

Build a Virtual Private Cloud

[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.

k4nt 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

☐ Amazon-provided IPv6 CIDR block

☐ IPv6 CIDR owned by me

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a secure, isolated network in AWS that lets me define IP ranges, create subnets, and manage routing. It's useful for controlling traffic, securing resources, and connecting to the internet or on-premises networks

How I used Amazon VPC in this project

I used Amazon VPC to create an isolated network for my project. I set up a VPC, created subnets, and configured a route table. I also attached an Internet Gateway to enable public access and assigned public IPs to instances for external connectivity

This project took me...

This project took me around 10-15 min to complete. Setting up the VPC, subnets, and internet gateway was straightforward, but troubleshooting connectivity issues and configuring security settings took extra time to ensure everything worked properly.

Virtual Private Clouds (VPCs)

A Virtual Private Cloud (VPC) is an isolated network within a public cloud, allowing users to manage subnets, IPs, routing, and security. It provides scalable, private resources while leveraging cloud infrastructure for secure and flexible deployment. There was already a default VPC in my account ever since my AWS account was created. This is because AWS automatically provides a default VPC in each region, making it easier to launch instances with networking already configured.

To set up my VPC, I had to define an IPv4 CIDR block, which is a range of IP addresses used for networking. It determines the number of available IPs and how they are allocated within the VPC. For example, 10.0.0.0/16 provides around 65,536 IPs.

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Subnets

Subnets are smaller network segments within a VPC that help organize and control traffic flow. There are already subnets existing in my account, one for every Availability Zone in the default VPC, ensuring high availability and fault tolerance. Once I created my subnet, I enabled auto-assign public IPv4 addresses. This setting makes sure instances launched in the subnet get a public IP so that they can communicate over the internet without needing manual IP assignment or an Elastic IP.

The difference between public and private subnets is internet access. For a subnet to be public, it must have a route table pointing to an Internet Gateway and instances must have a public IPv4 or Elastic IP to communicate outside the VPC.

Subnets (1/4) Info

Last updated 5 minutes ago

Actions

Create subnet

Find resources by attribute or tag

< 1 >

<div><div></div></div>	Name	Subnet ID	State	VPC	Block Public...
<div><div></div></div>	-	subnet-0bfcaba7586f1b931	<div><div></div>Available</div>	vpc-037a1f8b79316d8a9	<div><div></div>Off</div>
<div><div></div></div>	-	subnet-01c743c802cc38b63	<div><div></div>Available</div>	vpc-037a1f8b79316d8a9	<div><div></div>Off</div>
<div><div></div></div>	-	subnet-0a723f0498f8c19d5	<div><div></div>Available</div>	vpc-037a1f8b79316d8a9	<div><div></div>Off</div>
<div><div></div></div>	Public 1	subnet-09a6f759a3d410da4	<div><div></div>Available</div>	vpc-02638f714401eb00e k4nt...	<div><div></div>Off</div>

Internet gateways

Internet gateways are AWS components that connect a VPC to the internet, enabling traffic between public subnets and external networks. They work with route tables to allow instances with public IPs to send and receive data over the internet.

Attaching an internet gateway to a VPC allows public subnet instances to access the internet. If I missed this step, instances wouldn't connect externally, even with public IPs, because no route to the internet would exist in the VPC's route table.

Internet gateways (2) [Info](#)



<input type="checkbox"/>	Name	<input type="checkbox"/>	Internet gateway ID	<input type="checkbox"/>	State
<input type="checkbox"/>	-	<input type="checkbox"/>	igw-0a36e4773e024895f	<input type="checkbox"/>	✔ Attached
<input type="checkbox"/>	k4nt IG	<input type="checkbox"/>	igw-00eb04a9a43e90bfd	<input type="checkbox"/>	✔ Attached