



Build a Virtual Private Cloud



victor ibhafidon

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.

Xtech 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

Tenancy Info
Default

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key Value - optional
Name Xtech VPC Remove tag

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. I defined subnets for different tiers, attached an internet gateway for public access, and setup security groups and NACLs to control traffic, ensuring security.

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

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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Key	Value - optional
<input type="text"/> Name	<input type="text"/> Xtech VPC

Remove tag

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

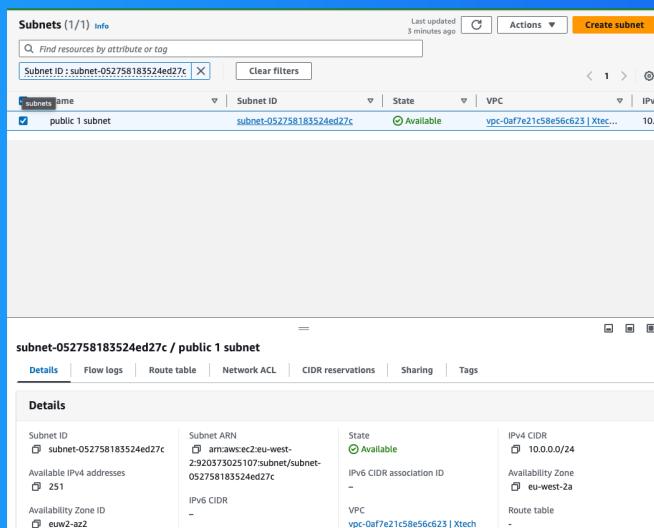
The screenshot shows the AWS Subnets console with the following details:

Subnet ID	Subnet ARN	State	IPv4 CIDR
subnet-052758183524ed27c	arn:aws:ec2:eu-west-2:920373025107:subnet/subnet-052758183524ed27c	Available	10.0.0.0/24

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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