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Build a Virtual Private Cloud (VPC)

M

Mohammed Dawoud Mota

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
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 (Virtual Private Cloud) is a private, isolated section of the cloud where you can launch and manage resources. It's useful because it gives control over network traffic, security, and resource organization.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create a public subnet. I then created an internet gateway and attached it to my VPC to allow it to get access to the internet.

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

One thing I didn't expect in this project was how easy it was to create a VPC and give it access to the internet through the igw.

This project took me...

This project took me 30 minutes to complete.

Virtual Private Clouds (VPCs)

VPCs matter because they give your cloud resources privacy and control. Without them, all resources would exist in one open space, making it hard to secure, organize, and control how they communicate.

There's already a VPC in your account because AWS creates a default one so you can launch resources immediately. Some services need a VPC to run securely, while others like S3 or Lambda don't. A VPC is private, not the internet.

An IP address is a unique identifier for resources in a network, letting them communicate. IPv4 is the common format (e.g., 192.168.0.1). CIDR blocks assign ranges of IPs, controlling how many addresses a network or subnet can use.

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Subnets

Subnets are like neighborhoods in a VPC city, grouping resources with similar access rules. Public subnets are open, private subnets are restricted. Each subnet must have a unique IP range and belongs to a specific Availability Zone.

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

My subnet isn't public yet because it's not connected to an internet gateway. A subnet is only considered public when its resources can access the internet, while private subnets remain isolated for internal use.

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Subnets (1) Info						
<input type="text"/> Find subnets by attribute or tag						
<input type="text"/> Subnet ID : subnet-0c202bcf3979bea71 X		Clear filters		Actions		
<input type="checkbox"/>	Name	Subnet ID	State	VPC	Block Public...	IP
<input type="checkbox"/>	Public 1	subnet-0c202bcf3979bea71	Available	vpc-09c8bff80bff3535f NextW...	<input type="checkbox"/> Off	10

Internet gateways

Internet gateways are what allow the VPC and the resources in the VPC to get access to the internet and become accessible to the external users.

Attaching an internet gateway to a VPC means that the VPC will have internet access. If I missed this step, then the VPC will not be able to access the internet.

Internet gateways (1/2) Info			
<input type="checkbox"/>	Name	Internet gateway ID	State
Actions Create internet gateway			
<input type="checkbox"/>	-	igw-0130bbb7dedac8302	Attached
<input checked="" type="checkbox"/>	NextWork IG	igw-095707659aade0cde	Attached



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