



Build a Virtual Private Cloud



James La

The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The current step is 'VPC settings'. The page title is 'Create VPC Info' and the sub-instruction is 'A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.' The 'VPC settings' section includes:

- Resources to create:** A radio button group with 'VPC only' selected (highlighted in blue) and 'VPC and more' unselected.
- Name tag - optional:** An input field containing 'NextWork VPC'.
- IPv4 CIDR block:** A radio button group with 'IPv4 CIDR manual input' selected (highlighted in blue) and 'IPAM-allocated IPv4 CIDR block' unselected.
- IPv4 CIDR:** An input field containing '10.0.0.0/16'.
- IPv6 CIDR block:** A radio button group with 'No IPv6 CIDR block' selected (highlighted in blue) and three other options unselected.
- Tenancy:** A dropdown menu set to 'Default'.



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Introducing Today's Project!

What is Amazon VPC?

An Amazon VPC is an isolated network where the owner of the VPC is able to manage different subnets and configure the rules within the VPC, like traffic rules and security measures.

How I used Amazon VPC in this project

Today, I created a subnet within the Amazon VPC and allocated specific IPs to the VPC and the subnet. I also created an Internet Gateway that would allow any traffic to go to and from the VPC to the internet.

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

I didn't expect how easy and intuitive this project was. Creating a VPC, a subnet and an internet gateway was very fluid and fast. I found it very beginner-friendly.

This project took me...

This project only took me about 30 minutes.



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Virtual Private Clouds (VPCs)

VPCs are an isolated section of a public cloud where you can utilize cloud resources in a virtual network.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS provides default VPCs in each AWS account so that we are able to use resources that require VPCs.

To set up my VPC, I had to assign an the whole block of addresses an IPv4 CIDR with 16 bits which means that the first 16 bits of the IP address are fixed and the remaining 16 bits are able to be any number within the range 0 to 255.

The screenshot shows the 'Create VPC' wizard in the AWS Management Console. The 'VPC settings' step is displayed. Under 'Resources to create', the 'VPC only' option is selected. A 'Name tag - optional' field contains 'NextWork VPC'. Under 'IPv4 CIDR', the value '10.0.0.0/16' is entered. Under 'IPv6 CIDR block', the 'No IPv6 CIDR block' option is selected. Under 'Tenancy', the 'Default' option is chosen.



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Subnets

Subnets are sub networks within a VPC where you can launch resources.

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

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 have the auto-assign public IPv4 address feature toggled on.

You have successfully changed subnet settings:
Enable auto-assign public IPv4 address

Last updated less than a minute ago

Actions Create subnet

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR association ID
Public 1	subnet-0ef6eb646c67d148d	Available	vpc-0b43bf956984b2476 Nex...	10.0.0.0/24	-	-



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Internet gateways

Internet gateways are access points that allow data to flow to and from the VPC and the internet.

Attaching an internet gateway to a VPC means that data is able to access the broader internet from within the VPC.

Internet gateways (2) Info					
<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	=	igw-078a1a371ecfc8a852	Attached	vpc-0b65e13a27aefb97f	841162672366
<input type="checkbox"/>	NextWork IG	igw-0009d92860cb07ff1f	Attached	vpc-0b458f936984b2476 NextWork VPC	841162672366



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