



# Build a Virtual Private Cloud



Roshan Thomas

VPC > Your VPCs > Create VPC

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  
IPv4 CIDR  
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



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# Introducing Today's Project!

## What is Amazon VPC?

Amazon VPC is like your private internet castle in the cloud, where you control who gets in, what happens inside, and how data flows. It's useful because it keeps your cloud resources secure and organized, just the way you want!

## How I used Amazon VPC in this project

I used Amazon VPC to create and configure a secure virtual network, setting up a VPC, a public subnet, and an internet gateway to enable internet access for resources within the VPC.

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

I didn't expect the default VPC and subnets to already exist, which made it easier to understand the structure before creating my custom VPC.

## This project took me...

It took me 1 hour 20 mins to complete the project.

# Virtual Private Clouds (VPCs)

VPCs are isolated virtual networks in AWS that let you manage and secure your resources, like EC2 instances and S3 buckets. They provide privacy and control, preventing your resources from mixing with others in the cloud.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS wanted to give me a ready-made playground, so I could start deploying and connecting resources instantly, without any setup hassle!

To set up my VPC, I had to define an IPv4 CIDR, which means choosing a range of IP addresses for my network. It's like deciding the street numbers for my virtual neighborhood, ensuring everything has a unique address!

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 value '10.0.0.0/16' is entered. The 'IPv6 CIDR block' section is collapsed. The 'Tenancy' dropdown is set to 'Default'.

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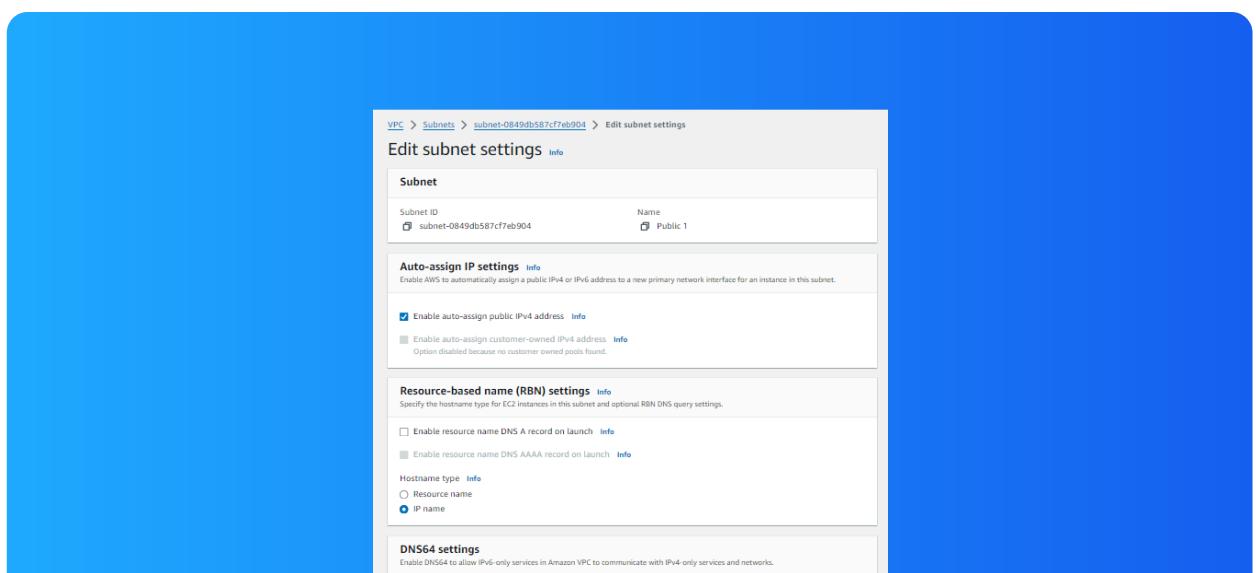
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# Subnets

Subnets are like the neighborhoods within my VPC city. They divide my IP address space into smaller zones, letting me organize and control where different resources live and how they interact with each other.

There are already subnets existing in my account, one for every Availability Zone in the default VPC. AWS set them up so I could start building and deploying resources right away, like having pre-built neighborhoods ready to explore!

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 have a route to the internet through an Internet Gateway. It's like opening the doors to the outside world!



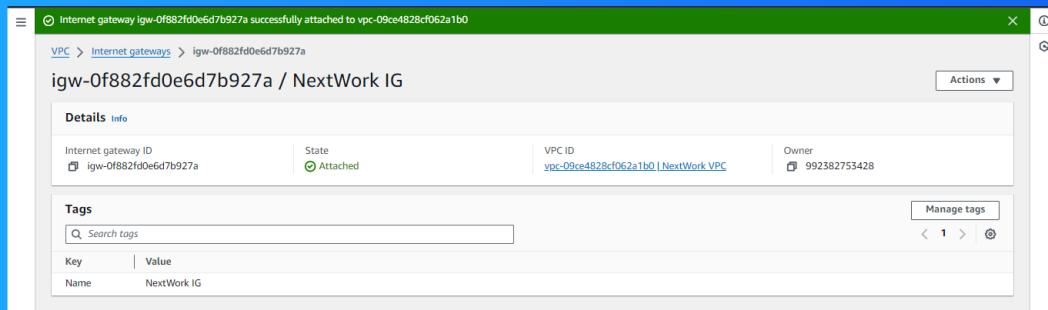
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# Internet gateways

Internet gateways are the portals that connect my VPC to the internet, letting data flow in and out. Think of them as the front door that opens my virtual world to the web!

Attaching an internet gateway to a VPC means my VPC gets internet access, allowing my resources to communicate with the web. It's like giving my virtual city a direct link to the outside world!





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