



Build a Virtual Private Cloud



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Create VPC Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Resources to create Info
Create only the VPC resource or the VPC and other networking resources.

VPC only VPC and more

Name tag - optional
Creates a tag with a key of 'Name' and a value that you specify.
NextWork VPC

IPv4 CIDR block Info
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block
10.0.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block Info
 No IPv6 CIDR block IPAM-allocated IPv6 CIDR block Amazon-provided IPv6 CIDR block IPv6 CIDR owned by me

Tenancy Info
Default

Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a service that lets you create a private, isolated network in AWS. It's useful for controlling resources, IP ranges, subnets, and security, ensuring secure and customizable cloud infrastructure.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to set up a private network for my resources. I defined a CIDR block, created subnets, and attached an internet gateway to ensure secure internet access for instances in public subnets.

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

One thing I didn't expect in this project was the complexity of managing subnet routing and ensuring proper internet access. I initially overlooked the need to configure route tables and internet gateways to enable communication with external network.

This project took me...

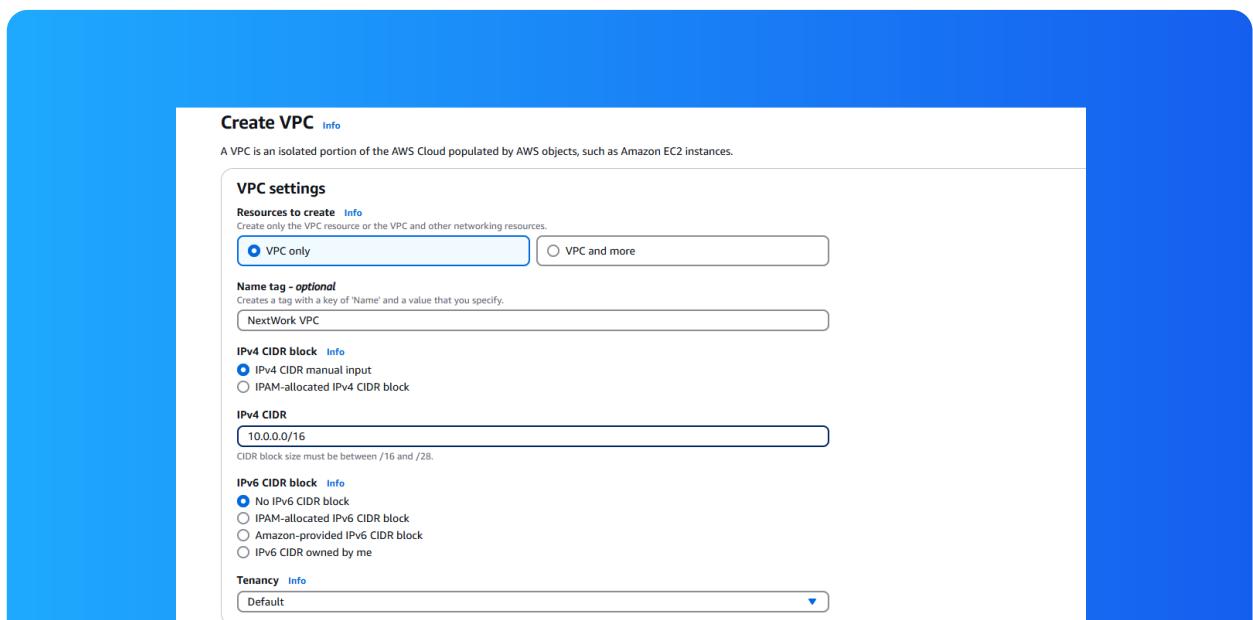
This project took me about a few hours to complete. Setting up the VPC, configuring subnets, and attaching the internet gateway took the most time, especially ensuring the correct routing and security settings were in place for proper functionality.

Virtual Private Clouds (VPCs)

A VPC is a private, isolated section of a cloud provider's network where you can launch resources like servers. It gives control over networking, subnets, IP ranges, and security, ensuring resources are accessible securely and privately.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS provides a default VPC in each region to simplify initial setups. It allows you to immediately launch resources with networking configurations.

To set up my VPC, I had to define an IPv4 CIDR block, which is a range of IP addresses in IPv4 format (e.g., 192.168.0.0/16) used to allocate addresses to resources within the network, ensuring proper organization and communication.

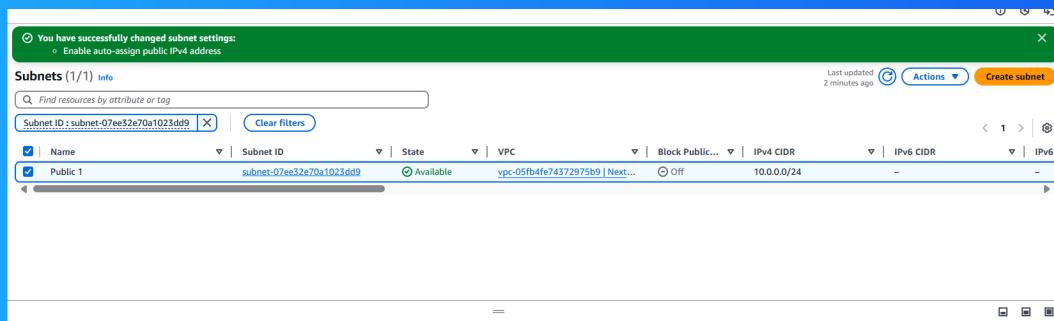


Subnets

Subnets are subdivisions of a VPC that segment the IP address range for organizing resources. There are already subnets existing in my account, one for every availability zone in the region, allowing resources to be distributed for high availability.

Once I created my subnet, I enabled auto-assign public IPv4 addresses. This setting makes sure instances launched in the subnet get a public IP automatically, so they can be accessed directly from the internet for tasks like hosting web applications.

The difference between public and private subnets is internet accessibility. For a subnet to be considered public, it has to have an associated internet gateway and a route table entry directing traffic to the internet.



Internet gateways

Internet gateways are resources that enable communication between instances in a VPC and the internet. They provide a path for inbound and outbound traffic, making resources in public subnets accessible online.

Attaching an internet gateway to a VPC means resources in public subnets can send and receive traffic from the internet. If I missed this step, my instances wouldn't have internet access, even with public IPs.

Internet gateways (2) Info					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	-	igw-045ccb871f9953ce4	Attached	vpc-0f1668c25a9f51658	466742534146
<input type="checkbox"/>	NextWork IG	igw-02680aefef5bc74a89	Attached	vpc-05fb4fe74372975b9 NextWork VPC	466742534146



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