



Build a Virtual Private Cloud (VPC)



MHM Aslam

VPC > Your VPCs > Create VPC

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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MHM Aslam

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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC lets you create a private network in AWS, giving full control over IP ranges, subnets, routing, and security. It's useful for securely launching and managing resources in an isolated, customizable environment.

How I used Amazon VPC in this project

I used Amazon VPC in today's project to create a secure network environment, set up subnets, attach an internet gateway. This allowed my resources to communicate both internally and with the internet as needed.

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

One thing I didn't expect in this project was how setting up the VPC involved multiple steps, like subnets and internet gateways. I realized route tables are also important, but I'll be configuring them in my next project.



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This project took me...

This project took a few hours. I set up a VPC, subnets, and an internet gateway. I enabled auto-assign public IPs but haven't added route tables yet. I also understood IPv4 and CIDR. It was a good start to learning AWS networking basics.

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Virtual Private Clouds (VPCs)

VPCs (Virtual Private Clouds) are isolated networks within a cloud provider where you can launch resources like servers, giving you control over IP ranges, routing, and security.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS sets it up by default so I could launch and connect resources right away, without needing to configure networking from scratch.

To set up my VPC, I had to define an IPv4 CIDR block, which is' 10.0.0.0/16 this means that first 16 bits is fixed (10.0). the last 16 bits can go up to 255.255 then this IP address can vary 10.0.0.0 to 10.0.255.255

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Subnets

Subnets are subdivisions of a VPC that allow you to group resources based on security and routing needs. There are already subnets existing in my account, one for every Availability Zone in the region, created automatically with the default VPC.

Once I created my subnet, I enabled the auto-assign public IP setting. This setting makes sure that instances launched in the subnet automatically get a public IP, so that they can be accessed from the internet if needed.

The difference between public and private subnets are based on internet accessibility. For a subnet to be considered public, it has to have a route to the internet through an internet gateway. Private subnets don't have this route, so they're isolated.

⌚ You have successfully changed subnet settings:
○ Enable auto-assign public IPv4 address

Subnets (1/4) [Info](#)

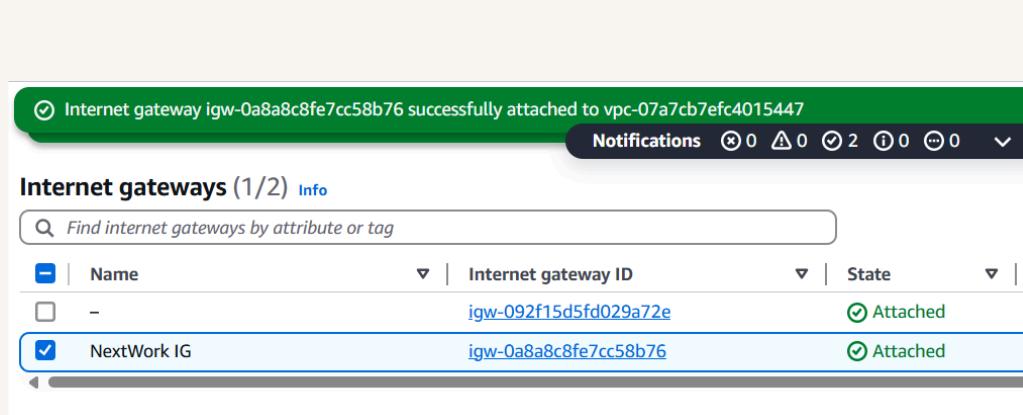
Find subnets by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State
<input type="checkbox"/>	-	subnet-0fe3579d800376eb7	⌚ Available
<input type="checkbox"/>	-	subnet-0172c59902974a8ed	⌚ Available
<input type="checkbox"/>	-	subnet-097581200db6e3c71	⌚ Available
<input checked="" type="checkbox"/>	Public 1	subnet-02ae05cc166c07002	⌚ Available

Internet gateways

Internet gateways are like bridges connecting your city (VPC) to the outside world (internet). They're key to making applications publicly accessible—by attaching one, your instances can access the internet and be reached by external users.

Attaching an internet gateway to a VPC means allowing the VPC to communicate with the internet. If I missed this step, my instances wouldn't be able to access the internet or be reached by external users, even if they had public IPs.





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