



Build a Virtual Private Cloud (VPC)



Nicolás Aversa

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 service that lets us launch AWS resources in a logically isolated virtual network that we define. It is useful because it gives us full control over our virtual networking environment.

How I used Amazon VPC in this project

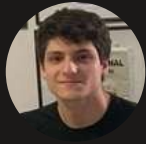
I used Amazon VPC in today's project to create a virtual private cloud, a public subnet, and an internet gateway. I created my own city (VPC), my own neighborhood (subnet), and my bridge (internet gateway), so my resources could access the internet.

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

One thing I did not expect in this project, was to have one default VPC, three default subnets and one internet gateway set up. AWS already had that set up so one can connect services together and launch resources from Day 1 of using AWS.

This project took me...

This project took me about an hour.



Virtual Private Clouds (VPCs)

VPCs are like cities in a country. They help organize the resources and get control over them. This way we can define how they communicate and integrate with each other without the public internet, ensuring privacy.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS automatically sets up a default VPC for you. Because of this, I could launch resources like EC2 instances and connect services together.

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. CIDR means Classless Inter-Domain Routing.

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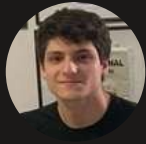
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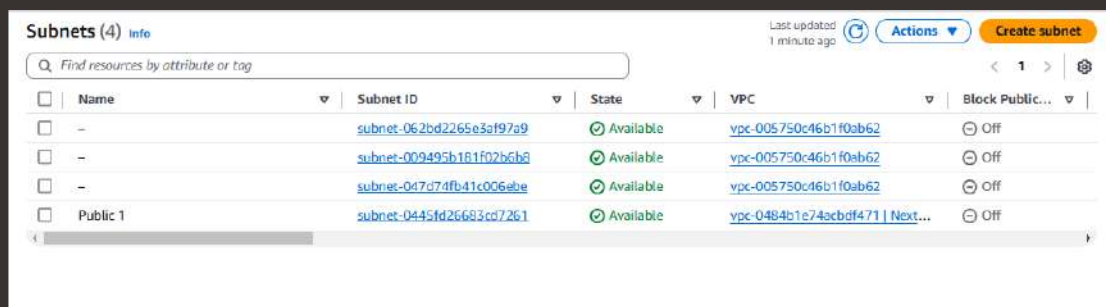


Subnets

Subnets are like different neighborhoods inside our VPC, which would be like our city. We use subnets to group resources with similar access rules and restrictions. There are already subnets existing in my account, one for every Availability Zone.

Once I created my subnet, I enabled auto-assign public IPv4 address. This setting makes sure that when any EC2 instance is launched in that subnet, it will instantly get a public IP address, so that I won't have to create one manually.

The difference between public and private subnets are that public subnets are connected to the internet, while private subnets aren't. For a subnet to be considered public, it has to be connected to an internet gateway.



The screenshot shows the AWS Management Console 'Subnets (4)' page. It includes a search bar, a table of subnets, and a 'Create subnet' button. The table lists four subnets, all in an 'Available' state, associated with the VPC 'vpc-005750c46b1f0ab62'. The 'Block Public Access' setting is 'Off' for all subnets. The fourth subnet, 'Public 1', is highlighted.

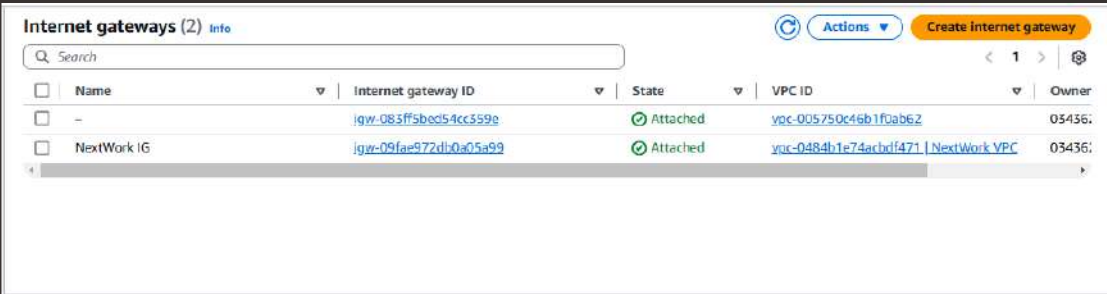
Name	Subnet ID	State	VPC	Block Public...
-	subnet-062bd2265e3a197a9	Available	vpc-005750c46b1f0ab62	Off
-	subnet-009495b161f02b5b8	Available	vpc-005750c46b1f0ab62	Off
-	subnet-047d74fb41c006ebe	Available	vpc-005750c46b1f0ab62	Off
Public 1	subnet-0445fd26683cd7261	Available	vpc-0484b1e74acbd471 Next...	Off



Internet gateways

Internet gateways are a bridge that links our private city (VPC) to the outside world (the internet), so our resources can communicate beyond our private space. This way they can access the internet and be accessible to external users.

Attaching an internet gateway to a VPC means that the resources in the VPC can now access the internet. If I missed this step, the resources in the VPC would not become public; they would remain private. Now we're connected to the internet!



<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	-	igw-083ff5bed54cc359e	Attached	vpc-005750c46b1f0ab62	03436;
<input type="checkbox"/>	NextWork IG	igw-09fae972d10a05a99	Attached	vpc-0884b1e74achdf471 NextWork VPC	03436;

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