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Build a Virtual Private Cloud (VPC)



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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.

IPv4 CIDR block Info
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block
IPv4 CIDR

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



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Introducing Today's Project!

What is Amazon VPC?

Amazon VPC is a service used to create and manage isolated cloud resources. It is useful because we want to be able to keep our resources in one place where we can easily find and manage them away from external access.

How I used Amazon VPC in this project

I accessed it through the management console and used it to build an internal network for my resources.

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

How easy it is to navigate the UI.

This project took me...

Barely 10 minutes.

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Virtual Private Clouds (VPCs)

VPCs are isolated environments in which users can keep resources away from the public. They are like internal networks.

There was already a default VPC in my account ever since my AWS account was created. This is because AWS wants it to be faster and easier to deploy resources, especially for beginners.

To set up my VPC, I had to define an IPv4 CIDR block, which is a range of IPv4 addresses available to be assigned to any resource deployed in the VPC. This is done to enable resources to communicate with each other.

The screenshot shows the 'Create VPC' configuration page. At the top, there's a brief description: 'A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.' Below this is a section titled 'VPC settings' with a sub-section 'Resources to create'. It offers two options: 'VPC only' (selected) and 'VPC and more'. A note below says 'Create only the VPC resource or the VPC and other networking resources.' Under 'Name tag - optional', there's a text input field containing 'SacNet'. The next section is 'IPv4 CIDR block' with a sub-section 'Info'. It has two options: 'IPv4 CIDR manual input' (selected) and 'IPAM-allocated IPv4 CIDR block'. Below this is a text input field containing '192.168.1.0/24'. A note says 'CIDR block size must be between /16 and /28.' The final section is 'IPv6 CIDR block' with a sub-section 'Info'. It has four options: 'No IPv6 CIDR block' (selected), 'IPAM-allocated IPv6 CIDR block', 'Amazon-provided IPv6 CIDR block', and 'IPv6 CIDR owned by me'. The last section is 'Tenancy' with a sub-section 'Info' and a dropdown menu currently showing 'Default'.

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Subnets

Subnets are smaller networks 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 addresses are automatically assigned to resources deployed in the subnet so that we don't have to configure them separately for each deployed resource.

The difference between public and private subnets is their ability to communicate with the Internet. For a subnet to be considered public, it has to be provided with an internet gateway.

The screenshot shows a list of subnets in an AWS management console. The header reads "Subnets (1/1) Info". Below it is a search bar with placeholder text "Find subnets by attribute or tag". A filter bar shows "Subnet ID : subnet-0249d1dd2c5a6220b" and a "Clear filters" button. The main table has columns: Name, Subnet ID, State, and VPC. The first row, "Public 1", is selected and shows the details: Subnet ID "subnet-0249d1dd2c5a6220b", State "Available", and VPC "vpc-0a80bd992fb168a73 | Sac...".

Name	Subnet ID	State	VPC
Public 1	subnet-0249d1dd2c5a6220b	Available	vpc-0a80bd992fb168a73 Sac...

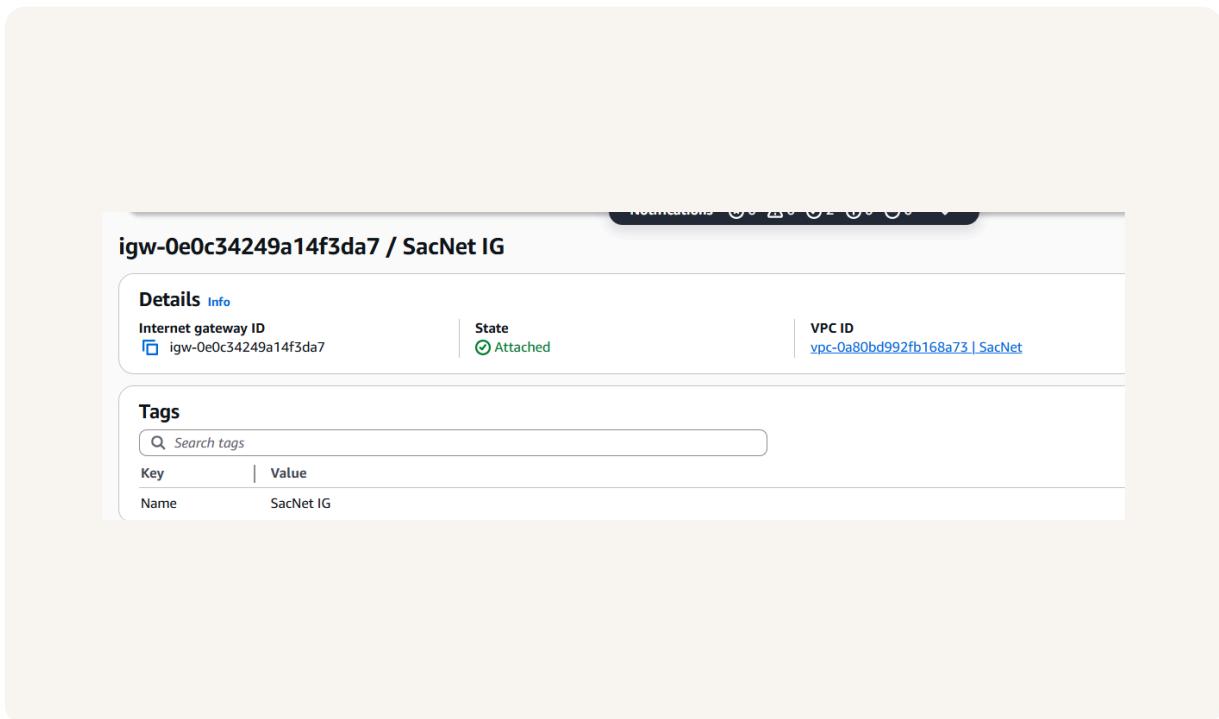
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Internet gateways

Internet gateways are the bridge between the isolated resources in the VPC and the public internet.

Attaching an internet gateway to a VPC means resources can now communicate with the internet. If I missed this step, there will be no internet connectivity.





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