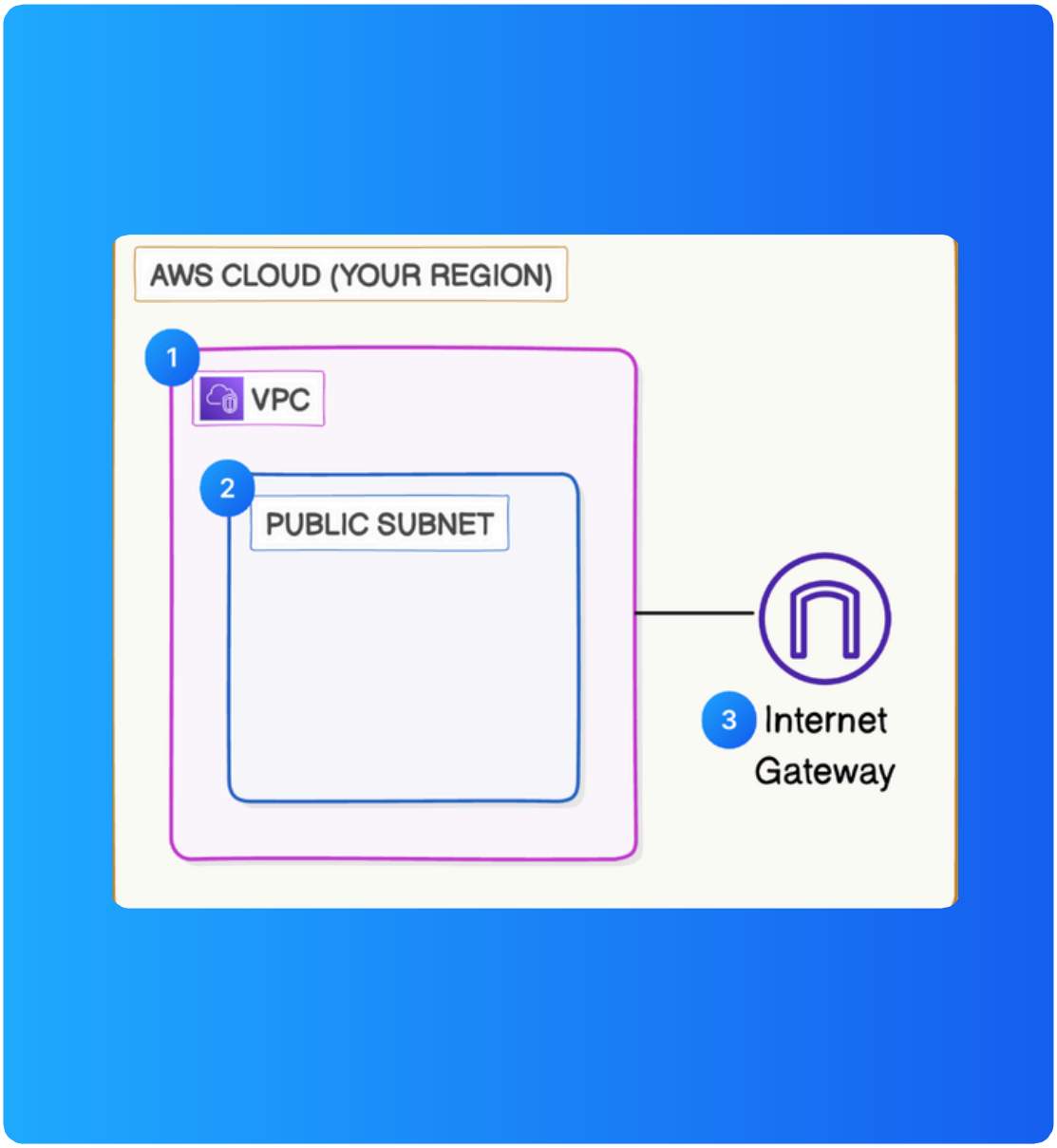
Build a Virtual Private Cloud

Praveen Bandara



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Introducing Today's Project!

What is Amazon VPC?

Amazon Virtual PrivateCloud(VPC) is a service that allows you to create a logically isolated network in the AWS cloud. It gives you full control over your virtual networking environment, including the selection of your IP address range.

How I used Amazon VPC in this project

In today'sproject, I used Amazon VPC to create asecure,isolated network environment, setting up public subnets for web servers and private subnets for databases.I configured security groups and routing tables to manage traffic.

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

Onething I didn't expect in this project was the complexity ofmanaging network traffic between multiple subnets. Configuring the routing tables and security groups to ensure seamless communication.

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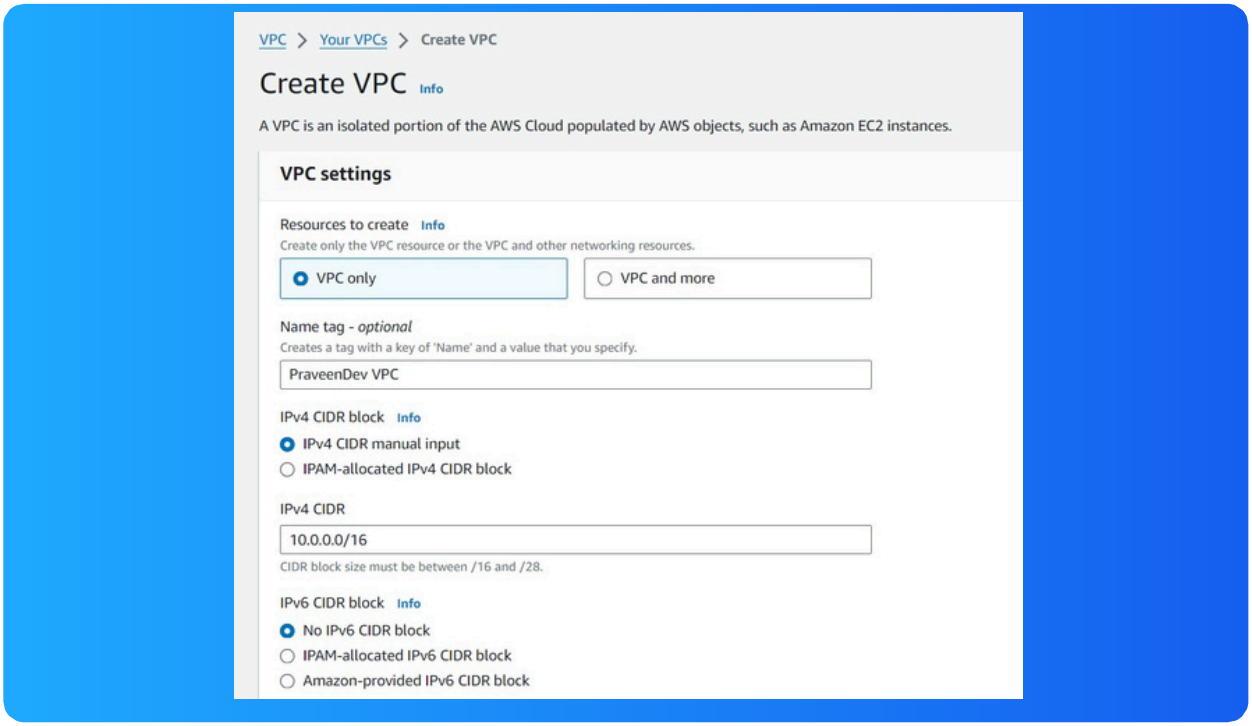
Virtual Private Clouds VPCs

VPCs are isolated section of the AWS Cloud that help to keep my AWS resources private and secure.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS has set up a default VPC to allow me to deploy resources like EC2 instances/RDS databases right away.

To set up my VPC, I had to define an IPv4 CIDR, which means a range of IP addresses that my VPC can allocate to the resources deployed into my VPC.



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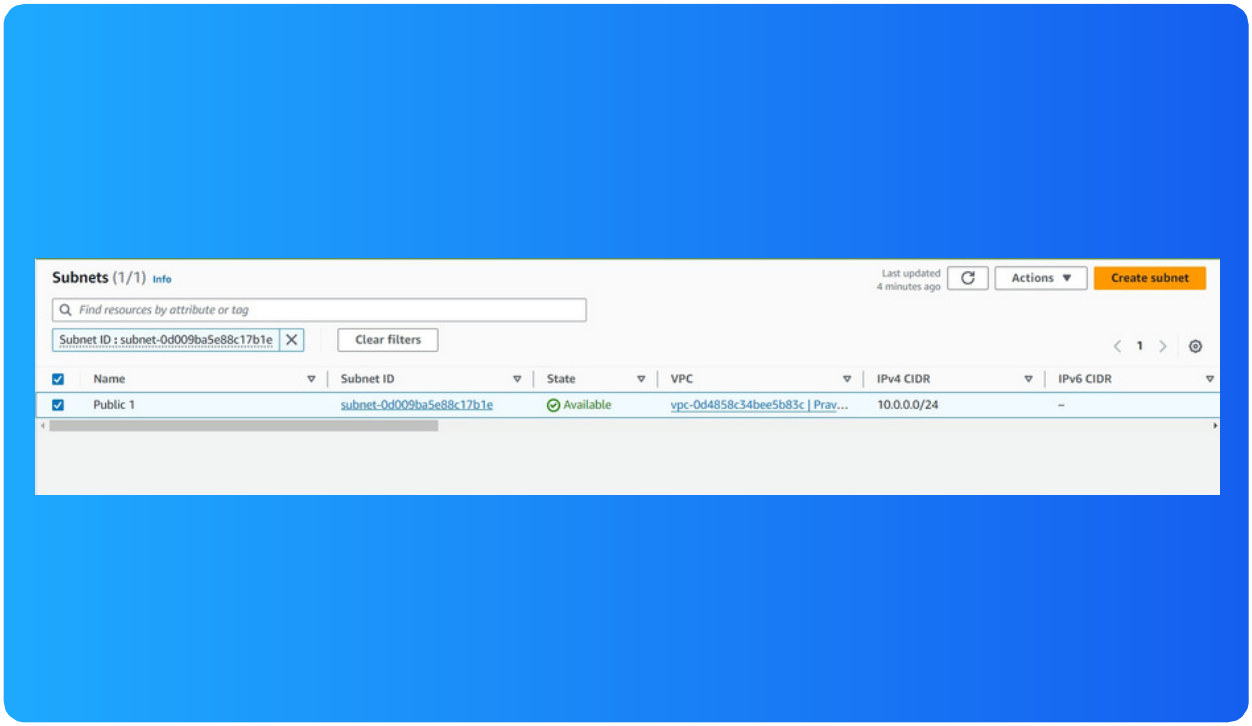
Subnets

Subnets are subsections of my VPC, just like how neighbourhoods are subsections of a city.

There are already subnets existing in my account, one for every Availability Zone in the Region that I've set up my VPC in. Since my region is Mumbai (ap-south-1), which has 3 Availability Zones, I have three default subnets already.

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 a router to an internet gateway.



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Internet gateways

Internet gateways are the key VPC components that allows internet access for the resources in my VPC/subnet. An internet gateway is also how users in the public can access my resources in a public subnnet.

Attaching an internet gateway means resources in your VPC can now access the internet. The EC2 instances with public IP addresses also become accessible to users, so your applications hosted on those servers become public too.