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Build a Virtual Private Cloud

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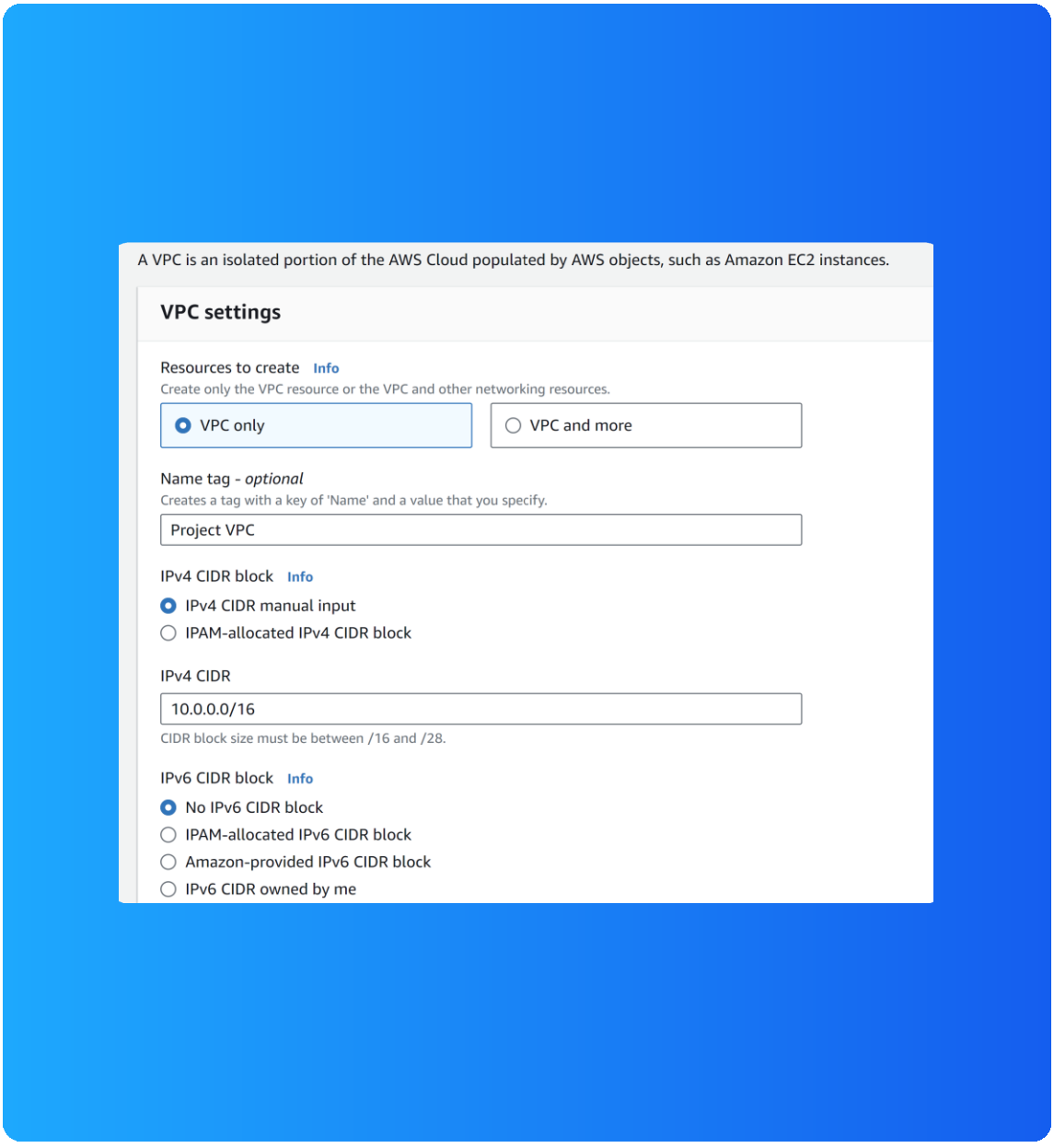

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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) exists within an AWS region and is used to build a private and secure connection for resources in the subnets. Through an internet gateway, these resources and users can access internet to communicate each other.

How I used Amazon VPC in this project

I used Amazon VPC in today's project to build a connection to the internet via an internet gateway. I also assigned a CIDR block to my VPC and created a subnet for my resources to access the internet, as well as for users to access those resources.

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

One thing I did not expect in this project was learning how the CIDR block works for both the VPC and subnets.

This project took me...

The entire project, including writing the report, took me an hour and a half to complete.

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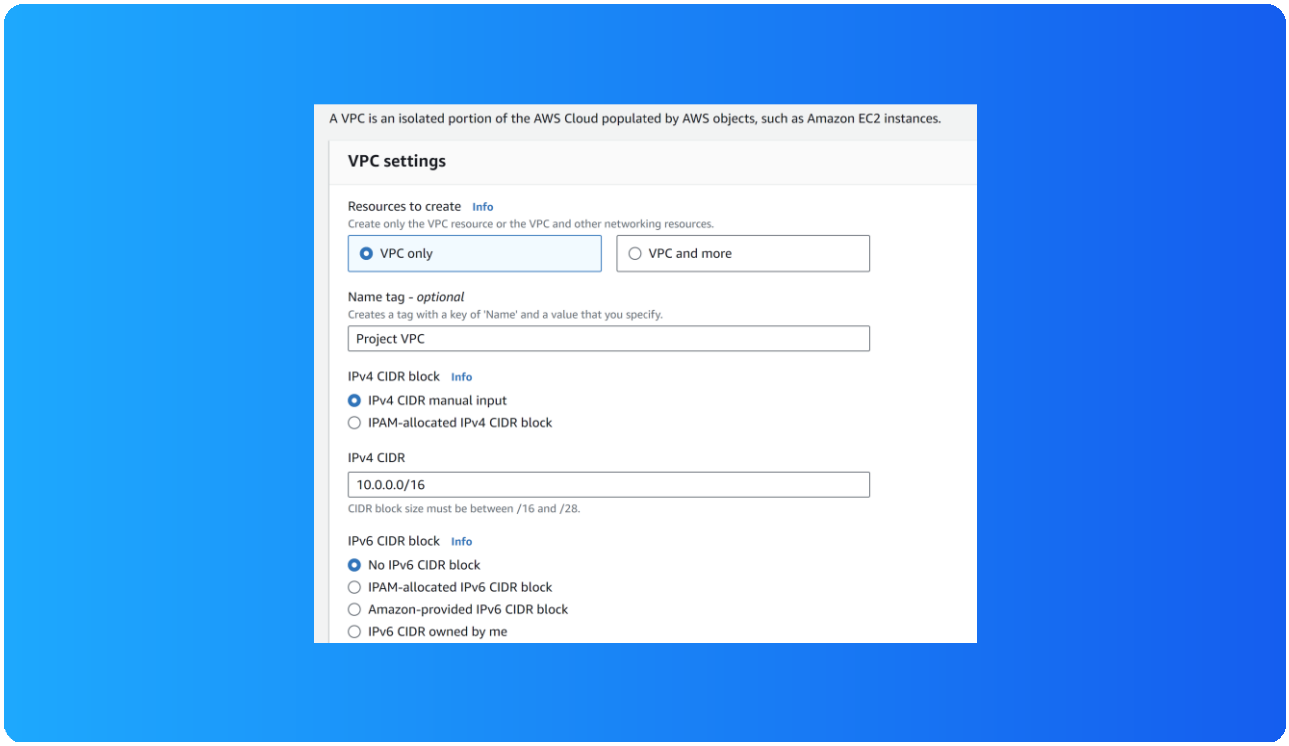
Virtual Private Clouds VPCs

A Virtual Private Cloud (VPC) is an isolated section of the AWS cloud that allows you to securely host and control resources, ensuring they remain private and protected.

There has been a default VPC in my account since my AWS account was created. This is because AWS sets up a default VPC to allow me to deploy resources like EC2 instances and RDS databases immediately without having to create a VPC from scratch.

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



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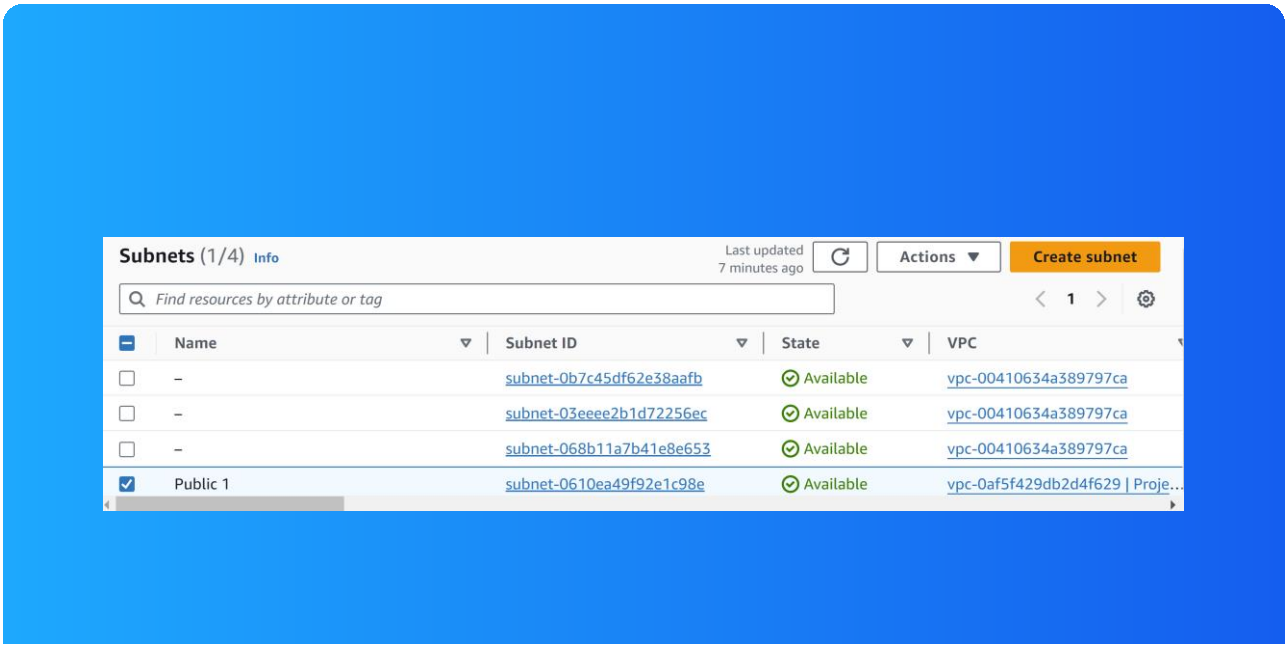
Subnets

Subnets are subdivisions of my VPC's CIDR block (range of IP addresses) where AWS resources, such as EC2 instances and RDS databases, can be placed. Each subnet is defined by its own CIDR block, which is a subset of the VPC's CIDR block.

There are already subnets existing in my account, with one for each Availability Zone in the Sydney region (ap-southeast-2). Since this region has three Availability Zones, I have three subnets set up.

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 must be routed to an internet gateway.



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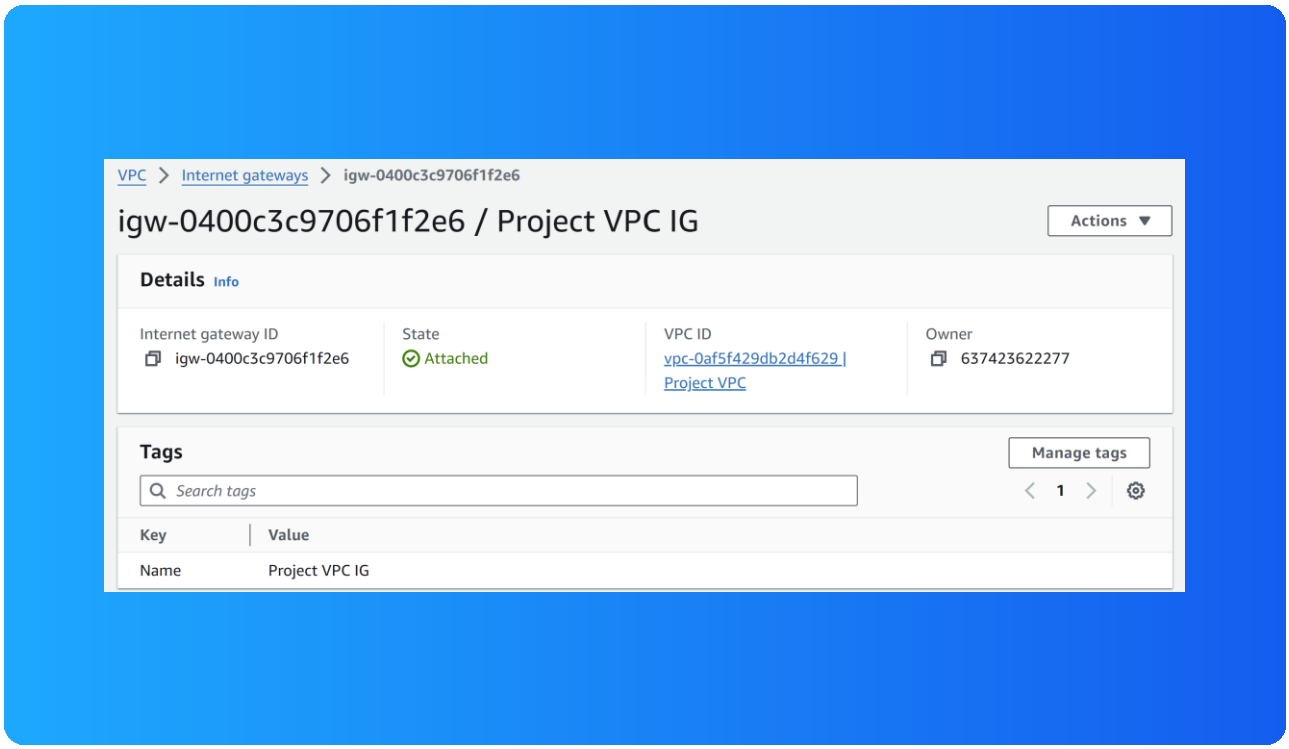
Internet gateways

Internet gateways are components of my VPC that allow resources within the VPC's subnets to access the internet. They also enable external users to access the resources in my VPC's public subnets.

Attaching an internet gateway to a VPC allows resources in the VPC's subnets to access the internet. EC2 instances with public IPs can also become accessible to external users, making the applications hosted on those instances publicly available.



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