

Build a Virtual Private Cloud (VPC)

A

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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

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 VPC is a virtual network in AWS that you control. It lets you launch resources in an isolated, secure environment. You set IP ranges, subnets, route tables, and gateways—making it ideal for customizing network architecture and security.

How I used Amazon VPC in this project

I created a subnet and attached an internet gateway

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

I did not expect how easy it was to configure a VPC

This project took me...

This project took me about 45 minutes

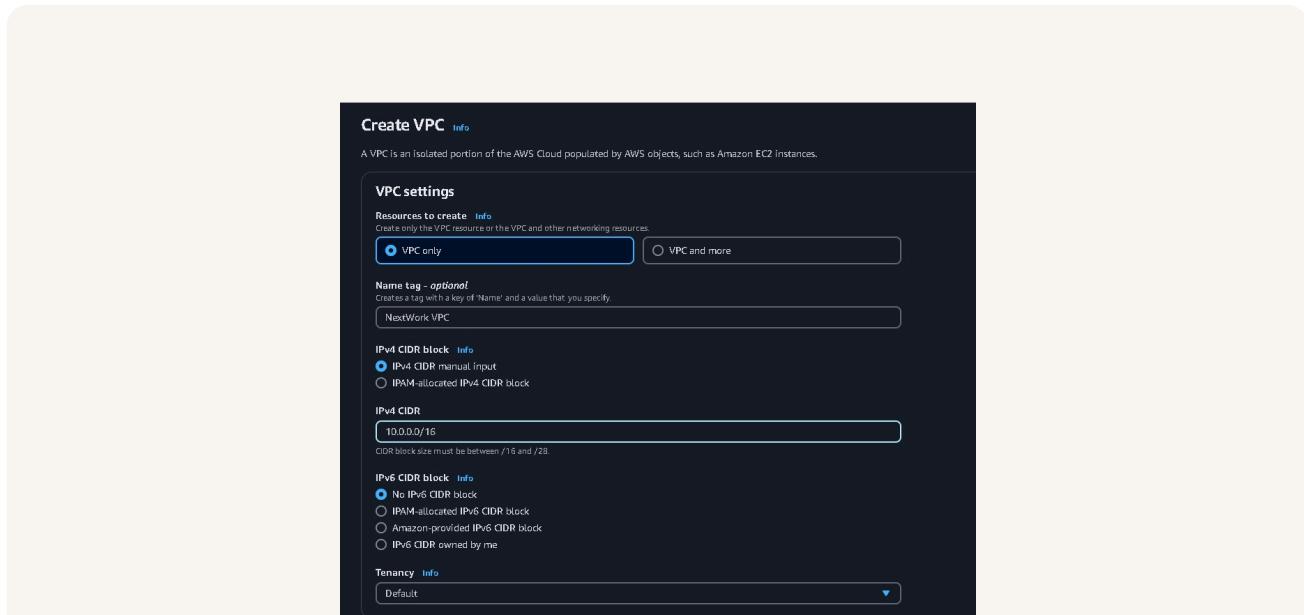


Virtual Private Clouds (VPCs)

A Virtual Private Cloud (VPC) is a secure, isolated section of a cloud provider's network where you can launch and manage cloud resources. It lets you control networking settings like IP ranges, subnets, route tables, and gateways for better security.

There was already a default VPC in my account ever since my AWS account was created. This is because the default VPC lets you launch resources (e.g. EC2 instances) and connect services together from Day 1 of using AWS.

An IPv4 CIDR block is a range of IP addresses defined using Classless Inter-Domain Routing. It uses a format like 192.168.0.0/24, where /24 indicates the number of fixed bits, giving 256 IP addresses. It's used to assign and manage networks.





Subnets

Subnets are smaller, divided sections of a VPC's IP address range. They help organize and isolate resources within a network. Subnets can be public or private, control traffic flow, and are key for efficient IP address management and security.

You enable auto-assign public IPv4 addresses so resources in a public subnet, like EC2 instances, can automatically get a public IP at launch. This allows them to communicate with the internet without manual IP assignment, saving time and effort.

The difference between public and private subnets are in internet access. For a subnet to be public, it has to have a route to an Internet Gateway, allowing resources to be accessible from the internet. Private subnets do not have this route.

Subnets (1/7) Info									
Find resources by attribute or tag									
Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR	IPv6 CIDR	IPv6 Cl		
-	subnet-01bd4ebe4d986d445a	Available	vpc-0c04ad6ca0cc0158	Off	172.31.0.0/20	-	-		
-	subnet-09c59662277e9ac59	Available	vpc-0c04ad6ca0cc0158	Off	172.31.32.0/20	-	-		
-	subnet-020a6a42cd71a9c14	Available	vpc-0c04ad6ca0cc0158	Off	172.31.16.0/20	-	-		
-	subnet-0554a236bdaca9f91	Available	vpc-0c04ad6ca0cc0158	Off	172.31.0.0/20	-	-		
-	subnet-0uccf0c095d0591fa	Available	vpc-0c04ad6ca0cc0158	Off	172.31.48.0/20	-	-		
-	subnet-0d4df94a8cae4f67b	Available	vpc-0c04ad6ca0cc0158	Off	172.31.64.0/20	-	-		
Public 1	subnet-06c003c36fb4200d3	Available	vpc-0984d9fa72d9851b Next...	Off	10.0.0/24	-	-		

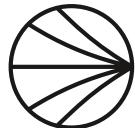


Internet gateways

An Internet Gateway is a VPC component that allows communication between resources in your VPC and the internet. It enables public subnets to send and receive traffic from the internet, acting as a bridge between the VPC and external networks.

Attaching an Internet Gateway to your VPC allows resources in public subnets to communicate with the internet. It enables inbound and outbound traffic but only works if route tables and public IPs are properly configured.

Internet gateways (1 / 2) Info					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	-	[gw-05cf9a772ad1b9e1]	Attached	vpc-0d04ad6ca0cc0158	066855493373
<input checked="" type="checkbox"/>	NextWork IG	[gw-064fb52c359736fb4]	Attached	vpc-0964d9faf72d8651b NextWork VPC	066855493373



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