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Build a Virtual Private Cloud (VPC)

TA

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VPC > Your VPCs > Create VPC

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?

A VPC (Virtual Private Cloud) is a service that lets you create a private, isolated network within the AWS cloud where you can launch AWS resources like EC2. It provides secure, isolated, and customizable networking for your AWS resources.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to set up a secure network environment by creating public subnet across multiple Availability Zones and attaching that Public subnet to an Internet Gateway.

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

I didn't expect how simple it is to understand Cloud Networking if you start from the basics and build up to more complex concepts.

This project took me...

This project took me about 1 hour and 30 minutes to complete.

Virtual Private Clouds (VPCs)

A Virtual Private Cloud (VPC) is like your own private section of the internet—carved out just for you inside a larger public cloud like AWS, Google Cloud, or Azure.

There was already a default VPC in my account ever since my AWS account was created. This is because when I created my AWS account, AWS automatically sets up a default VPC for me! This default VPC is why I could launch resources.

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.

The screenshot shows the 'Create VPC' configuration page in the AWS Management Console. The URL in the address bar is [VPC > Your VPCs > Create VPC](#). The main title is 'Create VPC Info'. A sub-instruction says 'A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.' Below this is a 'VPC settings' section with a 'Resources to create' dropdown set to 'VPC only'. There is a 'Name tag' input field containing 'NextWork VPC'. Under 'IPv4 CIDR block', the CIDR is set to '10.0.0.0/16'. Under 'IPv6 CIDR block', it says 'No IPv6 CIDR block'. The 'Tenancy' dropdown is set to 'Default'.

Subnets

Subnets (subnetwork) are a range of IP addresses in a Virtual Private Cloud (VPC). There are already subnets existing in my account, one for every Availability Zone of a Region.

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

The difference between public and private subnets is, a 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 be connected to an internet gateway.

TA

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NextWork Student

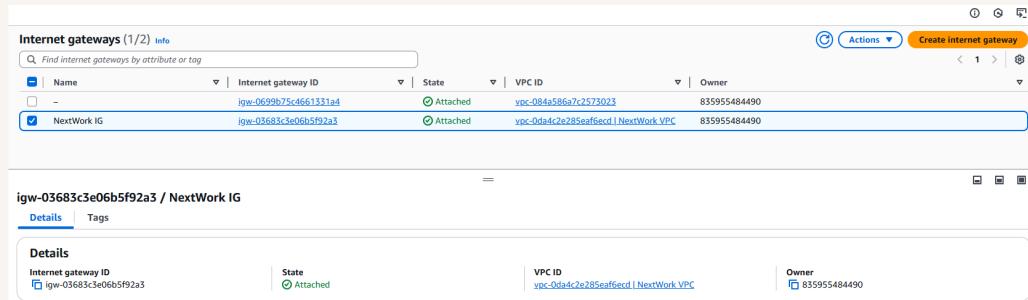
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Subnets (1/4) Info									
<input type="text"/> Find subnets by attribute or tag									
Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR	IPv6 CIDR	IPv6 C		
<input type="checkbox"/>	-	subnet-091919dadc029e7e38	Available	vpc-084a586a7c2573023	<input type="radio"/> Off	172.31.32.0/20	-		
<input type="checkbox"/>	-	subnet-0d7c127925ff56e59	Available	vpc-084a586a7c2573023	<input type="radio"/> Off	172.31.0.0/20	-		
<input type="checkbox"/>	-	subnet-03eab034470c4aee	Available	vpc-084a586a7c2573023	<input type="radio"/> Off	172.31.16.0/20	-		
<input checked="" type="checkbox"/>	Public 1	subnet-d90a031027cc88aaa	Available	vpc-0da4c2e285eaf6ecd Next...	<input type="radio"/> Off	10.0.0.0/24	-		

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 EC2 instances and applications hosted on those servers with public IP addresses would not be accessible to users.





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