



Build a Virtual Private Cloud (VPC)



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The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The current step is 'VPC settings'. The 'Resources to create' section has 'VPC only' selected. A 'Name tag - optional' field contains 'NextWork VPC'. Under 'IPv4 CIDR block', 'IPv4 CIDR manual input' is selected, and the CIDR block '10.0.0.0/16' is entered. Below it, the 'IPv6 CIDR block' section shows 'No IPv6 CIDR block' selected. The 'Tenancy' section is set to 'Default'.

Introducing Today's Project!

What is Amazon VPC?

Amazon Virtual Private Cloud (VPC) is a networking service that allows you to create a customizable, isolated network environment within the Amazon Web Services (AWS) cloud.

How I used Amazon VPC in this project

In today's project, Amazon VPC was used to create a customized, secure network environment for deploying and managing resources, ensuring proper isolation and control over traffic flow.

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

One thing I didn't expect in this project was how easy it felt to set everything up, given that I already knew the concepts of networking.

This project took me...

This project took around 30 mins to complete.

Virtual Private Clouds (VPCs)

VPCs (Virtual Private Clouds) are virtualized networks provided by cloud service providers, which allows users to create isolated and secure environments within a public cloud.

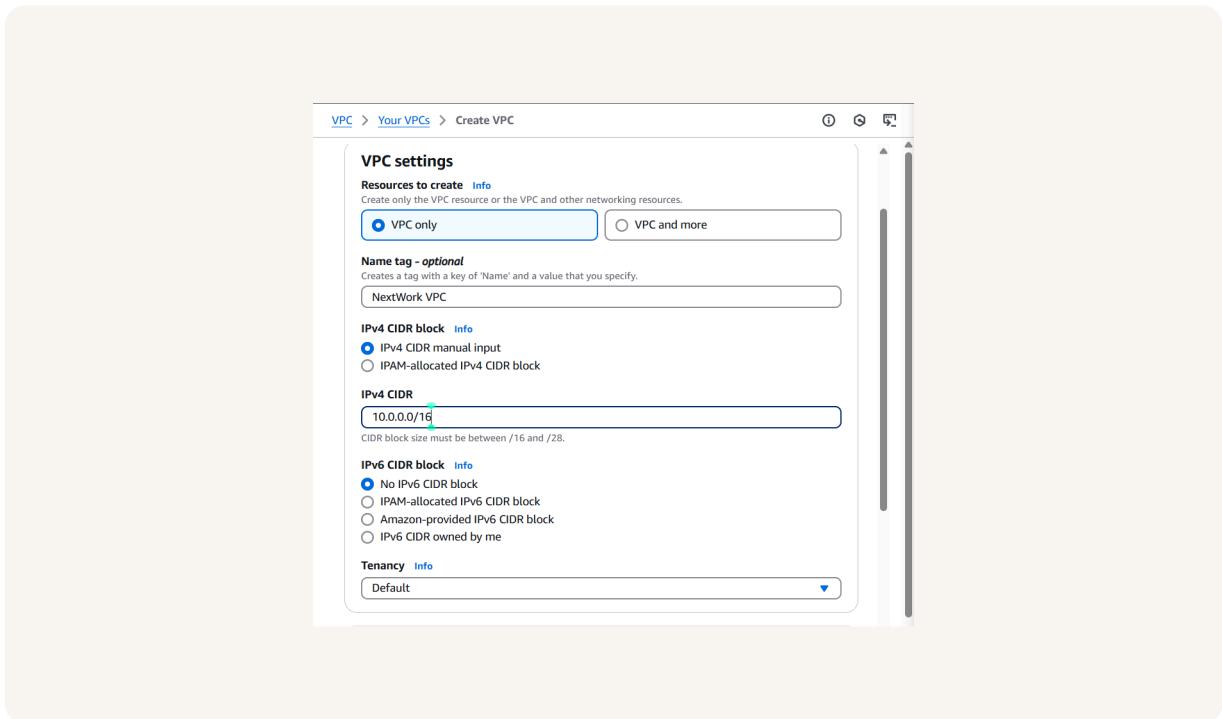
A default VPC exists in every AWS account which provides an environment for the users where they can quickly deploy and test resources without having to configure complex networking components

To set up my VPC, I had to define an IPv4 CIDR block, which is a method of representing a range of IPv4 addresses using a combination of an IP address and a suffix indicating the number of significant bits used for the network portion of the address

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Subnets

Subnets are smaller divisions of a VPC's CIDR block, used to segment a network into logical groups for better organization. There are already subnets existing in my account, one for every Availability Zone in each AWS region.

Once I created my subnet, I enabled auto-assign public IPv4 addresses. This setting makes sure that any EC2 instances launched within the subnet automatically receive a public IP address.

The difference between public and private subnets is primarily determined by whether the resources within the subnet can communicate directly with the internet. For a subnet to be "Public" , it has to have public IP addresses.

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VPC > Subnets > subnet-029a1cb5157f21101 > Edit subnet settings

Edit subnet settings [Info](#)

Subnet

| | |
|-----------|--------------------------|
| Subnet ID | Public 1 |
| Name | Public 1 |

Auto-assign IP settings [Info](#)
Enable AWS to automatically assign a public IPv4 or IPv6 address to a new primary network interface for an instance in this subnet.

Enable auto-assign public IPv4 address [Info](#)

Enable auto-assign customer-owned IPv4 address [Info](#)
Option disabled because no customer owned pools found.

Resource-based name (RBN) settings [Info](#)
Specify the hostname type for EC2 instances in this subnet and optional RBN DNS query settings.

Enable resource name DNS A record on launch [Info](#)

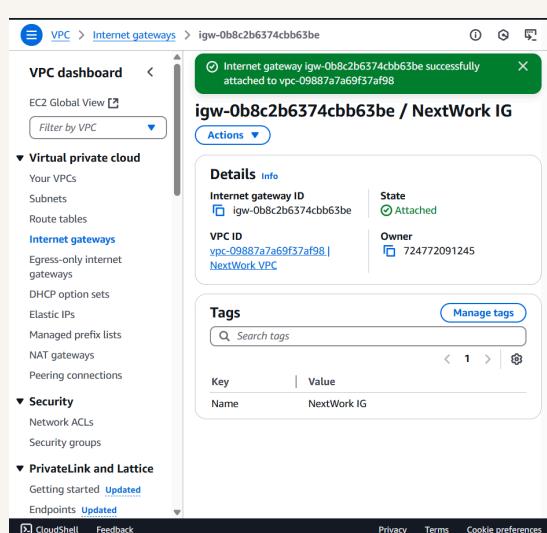
Enable resource name DNS AAAA record on launch [Info](#)

Hostname type [Info](#)
 Resource name
 IP name

Internet gateways

Internet gateways are scalable components that allow communication between instances in VPC and the internet. An internet gateway serves as the bridge that connects your VPC to the public internet, enabling resources to send and receive traffic.

Attaching an internet gateway to a VPC means that the VPC will have the capability to communicate with the internet. This step allows resources in the VPC to send and receive traffic from the internet, provided they have the necessary configuration.





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