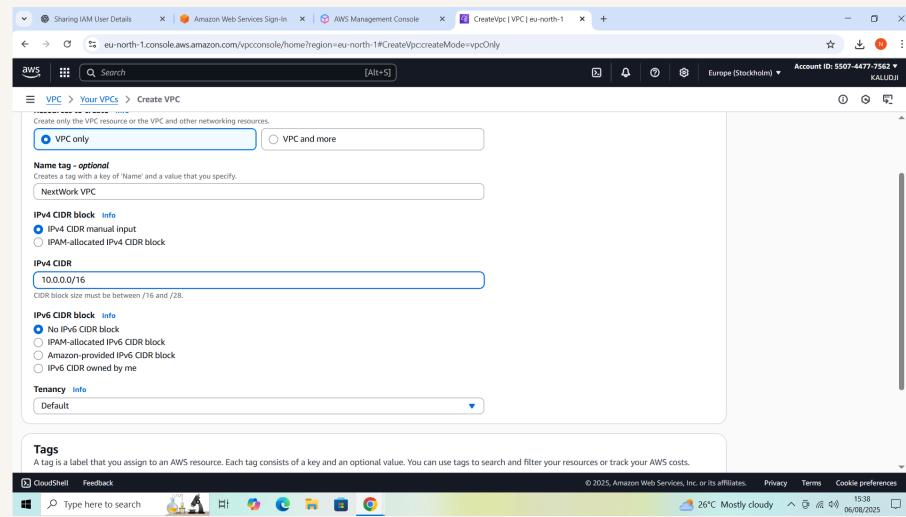




Build a Virtual Private Cloud (VPC)



Nchindo Boris





Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is a private network within the AWS Cloud. It gives you complete control over your cloud networking environment including IP address ranges, subnets, routing, and security settings.

How I used Amazon VPC in this project

I used Amazon VPC in today's project to create subnets and internet gateways

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

One thing I didn't expect in this project is that it would be very easy to complete

This project took me...

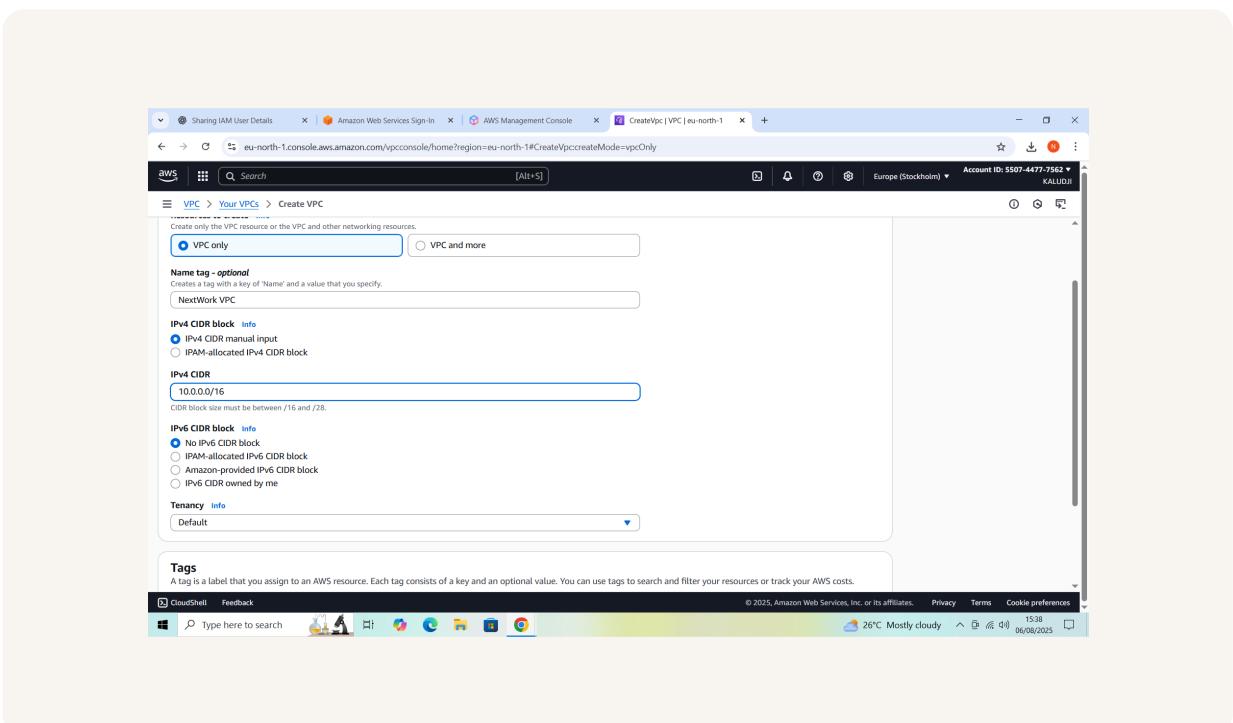
This project took me 1hr to complete

Virtual Private Clouds (VPCs)

VPCs are isolated network environments inside the AWS cloud where you can launch and manage AWS resources like EC2 instances, databases, and more.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS automatically sets up a default VPC for me! This default VPC is why I could launch resources (e.g. EC2 instances) and connect services together

To set up my VPC, I had to define an IPv4 CIDR block, which is 10.0.0.0/16. an IPv4 CIDR block (which stands for Classless Inter-Domain Routing) is a way to assign a whole block of IP addresses, kind of like creating a zone/area in a city.





Subnets

Subnets are smaller segment of a VPC. There are already subnets existing in my account, one for every Availability Zone of a Region

Once I created my subnet, I enabled auto-assign public IPv4 address. This setting makes sure the instance has a public IP address so that you won't have to create one manually

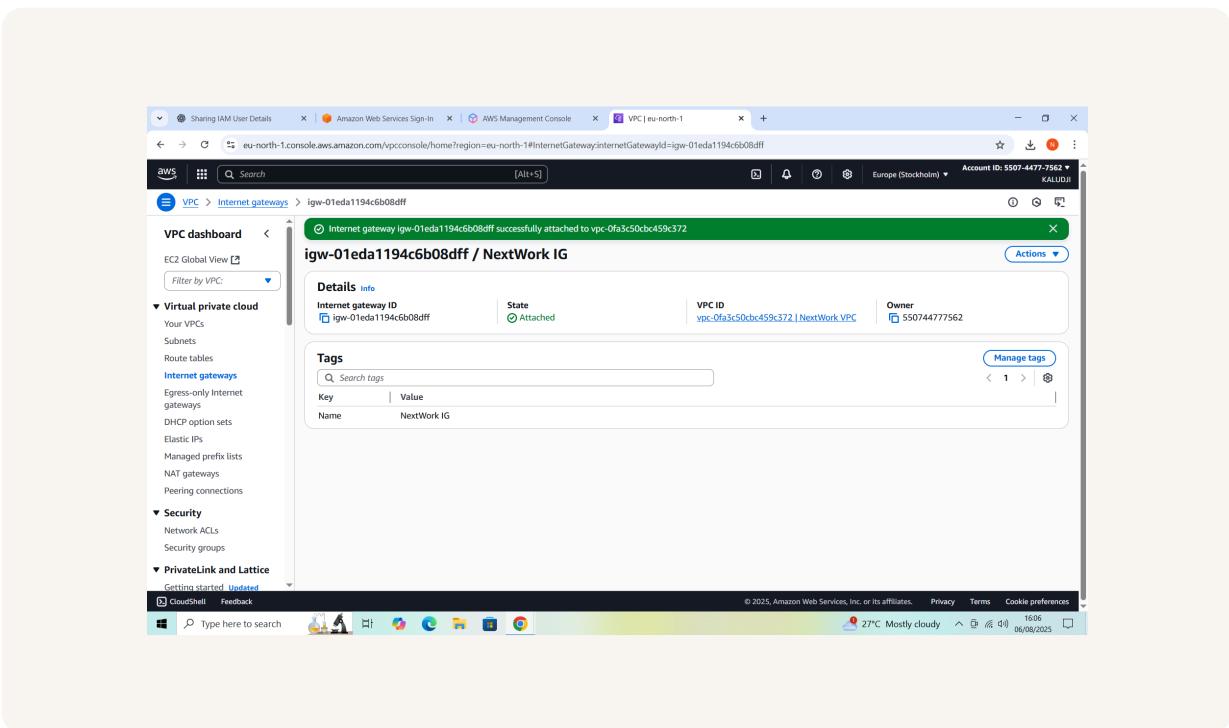
The difference between public and private subnets is that private subnets do not have direct internet access while public subnets do not. For a subnet to be considered public, it has to have direct internet access.

The screenshot shows the AWS Management Console interface for the VPC service. The top navigation bar includes tabs for IAM User Details, AWS Sign-In, AWS Management Console, and the current VPC section. The main content area is titled 'Subnets' and shows a table with one item: 'Public 1'. The table columns include Subnet ID, Name, Subnet ID, State, VPC, Block Public Access, and IPv4 CIDR. The 'Details' tab is selected for the 'Public 1' subnet, displaying its ARN, IPv4 CIDR (10.0.0.0/24), Availability Zone (eu-north-1a), and associated VPC (vpc-0fa3c50cb459c572). A success message at the top indicates that auto-assign public IPv4 address was successfully enabled. The left sidebar lists other VPC components like Subnets, Route tables, Internet gateways, and Security groups.

Internet gateways

Internet Gateways are network components that allows resources in my VPC (like EC2 instances in a public subnet) to connect to the internet, and allows the internet to connect back to them.

Attaching an internet gateway to a VPC means resources in my VPC can now access the internet. If I miss this step, resources in my VPC would not have access the internet.





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