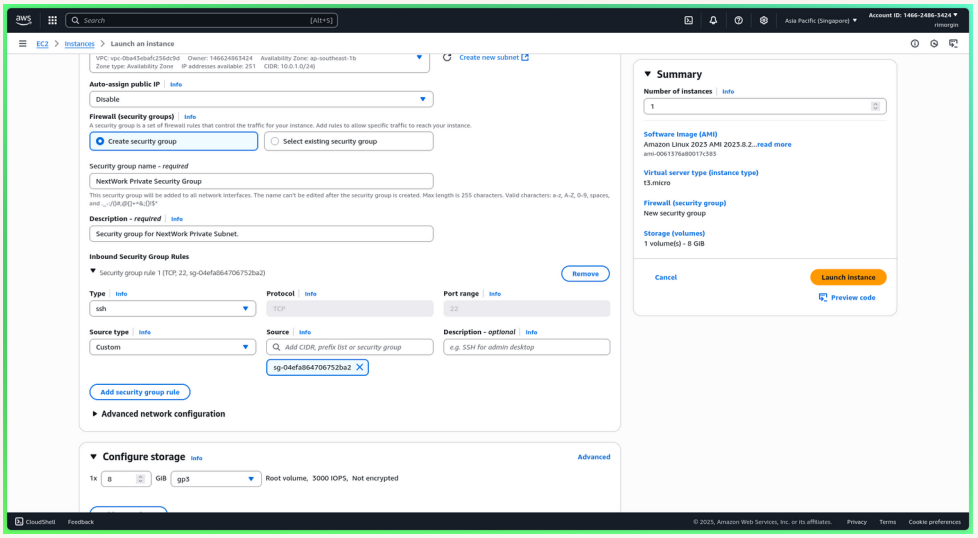
I had to change my EC2 instance's networking settings by clicking "EDIT" on networking settings pane instance creator. I tweaked the networking settings from default VPC to my custom VPC and other properies such as public subnet and custom SG.



Launching a private server

My private server has its own dedicated security group because assigning the same would pose security risks as all traffic is allowed on public server.

My private server's security group's source is the security group assigned to public server which means instances on that security group can access the private server.

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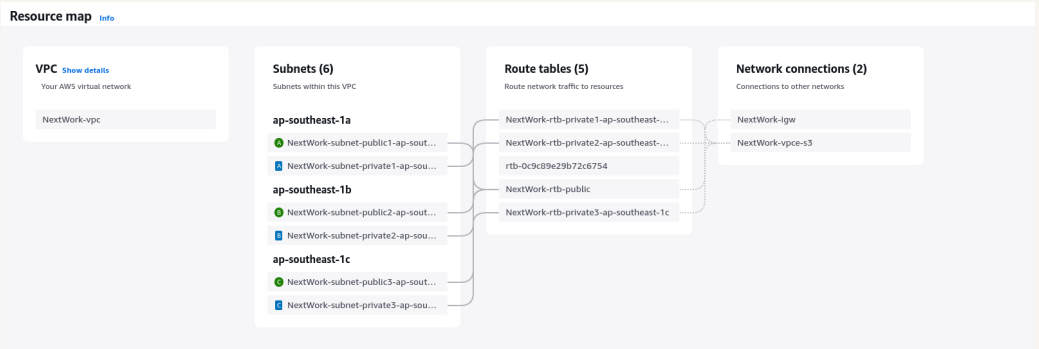
Speeding up VPC creation

I used an alternative way to set up an Amazon VPC! This time, I didn't create VPC only but in a wider scope. This means subnets are automatically created but lets you configure CIDR blocks if you want. Other things are created too are Internet Gateway, Route Table, and NACL

A VPC resource map is a visual representation of structured connections inside VPC.

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 originally isolated networks in the cloud even if they are on the same region.

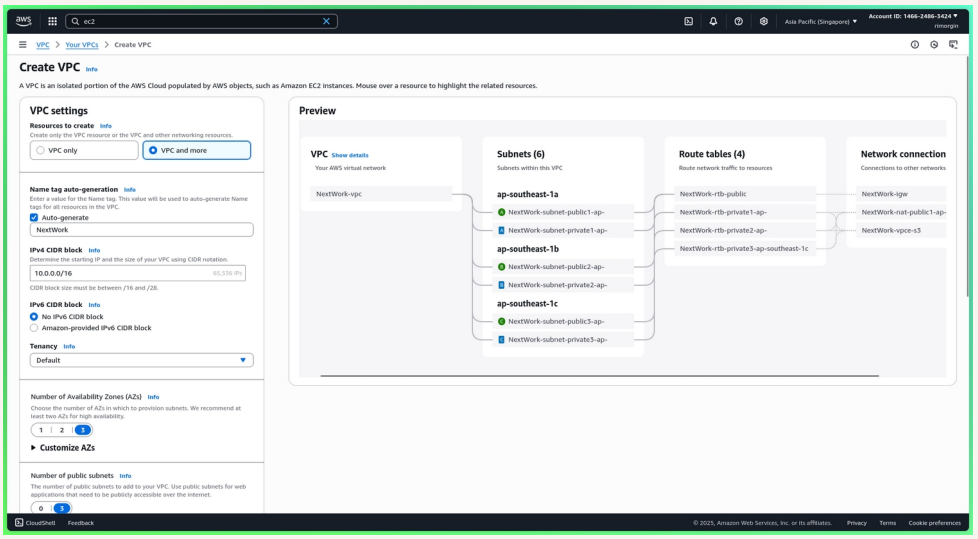


Speeding up VPC creation

Tips for using the VPC resource map

When determining the number of public subnets in my VPC, I only had two options. This was because AWS defaults to recommended security practices of high redundancy and availability.

The set up page also offered to create NAT gateways, which are a way for private subnets reach the internet by translating private addresses to public addresses. However, traffic from the internet going inbound through NAT gateway is not allowed.



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