



Build a Virtual Private Cloud (VPC)

K

Kehinde Abiuwa

The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The 'VPC settings' step is active. Key configuration options visible include:

- Resources to create:** A radio button group where 'VPC only' is selected.
- Name tag - optional:** A text input field containing 'NextWork VPC'.
- IPv4 CIDR block:** A text input field containing '10.0.0.0/16'.
- IPv6 CIDR block:** A radio button group where 'No IPv6 CIDR block' is selected.
- Tenancy:** A dropdown menu set to 'Default'.

The top navigation bar shows the AWS logo, search bar, and region selection 'Europe (Stockholm)'. The bottom of the screenshot has a light gray gradient overlay.

Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a virtual network that you create in AWS. It allows you to launch AWS resources (like EC2 instances, databases, etc.) into a logically isolated section of the AWS cloud. Amazon VPC is useful because it lets you securely launch and manage AWS resources in a customizable, isolated virtual network that you fully control

How I used Amazon VPC in this project

I created my own vpc and and created a subnet in the vpc, and then also created an internet gateway and connected it to my vpc so that resources in the vpc are accesible via the internet

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

Nothing really

This project took me...

i spent 12mins

Virtual Private Clouds (VPCs)

A VPC (Virtual Private Cloud) in AWS is a logically isolated network in the AWS cloud where you can launch and manage AWS resources like EC2 instances, databases, and other services. Think of it like Your own private data center in the cloud — you control the network setup, including IP address ranges, Subnets, Route tables, Internet gateways, Security rules

There was already a default VPC in my account ever since my AWS account was created. This is because when i setup my account, aws setup a default vpc for me so I would be able to do things like launch an ec2 instance

To set up my VPC, I had to define an IPv4 CIDR block, which is a range of ip addresses for my vpc



The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The top navigation bar includes the AWS logo, search bar, and tabs for 'VPC', 'Your VPCs', and 'Create VPC'. The status bar indicates 'Europe (Stockholm)'. The main section is titled 'VPC settings' and contains the following fields:

- Resources to create:** A radio button group with 'VPC only' selected (checked), and 'VPC and more' is also available.
- Name tag - optional:** A text input field containing 'NextWork VPC'.
- IPv4 CIDR block:** A radio button group with 'IPv4 CIDR manual input' selected (checked). Other options include 'IPAM-allocated IPv4 CIDR block'. A text input field shows '10.0.0.0/16'.
- Tenancy:** A dropdown menu showing 'Default'.



Subnets

Subnets are used to group resources with similar access rules and restrictions. Some subnets might be public areas that all resources can access (public subnets) while others are private areas with limited access (private subnets). There are already subnets existing in my account, one for every availability zone in my region

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

The difference between public and private subnets is that public subnets have access to the internet which means they can communicate with external networks while private subnets are not connected to the internet and don't need to be publicly accessible. For a subnet to be considered public, it has to be connected to an internet gateway



The screenshot shows the AWS VPC Subnets page. A green success message at the top states: "You have successfully changed subnet settings: Enable auto-assign public IPv4 address". The main table lists one subnet:

Name	Subnet ID	State	VPC
Public 1	subnet-0625fcc6d909a1863	Available	vpc-0979a873bb068089b Nex...

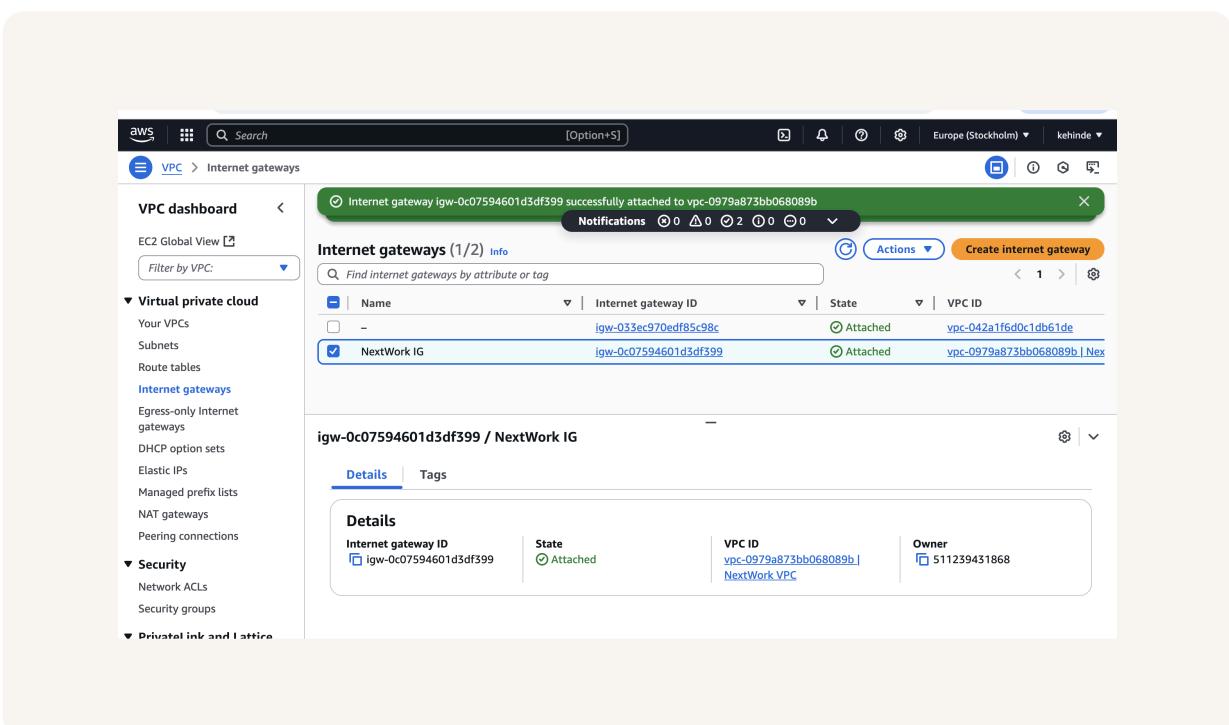
The subnet details are as follows:

Details			
Subnet ID	subnet-0625fcc6d909a1863	Subnet ARN	arnaws:ec2:eu-north-1:511239431868:subnet/subnet-0625fcc6d909a1863
IPv4 CIDR	10.0.0.0/24	State	Available
		IPv6 CIDR	-
		Available IPv4 addresses	-
		Block Public Access	Off
		IPv6 CIDR association ID	-

Internet gateways

Internet gateways are like building bridges (internet gateways) that links our VPC to the outside world (the internet), so our resources can communicate beyond your private space. Internet gateways are key to making applications available on the internet. By attaching an internet gateway, our instances can access the internet and be accessible to external users

Attaching an internet gateway to a VPC means resources in your VPC can now access the internet. If I missed this step, i would not be able to access the internet from any resources in my vpc





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