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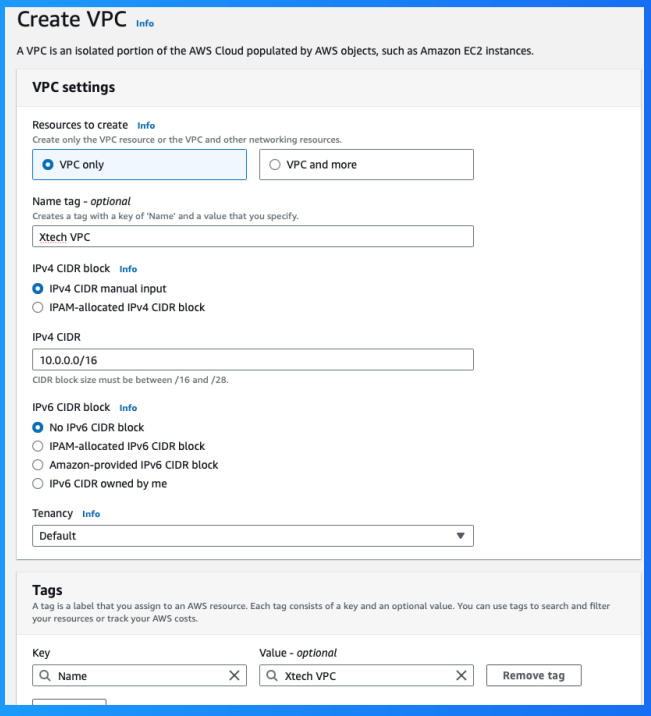
Build a Virtual Private Cloud

victor ibhafidon



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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC (Virtual Private Cloud) is a customizable, isolated network in the AWS cloud. It allows you to control network settings, like IP ranges, subnets, and gateways. VPC enhances security and privacy, ensuring your AWS resources remain protected

How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create a secure, isolated environment for my resources. defined subnets for different tiers, attached an internet gateway for public access, and setup security groups and NACLs to control traffic, ensuring sec

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

what I did not expect is that while I have set up an internet gateway and attached it to a vpc, I still have to set up route tables which will help EC2 instances/resources in my VPC to find their way to the internet gateway attached to my VPC-

This project took me...

it took me less than an hour including drafting up documentation

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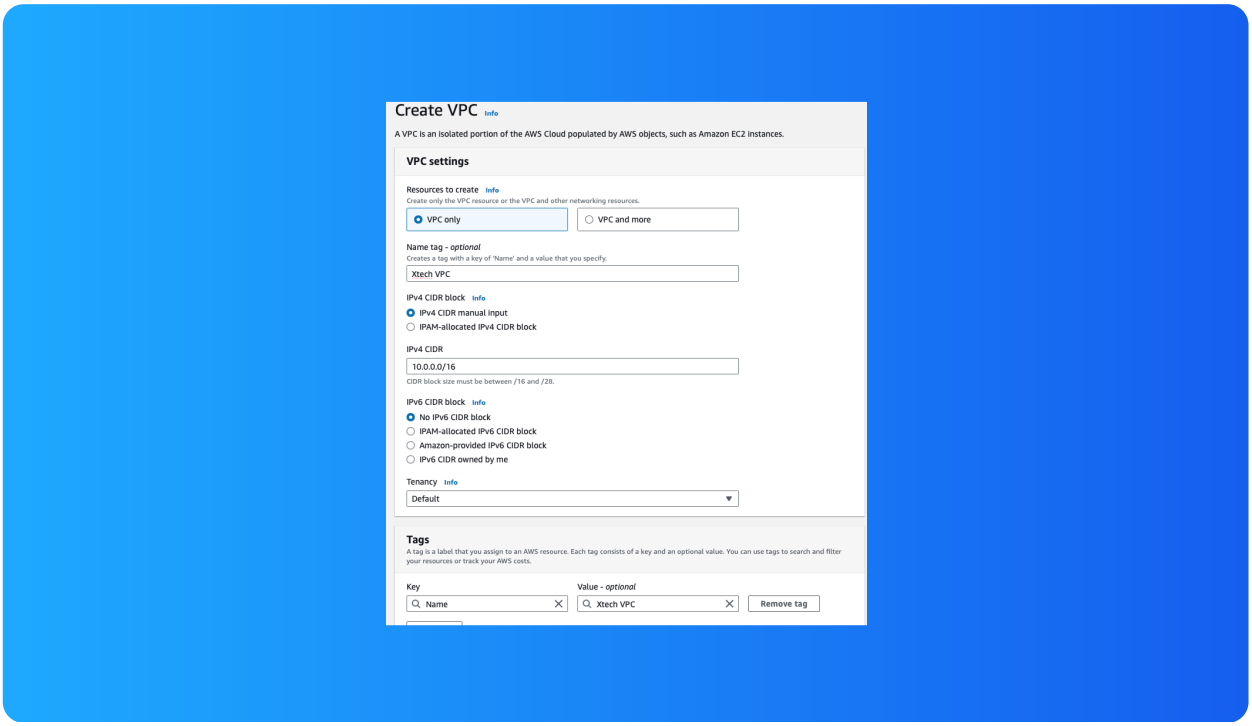
Virtual Private Clouds (VPCs)

A Virtual Private Cloud (VPC) is an isolated section of the AWS cloud that allows me to securely launch AWS resources in a virtual network. You can control aspects like IP address ranges, subnets, route tables, and network gateways within the VPC.

There was already a default VPC in my account because AWS has set up a default VPC to allow me deploy resources like EC2 instances/RDS DB right away.

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



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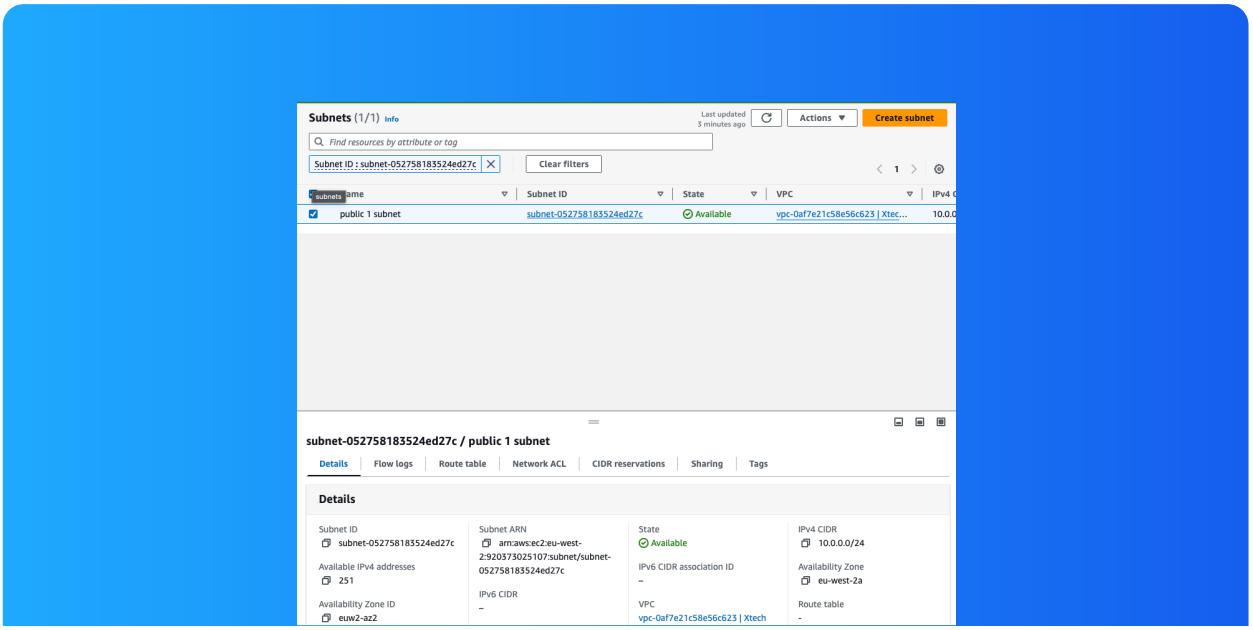
Subnets

Subnets are subdivisions of a VPC, like neighborhoods within a city, each with its own distinct area. Just as neighborhoods have different access roads, subnets manage traffic with routes, gateways, and security rules.

there are already subnets existing in my account, one for every availability zone in the region(uk London) that I have set up my VPC in. since my region (uk London) had 3 availability zones, I have 3 default subnets already

Naming a subnet "Public 1" doesn't make it public. A public subnet must have a route to an internet gateway (IGW) to enable communication with the internet. Additionally, the subnet's associated Network Access Control List (NACL) and Security Groups



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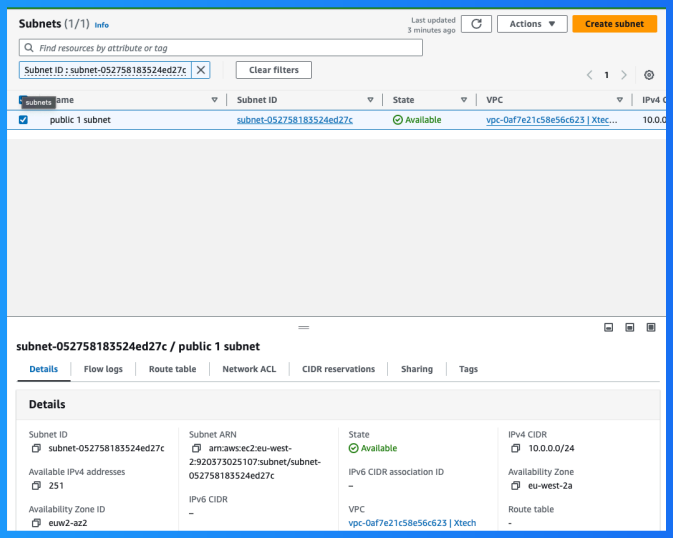
Internet gateways

Internet gateways are VPC components that allows internet access for the resources in my VPC/subnet. it allows external users to access my resources in a public subnet. It supports bidirectional traffic, allowing instances within public subnets

Attaching an IG to a VPC means resources in public subnets can communicate with the internet. It enables inbound & outbound traffic, allowing instances to access external services while still applying security controls like NACLs and security groups



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