



# Build a Virtual Private Cloud



Juncheng Wang

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** Info  
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

### Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

No tags associated with the resource

You can add 50 more tags



# Introducing Today's Project!

## What is Amazon VPC?

Virtual Private Cloud (VPC) helps me to create my own private space that contains my own resources in the big AWS cloud.

## How I used Amazon VPC in this project

I created a new VPC, and set up a public subnet in it. I also attached a Internet Gateway to this VPC.

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

I learned something new about IPv4 CIDR.

## This project took me...

Round 1 hour



# Virtual Private Clouds (VPCs)

Virtual Private Cloud (VPC) is like managing your own city inside the whole AWS cloud country. It's like having a fenced-off piece of land online.

AWS provides a default VPC in each AWS account to help users to quickly get started such as creating an EC2 instance straight away without worrying about setting up a VPC.

I need to set up a block of IP addresses that follow the IPv4 standard.

The screenshot shows the 'Create VPC' page in the AWS Management Console. The breadcrumb trail at the top is 'VPC > Your VPCs > Create VPC'. The main heading is 'Create VPC' with an 'Info' icon. Below this, a note states: 'A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.' The 'VPC settings' section contains several options: 'Resources to create' with 'VPC only' selected; 'Name tag - optional' with a text input field containing 'my-vpc-01'; 'IPv4 CIDR block' with 'IPv4 CIDR manual input' selected and a text input field containing '10.0.0.0/16'; 'IPv6 CIDR block' with 'No IPv6 CIDR block' selected; and 'Tenancy' set to 'Default'. At the bottom, there is a 'Tags' section with an 'Add tag' button and a 'Create VPC' button.



# Subnets

If the VPC is like a city, subnets are like different neighborhoods inside the city. You use subnets to group resources with similar access rules and restrictions.

There are already subnets existing in my account, one for every Availability Zone of a Region.

I named my subnet Public 1, but that doesn't automatically make my subnet a public subnet. For a subnet to be considered public, it has to enable the auto-assign public IP address feature for the subnet or assign it manually.

**Subnet settings**  
Specify the CIDR blocks and Availability Zone for the subnet.

**Subnet 1 of 1**

**Subnet name**  
Create a tag with a key of 'Name' and a value that you specify.  
  
The name can be up to 256 characters long.

**Availability Zone** [Info](#)  
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

**IPv4 VPC CIDR block** [Info](#)  
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

**IPv4 subnet CIDR block**  
 256 IPs

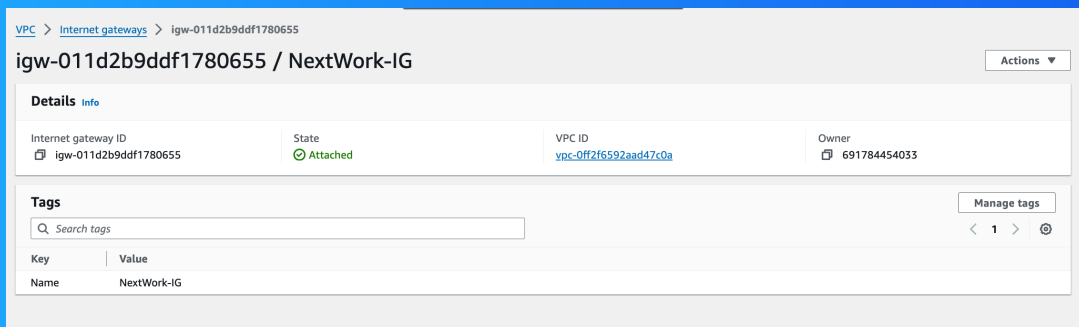




# Internet gateways

Internet gateways are the main entrance gate to the VPC. It allows data from the internet to enter and exit, facilitating communication between the VPC and the internet.

Attaching an internet gateway to a VPC means that the resources in the VPC can have access to the internet and be accessible to external users.





# Everyone should be in a job they love.

Check out [nextwork.org](https://nextwork.org) for  
more projects

