



# Build a Virtual Private Cloud

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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

# Introducing Today's Project!

## What is Amazon VPC?

Amazon Virtual Private Cloud (VPC) is an isolated space that's private to the user on the cloud where they can manage and design how that space will work for their resources.

## How I used Amazon VPC in this project

In this project I used Amazon VPC to create my own private space where I can manage and host my resources.

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

I wasn't expecting how simple it was to create a VPC with components like subnets and the Internet Gateway in my account. Now I understand how to use features such as automatically assign public IP addresses in AWS.

## This project took me...

This project took me 45 minutes, which includes the 15 minutes I needed to finish writing my documentation.

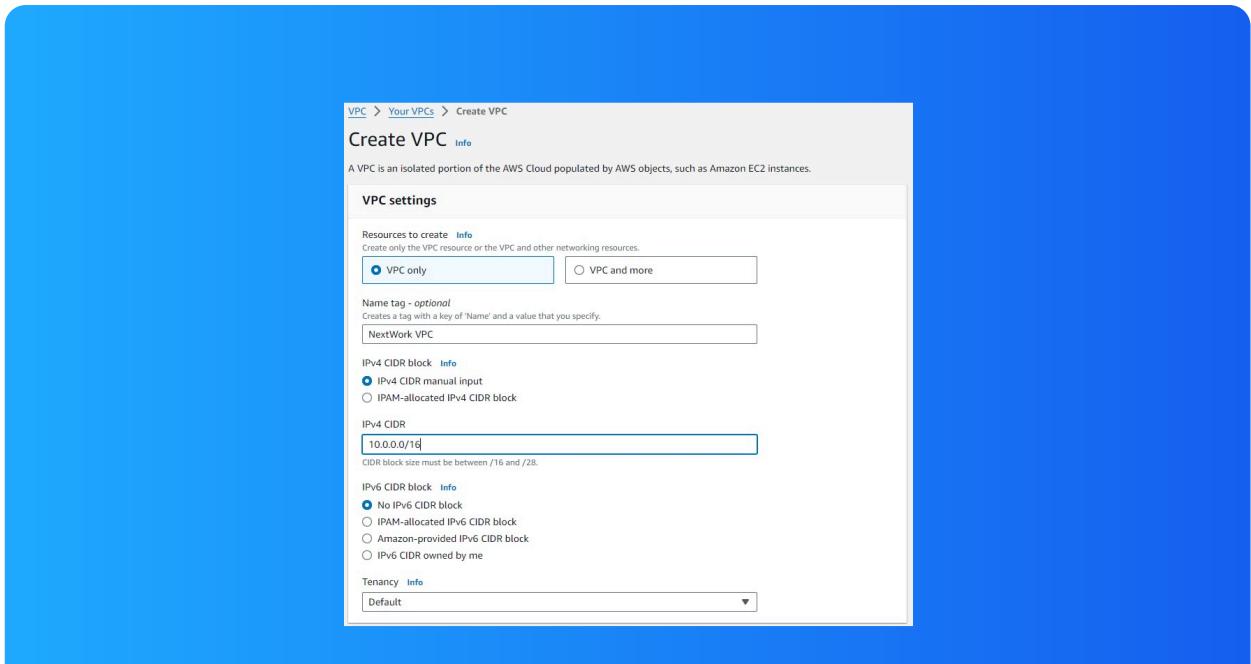


# Virtual Private Clouds (VPCs)

VPCs are isolated sections on the AWS cloud that provide security and privacy of a user's resources, as well as keeping them organized.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS created one for me automatically so that my resources would already be assigned one to ensure privacy and my own working space.

To set up my VPC, I had to define an IPv4 CIDR, which means there would a group of IP addresses assigned for the VPC. These IP addresses are available to be assigned to resources, ensuring the efficiency of routing data to and from the Internet.



# Subnets

Subnets are small divisions within a VPC; a user can launch AWS resources in these subnets. Resources can be grouped together in a subnet that may have the same restrictions and access rules.

There are already subnets existing in my account, one for every availability zone existing in the region I selected in my account. For example there are 3 availability zones in the Canada Central region in my account.

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 given a route to an Internet Gateway to communicate with external networks and users.

Subnets (1) <a href="#">Info</a>					
<input type="text"/> Find resources by attribute or tag					
Name	Subnet ID	State	VPC	IPv4 CIDR	
Public 1	<a href="#">subnet-0946c9ed7a25a82e2</a>	<span>Available</span>	<a href="#">vpc-054f1c790710d27da   Next...</a>	10.0.0.0/24	

# Internet gateways

Internet Gateways are the gates that control the traffic and communication that comes from the Internet and also from the VPC.

Attaching an Internet Gateway to a VPC means the resources in my VPC can access the Internet. Certain resources with public IP addresses like EC2 instances will be publicly available for users as well as any applications on the instances.

Internet gateways (1) <a href="#">Info</a>					
<input type="text"/> <a href="#">Search</a>					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	NextWork IG	igw-0face5a8c4ba7b4d5	Attached	vpc-054f1c790710d27da   NextWork VPC	799990344483



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