



# Build a Virtual Private Cloud



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VPC > Your VPCs > Create VPC

**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

# Introducing Today's Project!

## What is Amazon VPC?

Amazon VPC provides logical security and privacy for your devices by isolating and providing privacy from the public internet.

## How I used Amazon VPC in this project

I used Amazon VPC in my project by creating a screened subnet with auto assigned IPV4 addresses for new machines joining the newly launched VPC and assigning it to an internet gateway to allow for public internet access.

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

One thing I didn't expect was how many default security features are preconceived in AWS. For example there are default VPCs, Subnets, and Gateways that come prepared with your AWS account to automatically provide a layer of security.

## This project took me...

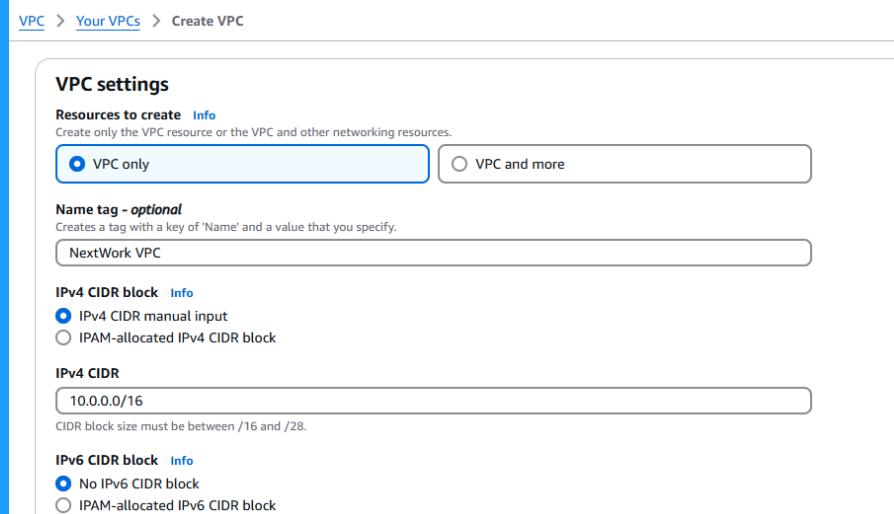
This project took less than an hour to complete and I'm happy I took the time to see these concepts work in real-time.

# Virtual Private Clouds (VPCs)

VPC's are equivalent to gated communities, all assets that are connected inside this VPC are secure and isolated so that people inside your organization can access them. This creates a high level of privacy/security.

There was already a default VPC in my account because this a default security feature of AWS to give all my assets privacy and confidentiality.

To set up my VPC, I had to define an IPV4 CIDR block which is 10.0.0.0/16. This creates a range of IP addresses for the assets inside this VPC.



# Subnets

Subnets are divisions of IP addresses and every region is given a set amount to use in your VPC for example in my region of N. Virginia I'm able to use 4 subnet ranges and in Ohio I'm only able to use 3 subnet ranges.

Once I created my subnet, I enabled Auto assign Public IPV4 address. This setting makes sure that every machine that is created inside my VPC is assigned a public IPV4 so that it can communicate with the public internet.

The difference between public and private subnets are public subnets are able to communicate with the public internet and private subnets are only able to communicate with the local area network.

You have successfully changed subnet settings:

- Enable auto-assign public IPv4 address

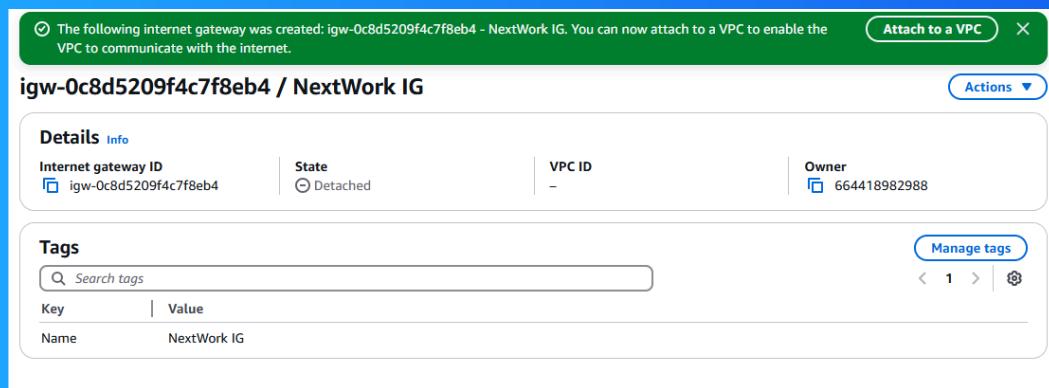
Last updated 3 minutes ago

Name	Subnet ID	State	VPC	Action
-	subnet-001fc979fb53f3d47	Available	vpc-0f87833cb2e02668a	Off
-	subnet-0d890dc13bfe62d4f	Available	vpc-0f87833cb2e02668a	Off
-	subnet-0a193733311927db	Available	vpc-0f87833cb2e02668a	Off
-	subnet-050a13754b1ba0e56	Available	vpc-0f87833cb2e02668a	Off
-	subnet-0310c8005000bd629	Available	vpc-0f87833cb2e02668a	Off
-	subnet-0f4354a58bc9cc20d	Available	vpc-0f87833cb2e02668a	Off
Public 1	subnet-029830892d58ad7d7	Available	vpc-04a484103c281d710   Nex...	Off

# Internet gateways

Internet Gateways allow for public internet connectivity for devices on your local area network or VPC.

Attaching an internet gateway to a VPC means that new devices wouldn't have the option to communicate with the public internet without their IPV4 addresses.





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