



# Build a Virtual Private Cloud (VPC)



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The screenshot shows the 'Create VPC' wizard on the AWS VPC console. The steps are:

- VPC settings**:
  - Resources to create**: **VPC only** (selected)
  - Name tag - optional**: `dray-vpc`
  - IPv4 CIDR block**: `10.0.0.0/16`
  - IPv6 CIDR block**: **No IPv6 CIDR block** (selected)
  - Tenancy**: `Default`
- Tags**: A tag named `Name` with value `dray-vpc`.

# Introducing Today's Project!

## What is Amazon VPC?

Amazon VPC is a fundamental networking tool which creates a private space in the AWS region. It provides security and it becomes easy to manage AWS resources due to Amazon VPC.

## How I used Amazon VPC in this project

It is the first project of nine projects and in this project I had used it to create VPC, public subnet and Internet Gateway.

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

I had never expected that it will be so easy to create VPC and subnet and the concept of Internet Gateway is also something new for me.

## This project took me...

This project is a simple one and it takes near to 1 hr.

# Virtual Private Clouds (VPCs)

VPCs are like a city in the country i.e. Aws region. It plays an important role in providing privacy within the region and also managing resources become simpler with the VPCs.

There was already a default VPC in my account ever since my AWS account was created. This is because many AWS resources required vpc like ec2 instance so for new users aws provide a default vpc. With Default vpc we can do basic work on AWS.

To set up my VPC, I had to define an IPv4 CIDR block, which is a set of addresses which can be assign to the resources inside the vpc. It can also be considered as a range of addresses for the city i.e. VPC.



The screenshot shows the 'Create VPC' wizard in the AWS VPC console. The 'VPC settings' step is selected. Configuration includes:

- Resources to create:** VPC only (selected)
- Name tag - optional:** dray-vpc
- IPv4 CIDR block:** 10.0.0.0/16
- IPv6 CIDR block:** No IPv6 CIDR block selected
- Tenancy:** Default
- Tags:** A single tag named 'Name' with value 'dray-vpc' is added.

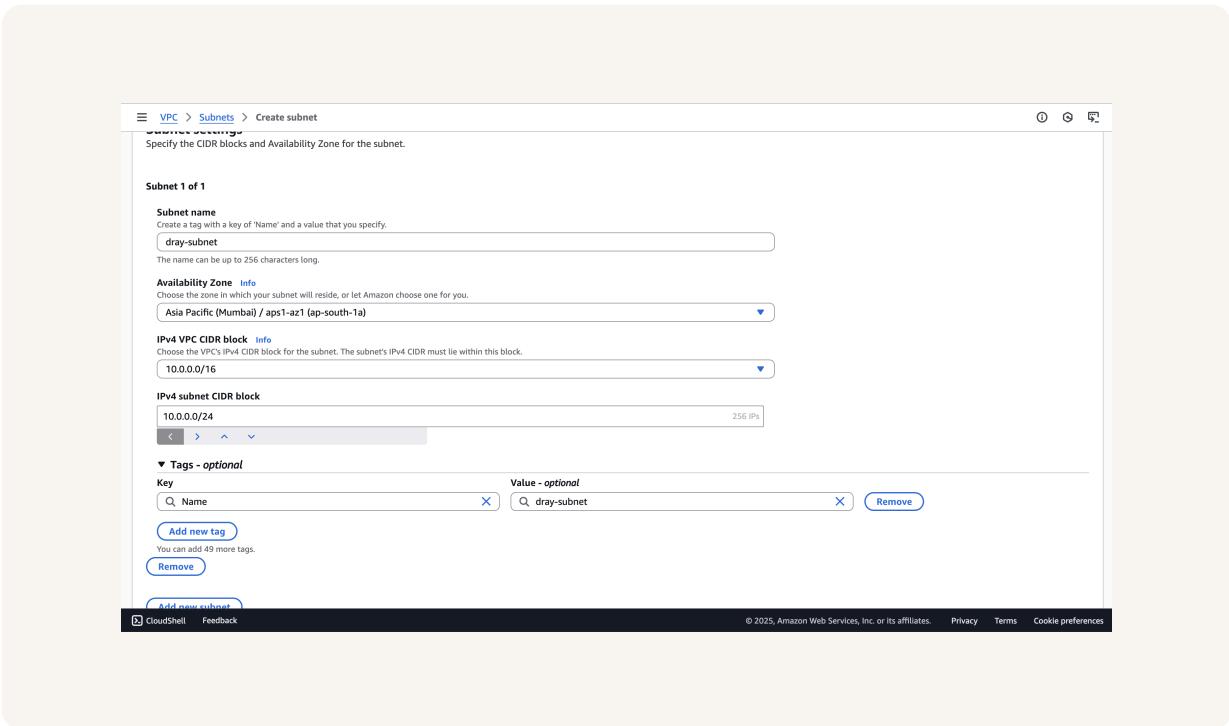
The URL in the browser is ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1&CreateVpc=createMode=vpcOnly

# Subnets

Subnets are division within the VPC There are already subnets existing in my account, one for every Availability zone.

Once I created my subnet, I enabled auto-assign public IPv4 addresses This setting makes sure that it gets a public IP so that it can be connected to the internet.

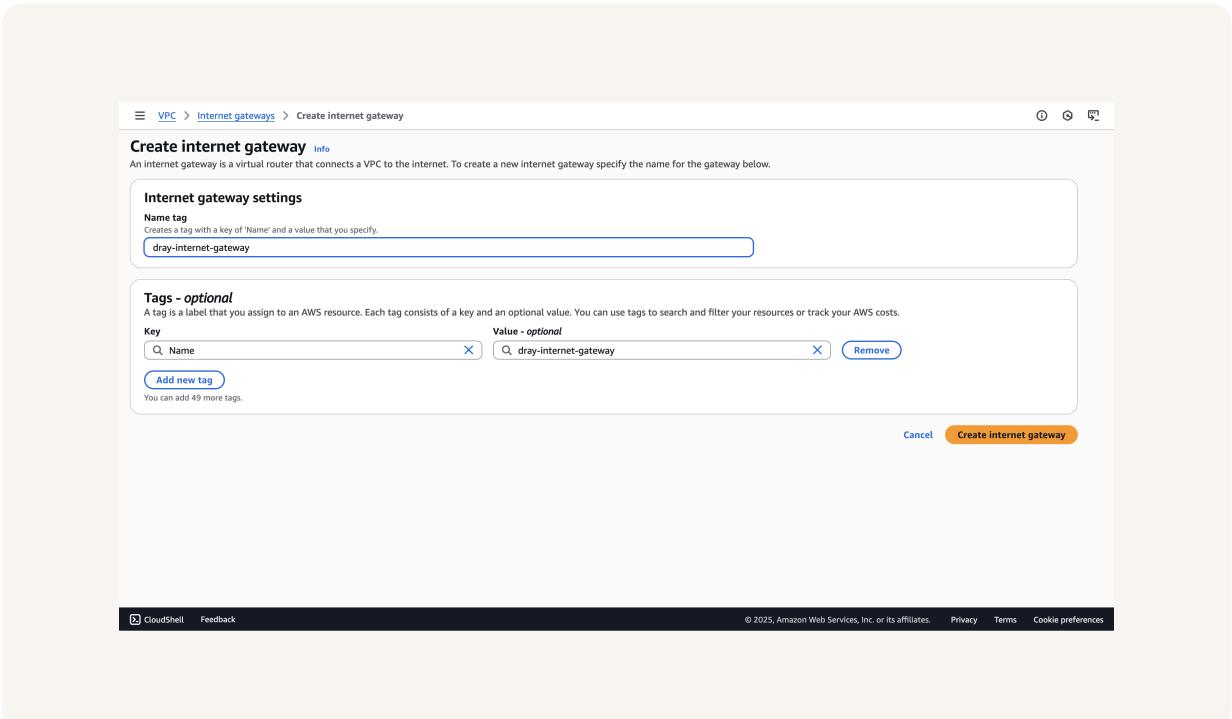
The difference between public and private subnets is that public subnet resources have the ability to access the internet, while private subnet resources cannot. For a subnet to be considered public, it must connect to an internet gateway.



# Internet gateways

Internet gateways are like a bridge to connect the resources inside the vpc to the internet.

Attaching an internet gateway to a VPC means creating a bridge between resources inside VPC and internet If I missed this step the resources cant access the internet and it will be a private subnet.





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