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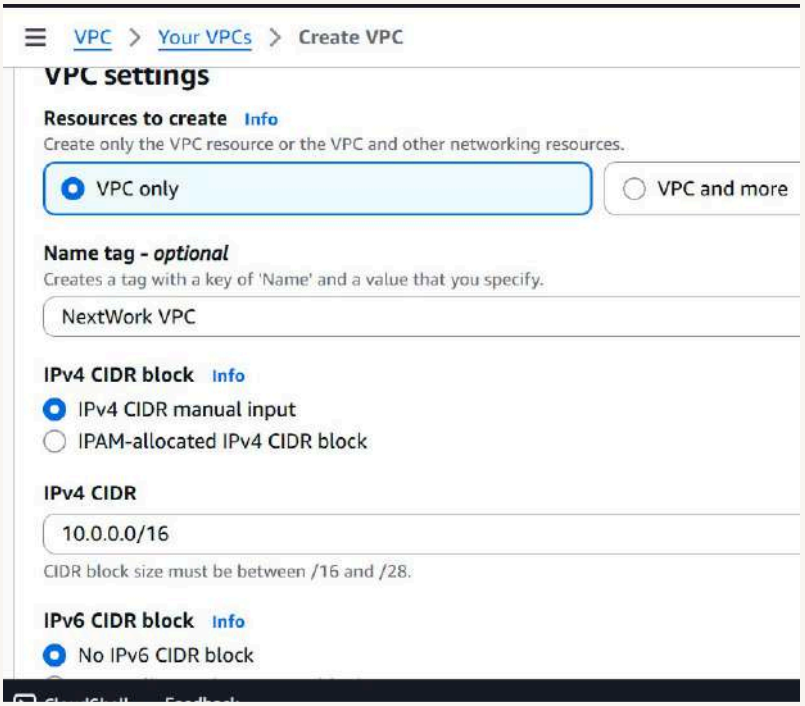
Build a Virtual Private Cloud (VPC)

GA Mohamed Galole



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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is a secure, isolated network environment in AWS where you can launch and manage your cloud resources. It’s useful because it gives you full control over your network settings including IP ranges, subnets, routing and security.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create a secure network environment for deploying cloud resources. I set up public subnet, configured an Internet Gateway for controlled access.

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

One thing I didn't expect in this project was how detailed the VPC configuration process can be especially when managing subnets, and gateways to ensure proper connectivity. It showed me how even a small misconfiguration can break network access.

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This project took me...

This project took me one and a half hours to complete.

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Virtual Private Clouds (VPCs)

VPC (Virtual Private Cloud) is basically your own private network inside AWS just like having your own data center, but virtual. It’s where your EC2 instances, databases, and other AWS services live and communicate securely.

There was already a default VPC in my account ever since my AWS account was created. Because When you created your AWS account, AWS automatically sets up a default VPC for you! This default VPC is why you could launch resources (e.g. EC2 instances)

To set up my VPC, I had to define an IPv4 CIDR block, which is a way to assign a whole block of IP addresses, kind of like creating a zone/area in a city.

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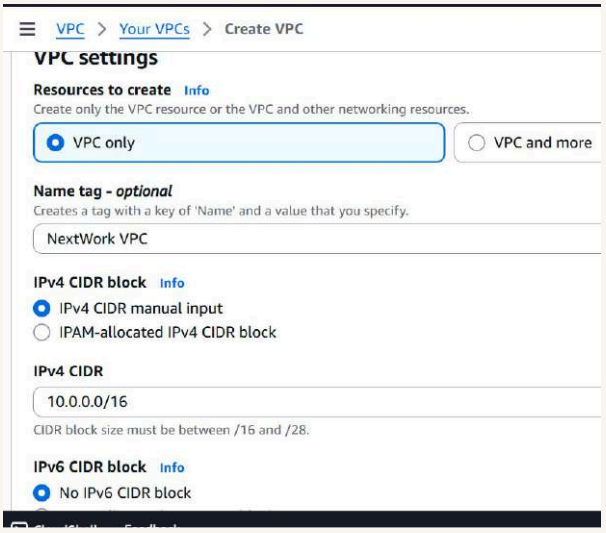

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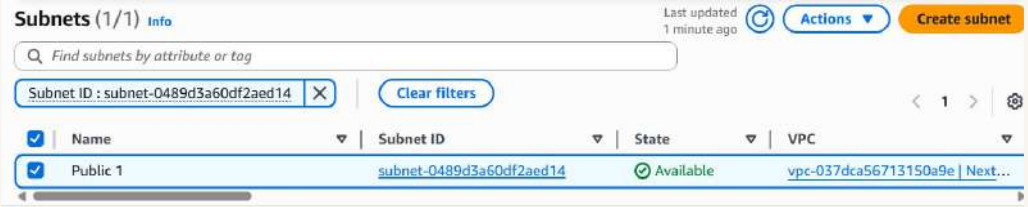
Subnets

Subnets are smaller network segments within an AWS VPC that help organize and isolate resources. They can be public (connected to the internet via an Internet Gateway) or private (no direct internet access, for databases or internal systems).

Once I created my subnet, I enabled auto-assign public IPv4 addresses. This setting makes sure that any EC2 instance launched in that subnet will instantly get a public IP address so that you won't have to create one manually.

The difference between public and private subnets are public subnet is connected to the internet while private subnet does not have direct internet access. For a subnet to be considered public, it has to be connected to an internet gateway.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Last updated 1 minute ago
Actions
Create subnet
Find subnets by attribute or tag
Subnet ID : subnet-0489d3a60df2aed14
Clear filters
1
Name
Subnet ID
State
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Public 1
subnet-0489d3a60df2aed14
Available
vpc-037dca56713150a9e | Next...

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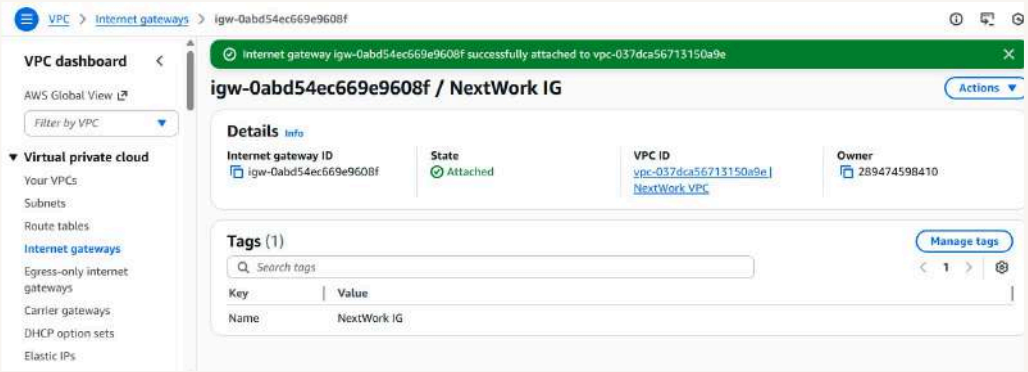
Internet gateways

Internet gateways are key to making applications available on the internet. By attaching an internet gateway, your instances can access the internet and be accessible to external users.

Attaching an internet gateway to a VPC means resources in my VPC can now access the internet. The EC2 instances with public IP addresses also become accessible to users, so my application hosted on those servers become public too.



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