



Build a Virtual Private Cloud (VPC)

SH

shilpa_i_kale@yahoo.com

The screenshot shows the 'Create VPC' step in the AWS VPC wizard. The navigation bar at the top shows 'VPC > Your VPCs > Create VPC'. The main form fields are:

- Name tag - optional**: A text input field containing 'NextWork VPC'.
- IPv4 CIDR block**: A dropdown menu showing 'IPv4 CIDR manual input' selected. Below it, a text input field contains '10.0.0.0/16'.
- IPv6 CIDR block**: A dropdown menu showing 'No IPv6 CIDR block' selected.
- Tenancy**: A dropdown menu showing 'Default' selected.

Introducing Today's Project!

What is Amazon VPC?

Amazon VPCs are isolated sections of the AWS cloud that helps us to keep our AWS resources private and secure.

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create a isolated section and also created public subnet and internet gateway.

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

One thing I didn't expect in this project was there was already a default VPC, default subnet and default Internet Gateway.

This project took me...

This project took me 2hrs to complete including documentation, understanding the whole concept.

Virtual Private Clouds (VPCs)

VPCs are isolated sections of the AWS cloud that help to keep my AWS resources private and secure.

There was already a default VPC in my account ever since my account was created. This is because AWS has setup a default VPC to allow me to deploy resources like EC2 instances or RDS databases right away without having to create my VPC from scratch.

To set up my VPC, I had to define an IPv4 CIDR block, which means a range of IP addresses that my VPC can allocate to the resources deployed into my VPC.

The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The current step is 'Create VPC'. The configuration fields shown are:

- Name tag - optional:** NextWork VPC
- IPv4 CIDR block:** 10.0.0.0/16
- IPv6 CIDR block:** No IPv6 CIDR block selected
- Tenancy:** Default

Subnets

Subnets are subsections of my VPC, just like how neighbourhoods are subsection of a city. There are already subnets existing in my account, one for every availability zone in the Region that I've setup in my VPC in. My region has 3 AZs.

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

The difference between public and private subnets are the resources in public subnets can communicate with external network and resources in private subnets can not. For a subnet to be considered public, it has to connect to an internet gateway.

SH

shilpa_i_kale@yahoo.c...

NextWork Student

nextwork.org

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

Last updated 4 minutes ago [Actions](#) [Create subnet](#)

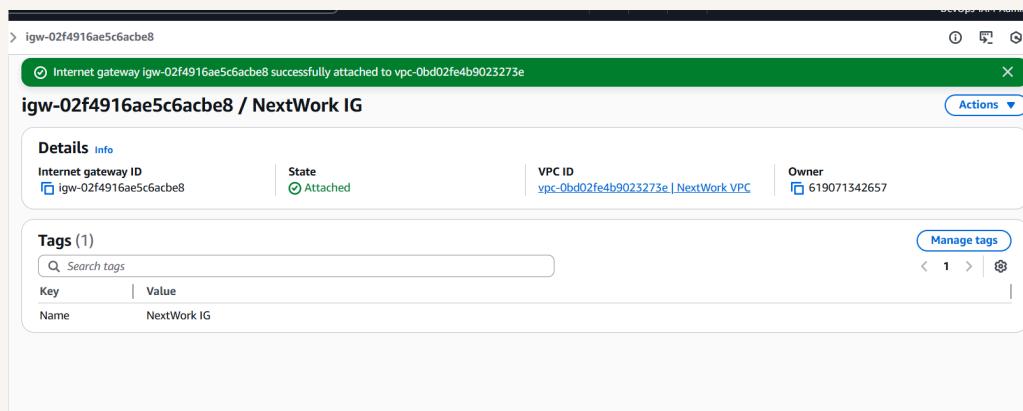
Find subnets by attribute or tag

Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR
-	subnet-0f5ef108156018567	Available	vpc-09afe716642db711e	<input type="radio"/> Off	172.31.0.0/20
-	subnet-0abf61e92c2bbfd82	Available	vpc-09afe716642db711e	<input type="radio"/> Off	172.31.16.0/20
-	subnet-03ddff044609b9ee	Available	vpc-09afe716642db711e	<input type="radio"/> Off	172.31.32.0/20
<input checked="" type="checkbox"/> Public 1	subnet-02133d23496524d33	Available	vpc-0bd02fe4b9023273e Next...	<input type="radio"/> Off	10.0.0.0/24

Internet gateways

Internet gateways are the key VPC components that allows internet access for the resources in my VPC/subnet. IG is also how users in the public can access my resources in a public subnet.

Attaching an internet gateway means resources in your VPC can now access the internet. The EC2 instances with public IP addresses also become accessible to users, so your applications hosted on those servers become public too.





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