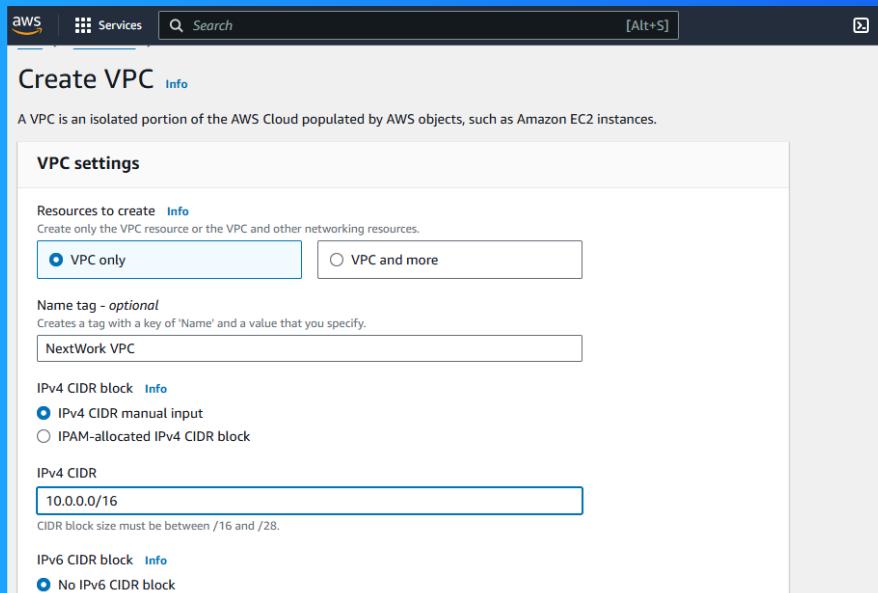




Build a Virtual Private Cloud

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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a service that allows you to create a private, isolated network within AWS where you can launch and manage resources like EC2 instances securely. This setup is useful because it enhances security and customization.

How I used Amazon VPC in this project

Configured VPC settings, including subnets and NAT gateways, for optimal network setup

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

Everything was quite plain and easy to grasp

This project took me...

14minutes

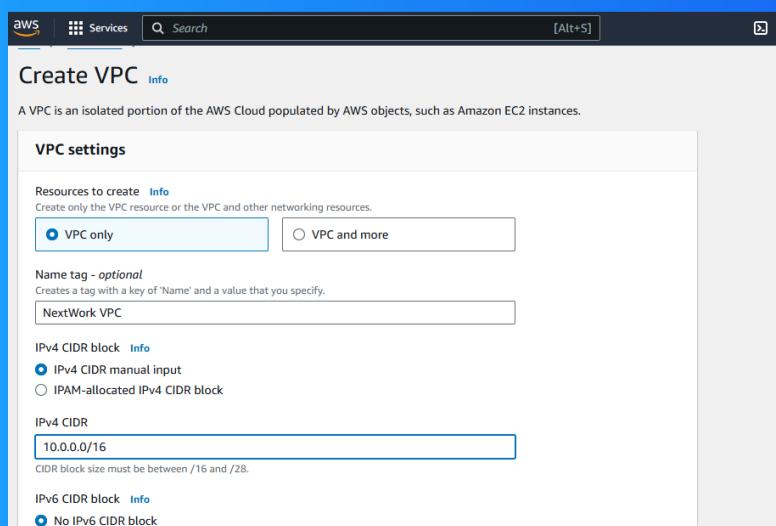


Virtual Private Clouds (VPCs)

VPCs (Virtual Private Clouds) are isolated cloud environments within AWS that allow users to define and control their own virtual network infrastructure, including IP address ranges, subnets, route tables, and security settings.

There was already a default VPC in my account ever since my AWS account was created. This is because once an ec2 instance is created it is assigned the default vpc so user won't need to do it themselves

To set up my VPC, I had to define an IPv4 CIDR, which means I was allocating IP addresses and routing IP packets thanks to IPv4 CIDR block. It specifies a range of IP addresses





Subnets

Subnets are smaller, segmented portions of a larger network (like a VPC) that help organize and manage IP addresses, improve security, and optimize traffic flow

There are already subnets existing in my account, one for every Availability Zone in the selected Region

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 be associated with a route table that includes a route to an internet gateway

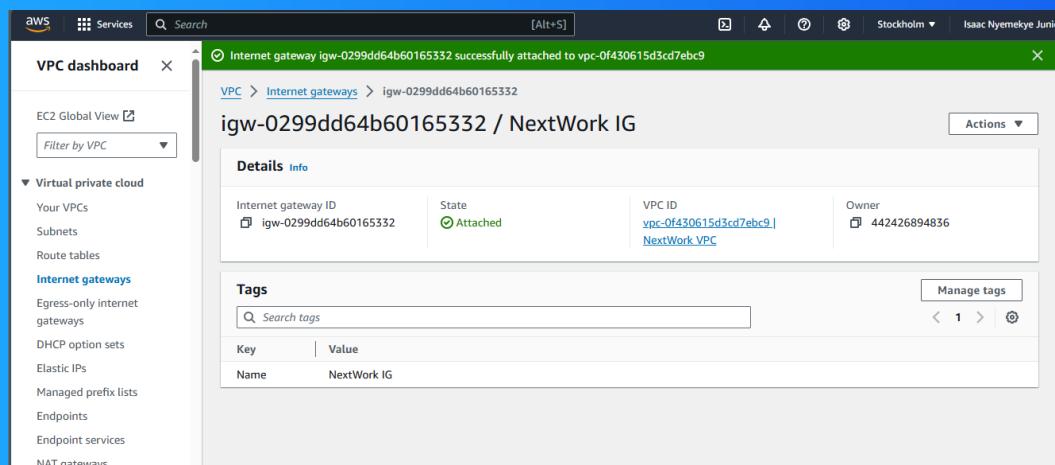
The screenshot shows the AWS VPC dashboard with the following details for the subnet:

Details	
Subnet ID	subnet-05ff48e37ea2796e0
Subnet ARN	arn:aws:ec2:eu-north-1:442426894836:subnet/subnet-05ff48e37ea2796e0
State	Available
IPv4 CIDR	10.0.0.0/24
IPv6 CIDR association ID	-
Availability Zone ID	eun1-az1
IPV6 CIDR	-
Network border group	eu-north-1
VPC	vpc-0f430615d3cd7ebc9 NextWork VPC
Network ACL	-
Default subnet	No
Auto-assign public IPv4 address	No
Customer-owned IPv4 pool	-
Outpost ID	-
Auto-assign IPv6 address	No
IPv4 CIDR reservations	-
Customer-owned IPv4 pool	-
IPv6-only	No
Hostname type	IP name
Resource name DNS A record	Disabled
Owner	-

Internet gateways

Internet gateways are horizontally scaled, redundant, and highly available VPC components that allow communication between instances in a VPC and the internet

Attaching an internet gateway to a VPC means that the VPC can communicate with the internet, enabling instances in public subnets to send and receive traffic to and from external sources





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