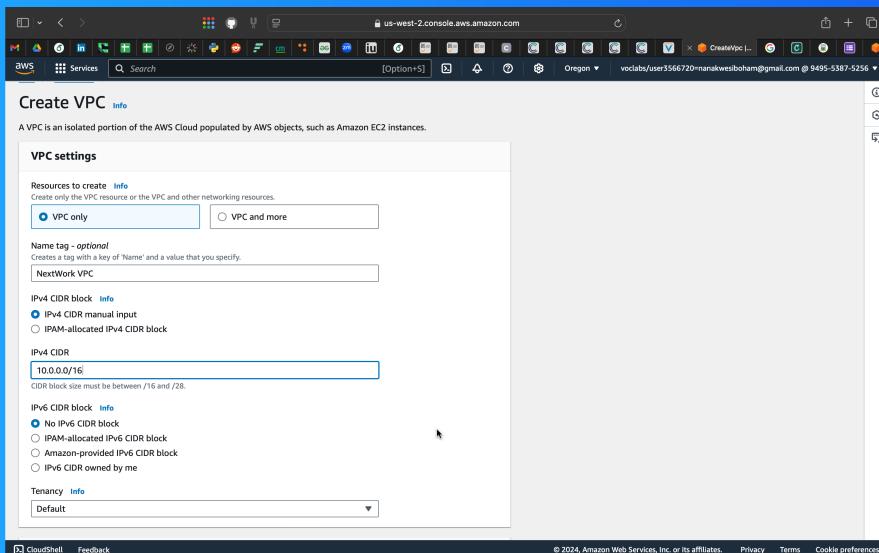




Build a Virtual Private Cloud



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Introducing Today's Project!

What is Amazon VPC?

Amazon Virtual Private Cloud (VPC) is a service that allows users to create a private, isolated network within the AWS cloud. It is useful because it provides enhanced security and isolation and integrates seamlessly with other AWS services.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create a secure network for my application. I set up a VPC with public and private subnets, attached an internet gateway for internet access, and deployed web servers in the public subnet.

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

One thing I didn't expect in this project was the complexity of configuring the route tables and security groups to ensure proper traffic flow between the public and private subnets.

This project took me...

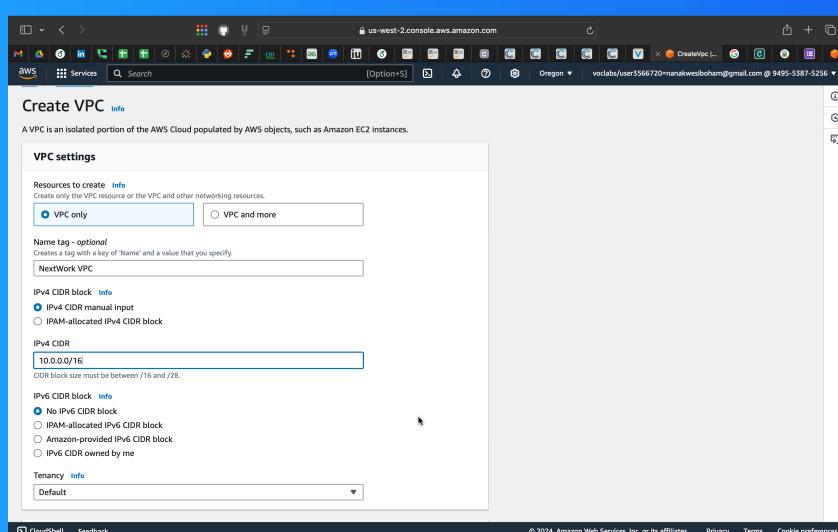
The project took me approximately five hours to complete. This included time for planning the network architecture, configuring the VPC and subnets, deploying resources, and testing the setup to ensure everything was functioning as intended.

Virtual Private Clouds (VPCs)

A Virtual Private Cloud (VPC) is a private, isolated section of a cloud provider's network where you can deploy and manage resources, such as virtual machines and databases.

There was already been a default VPC in my account since my AWS account was created. This is because the default VPC simplifies the process of launching new resources in AWS by providing a pre-configured network environment.

To set up my VPC, I had to define an IPv4 CIDR, which means specifying a range of IP addresses in Classless Inter-Domain Routing (CIDR) notation. This consists of an IP address followed by a slash and a number, e.g. 10.0.0.0/16.

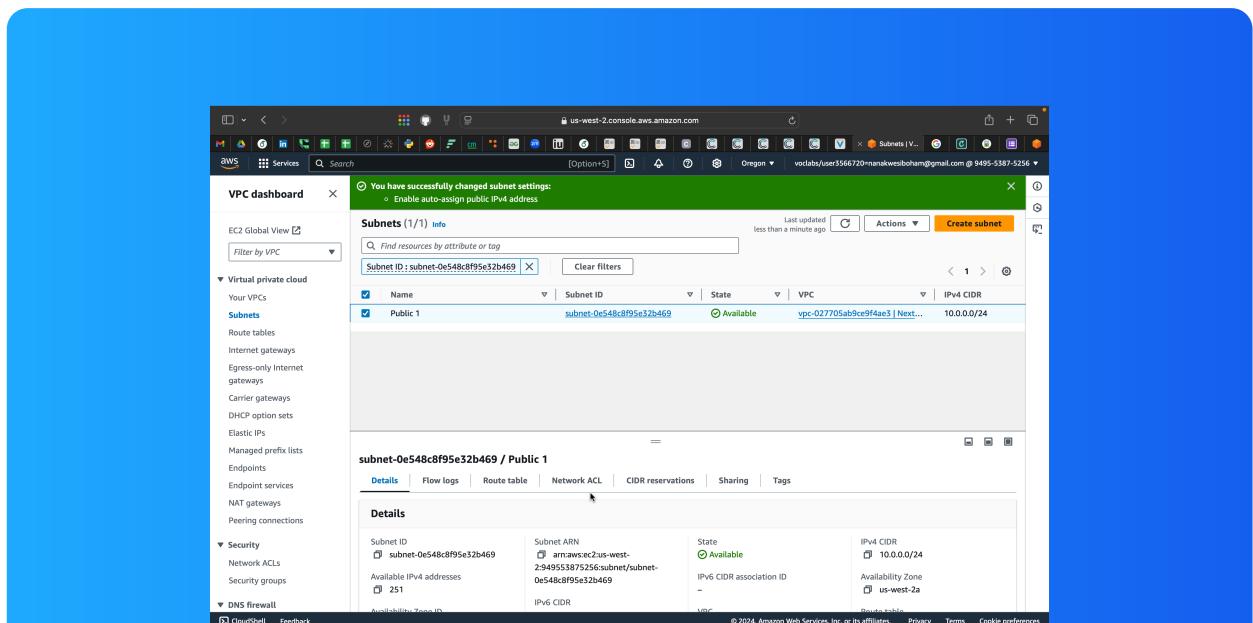


Subnets

Subnets are smaller segments of a larger network created to improve organisational performance and security. In a VPC, they divide the CIDR block into distinct IP address ranges, allowing for public or private configurations.

There are already subnets existing in my account, one for every availability zone in the default VPC. These default subnets simplify resource deployment by providing pre-configured settings, allowing me to quickly launch instances.

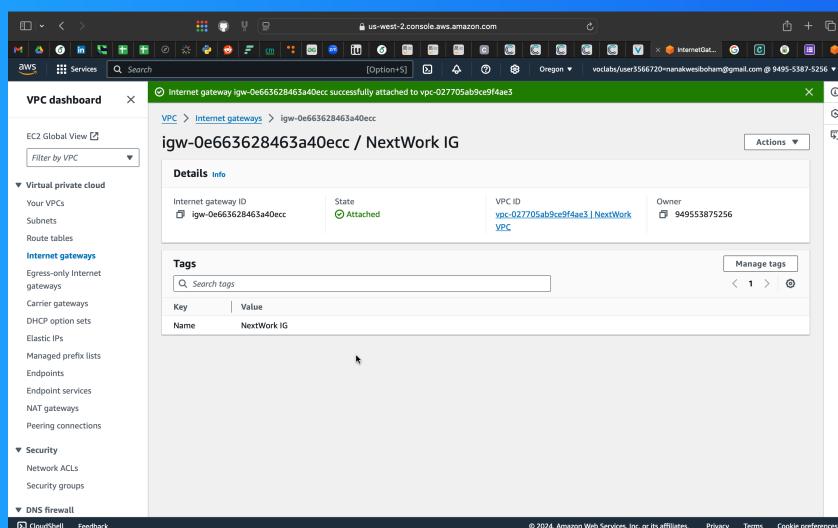
I named my subnet Public 1, but that doesn't automatically make my subnet a public subnet. For a subnet to be considered public, it has to have a route table associated with an internet gateway and resources within it must have public IP addresses.



Internet gateways

Internet gateways are VPC components that enable communication between resources in a VPC and the Internet. They allow outbound traffic from the VPC and facilitate inbound traffic to public subnets, providing internet connectivity to instances.

Attaching an internet gateway to a VPC means that the VPC can communicate with the internet, enabling resources within the VPC to send and receive traffic from external networks.





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