



# Build a Virtual Private Cloud

SH

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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.

**IPv4 CIDR block** Info  
 IPv4 CIDR manual input  
 IPAM-allocated IPv4 CIDR block

**IPv4 CIDR**  
  
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

# Introducing Today's Project!

## What is Amazon VPC?

Amazon VPC is a virtual isolated network within the AWS public cloud where you can create subnets and launch instances in it. By creating VPC, you get full control on your virtual networking environment.

## How I used Amazon VPC in this project

First of all, I created a VPC other than the default VPC then i created a public subnet in that VPC and at last i attached a internet gateway to the VPC so that the instances in public subnet can access the internet

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

The one thing i didn't expect about this project is about the auto assign public IPv4 address which was configured to the subnet which i created.

## This project took me...

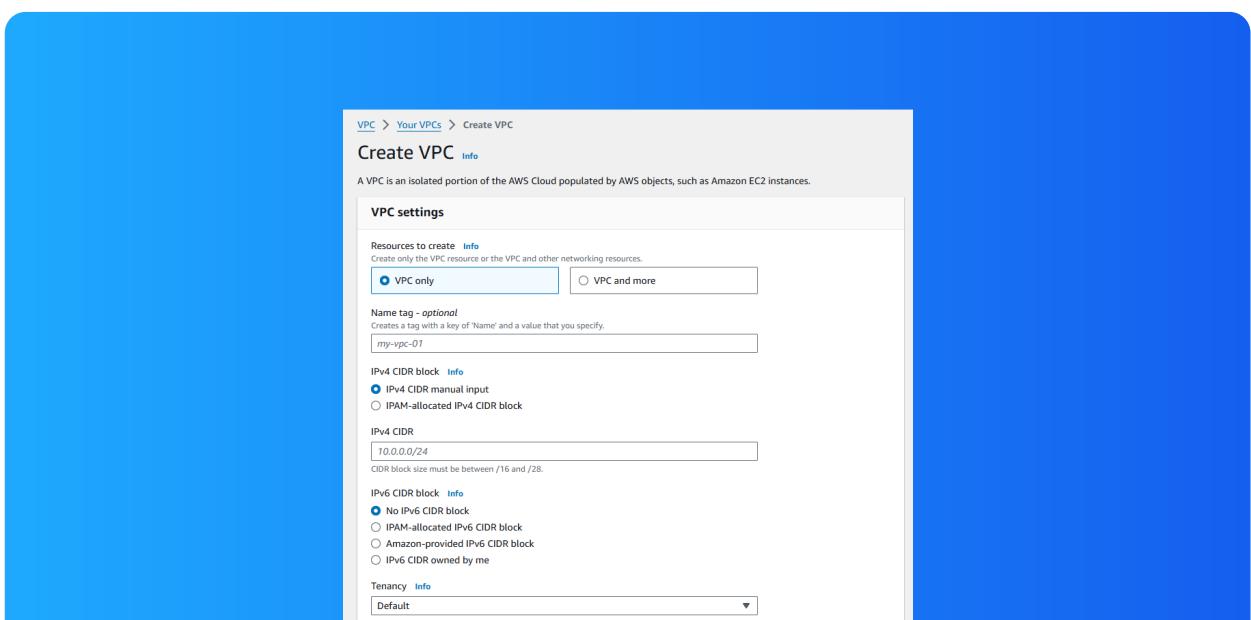
I took almost 1 hour 30 mins to complete this project as i am new to the AWS console and I got some hands on experience while doing this project.

# Virtual Private Clouds (VPCs)

VPCs are private, isolated networks within the AWS public cloud where you can launch and manage your resources securely. With a VPC, you get full control over your virtual networking environment. VPCs spread over all the availability zones in region.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS helps you quickly get started with the VPC service without needing to set up a VPC from scratch.

To set up my VPC, I had to define an Ipv4 CIDR, which means you specify a CIDR block which defines a range of IP addresses within the IPv4 address space for the entire VPC. For example, 10.0.0.0/16. The CIDR size should be between /16 to /28 in AWS



# Subnets

Subnets are smaller, subdivisions of a large network like VPC. Some subnets might be public areas that all resources can access (public subnets) while others are private areas with limited access (private subnets).

There are already subnets existing in my AWS account because of the default VPC provided by the AWS as it comes with predefined subnets in each availability zone in the region. These default subnets are ready to use to launch your resources.

I named my subnet Public 1, but that doesn't automatically make my subnet a public subnet because it must have a route to the internet gateway which should be attached to the VPC.

Subnets (1/4) <a href="#">Info</a>					
<input type="text"/> Find resources by attribute or tag					
Name	Subnet ID	State	VPC	IPv4 CIDR	
<input type="checkbox"/>	subnet-019a9d1503c63d49b	<span>Available</span>	vpc-00d43b35b05678449	172.31.32.0/20	<a href="#">Actions</a> <a href="#">Create subnet</a>
<input type="checkbox"/>	subnet-0559cd7edf7cc3a67	<span>Available</span>	vpc-00d43b35b05678449	172.31.0.0/20	
<input type="checkbox"/>	subnet-0cc5fce7175afdd38	<span>Available</span>	vpc-00d43b35b05678449	172.31.16.0/20	
<input checked="" type="checkbox"/>	Public 1	<span>Available</span>	vpc-0269a7991b6c2ca8a   my-...	10.0.0.0/24	

# Internet gateways

Internet gateways are those which are attached to the vpc of your choice. Through this internet gateways, the instances in the public subnet can access the internet and also these instances can be accessed by the external users.

Attaching an internet gateway to a VPC means that your instances in the public subnet can access the internet(outside world) and also these instances can be accessed by external users.

Internet gateways (2) <a href="#">Info</a>					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	-	igw-0f3b682b2bcd0fb95	Attached	vpc-00d43b35b05678449	203918853304
<input type="checkbox"/>	my-internet-gateway	igw-07b96a2e664adf751	Attached	vpc-0269a7991b6c2ca8a   my-vpc-01	203918853304



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