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Build a Virtual Private Cloud (VPC)



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VPC settings

Resources to create [Info](#)
Create only this 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.

IPv4 CIDR block [Info](#)
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block

IPv4 CIDR

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

Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a virtual network within the AWS cloud that you can create and manage, allowing you to isolate your AWS resources and control network traffic.

How I used Amazon VPC in this project

I created a VPC in my region, set up a subnet, and attached an internet gateway to allow the resources within the subnet to access the internet.

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

I did not expect assigning the dynamic IP addresses for my subnet

This project took me...

almost an hour

Virtual Private Clouds (VPCs)

VPCs are the reason why resources can be made private to you. You also get control over resources in a VPC, so you can organize how they communicate and integrate with each other without the public internet.

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

To set up my VPC, I had to define an IPv4 CIDR block, which is a way to assign a whole block of IP addresses, kind of like creating a zone/area in a city.

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NextWork VPC

IPv4 CIDR block [Info](#)

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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

Subnets

Subnets are like different neighborhoods inside your city. You use subnets to group resources with similar access rules and restrictions. There are already subnets existing in my account, one for every Availability Zones.

Once I created my subnet, I enabled auto-assign public IPv4 address. This setting makes sure I get a public IP address so that I won't have to create one manually

The difference between public and private subnets are public subnet is connected to the internet and a private subnet does not have direct internet access. For a subnet to be considered public, it has to connect it to an internet gateway

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The screenshot shows the AWS Subnets page with a green success message at the top: "You have successfully changed subnet settings: Enable auto-assign public IPv4 address". The table lists one subnet:

Name	Subnet ID	State	VPC	Block Public Access	IPv4 CIDR
Public 1	subnet-037e6bbad669f4a14	Available	vpc-058701809100c26b8 Nex...	Off	10.0.0.0/24

Below the table, the subnet details are shown:

subnet-037e6bbad669f4a14 / Public 1

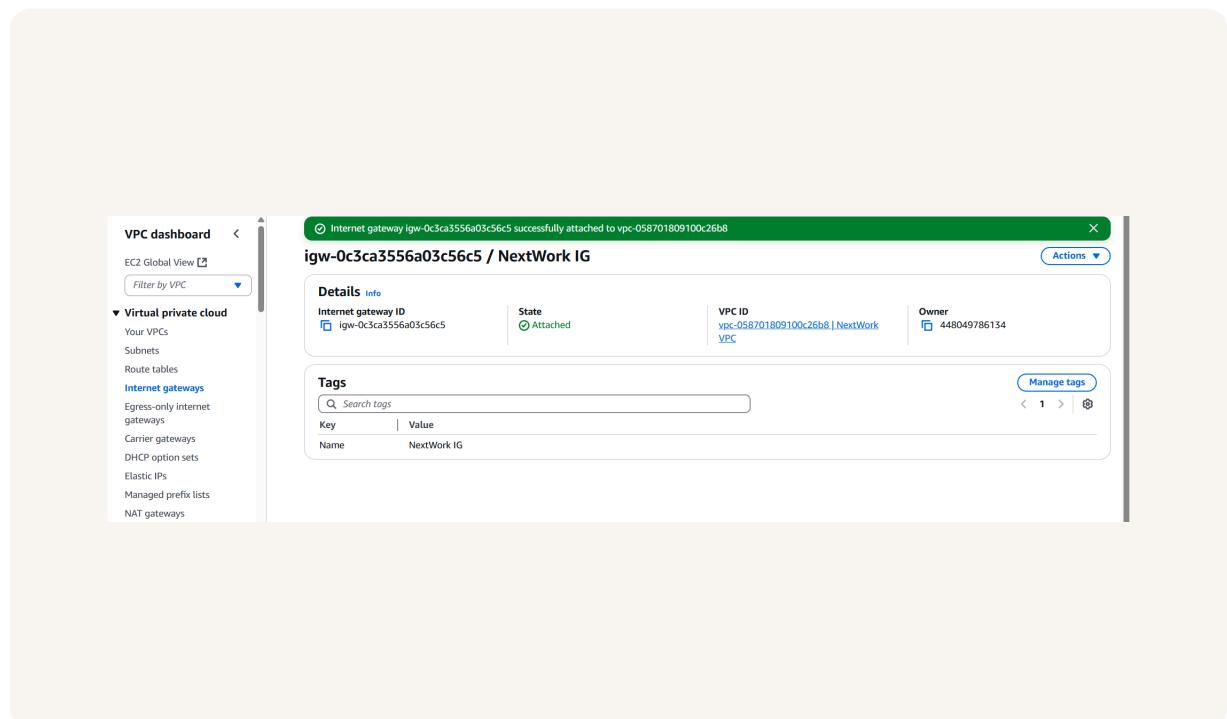
Details (selected) | Flow logs | Route table | Network ACL | CIDR reservations | Sharing | Tags

Subnet ID	Subnet ARN	State	Block Public Access
subnet-037e6bbad669f4a14	arn:aws:ec2:ca-central-	Available	Off

Internet gateways

Internet gateways are key to making applications available on the internet. By attaching an internet gateway, your instances can access the internet and be accessible to external users.

Attaching an internet gateway to a VPC means resources in your VPC can now access the internet. If I missed this step resources in subnet cannot access the internet.





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