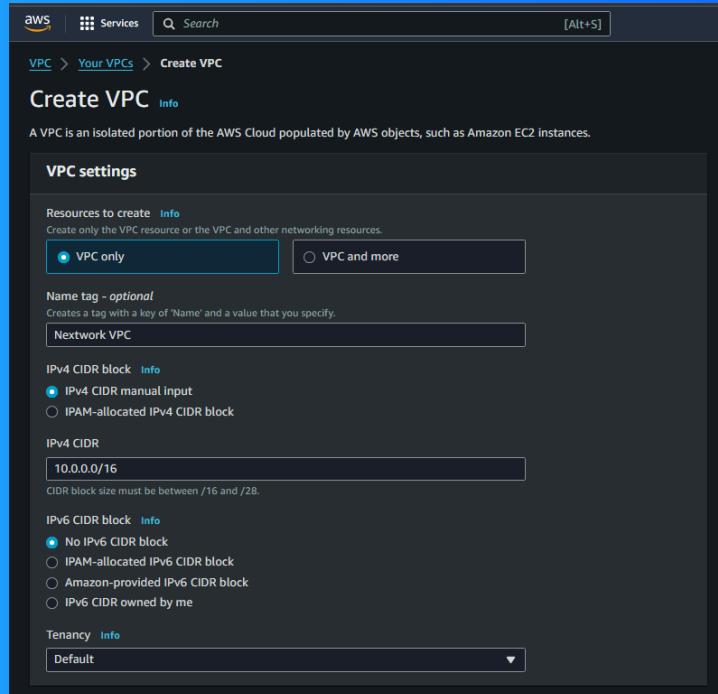




Build a Virtual Private Cloud



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Introducing Today's Project!

What is Amazon VPC?

Amazon Virtual Private Network (VPC) allows you to launch AWS resources within an isolated network, providing more control and security. It allows the user to specify the IP address ranges, configure route tables, etc.

How I used Amazon VPC in this project

It was a great learning experience. The networking concepts were presented in a simple and understandable manner. Overall, it was amazing.

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

One thing that surprised me was how easy it was to set up a private network.

This project took me...

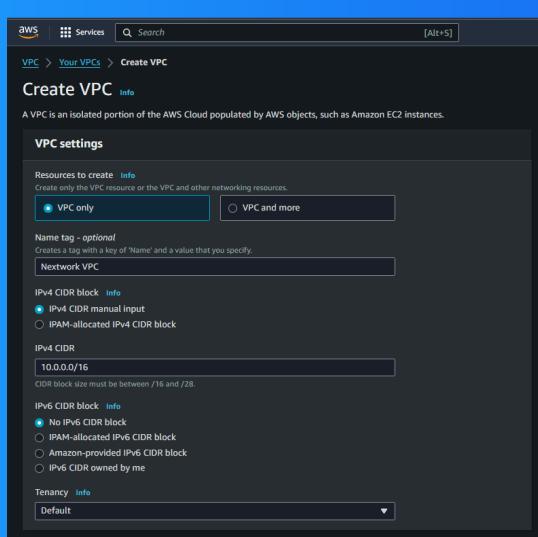
It took nearly an hour, including both the documentation and the implementation.

Virtual Private Clouds (VPCs)

VPCs are private cloud environments within the AWS cloud that allow the user to run applications and store data securely. It ensures that the network is isolated from the networks of other users.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS creates a default VPC for every new user, thus simplifying network setup and allowing resources to be launched easily.

To set up my VPC, I had to define an IPv4 CIDR, which means i had to define a range of IPv4 addresses for the VPC using the Classless Inter-Domain Routing (CIDR) notation. For eg: $10.0.0.0/16 = 10.0.0.0 \rightarrow 10.0.255.255$ [65,536 IP addresses available]



Subnets

Subnets are smaller networks within a larger network (VPC). This allows users within the same subnet to communicate directly and different subnets communicate through routing.

There are already subnets existing in my account, one for every Availability zone in my region. AWS creates these subnets along with the default VPC, ensuring that the resources are distributed among various zones.

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 connected to an internet gateway so that it can have access to the internet.

Subnets (4) Info								
<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR association ID	Available IPv
<input type="checkbox"/>	-	subnet-0122090d45352df0	Available	vpc-080da379486652d5a	172.31.32.0/20	-	-	4091
<input type="checkbox"/>	-	subnet-01b25114f12d07a6	Available	vpc-080da379486652d5a	172.31.0.0/20	-	-	4091
<input type="checkbox"/>	-	subnet-0c8b2d5f6c820d7c	Available	vpc-080da379486652d5a	172.31.16.0/20	-	-	4091
<input type="checkbox"/>	Public 1	subnet-02c43464bae3db	Available	vpc-0f6a167ee06d1c2b4 Next...	10.0.0.0/24	-	-	251

Internet gateways

Internet gateways connects a private network to the internet. It allows data flow between different networks, allowing devices within a private network to access external resources.

Attaching an internet gateway to a VPC means enabling direct communication between the VPC and the internet. This means that the resources within the VPC have access to the internet and are also accessible through it.

Internet gateways (2) <small>Info</small>					
<input type="text"/> Search					
Name	Internet gateway ID	State	VPC ID	Owner	
-	igw-07fc6f61572e08463	Attached	vpc-0800da379486652d3a	767397671451	<input type="button" value="Actions"/>
NextWork IG	igw-07b696eef1142a1824	Attached	vpc-06fa167eeb6d1c2b4 Nextwork VPC	767397671451	<input type="button" value="Actions"/>



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