10 AWS Default Virtual Private Cloud (VPC) Facts: that every cloud engineer should know

Fact 1: Default VPC

What is Default VPC?

A default VPC is a logically isolated virtual network in the AWS Cloud that is automatically created for your AWS account the first time you provision Amazon EC2 resources.

Why use Default VPC?

Default VPCs make it **easier to set up**, **manage**, and **scale** your AWS resources as your needs grow. They also provide the ability to communicate with the internet, which can be essential for many applications.

How to use Default VPC?

When you launch an instance without specifying a subnet-ID, your instance **will be launched in your default VPC.**

Not using then be ready with?

If you don't use the default VPC, you'll need to set up and configure your own custom VPC which can add complexity to your AWS setup.

Fact 2: Default Subnets

What is Default Subnets?

Each default VPC comes with a default subnet in each Availability Zone.

Why use Default Subnets?

They allow you to start deploying your instances right away, without the need to worry about network configuration.

How to use Default Subnets

When you create an EC2 instance in a specific Availability Zone without specifying a subnet, it will be automatically assigned to the default subnet of that Availability Zone.

Not using then be ready with?

If you decide not to use default subnets, you need to create and configure your own subnets, adding to your administrative tasks.

Fact 3: Internet Connectivity

What is Internet Connectivity in Default VPC?

All default VPCs come with a pre-configured internet gateway to allow all your instances internet access.

Why use Internet Connectivity in Default VPC?

This provides your instances with the ability to access the internet and enables internet traffic to reach your instances.

How to use Internet Connectivity in Default VPC?

You don't need to manually set this up; it's automatically configured with the creation of a default VPC.

Not using then be ready with?

If you aren't using a default VPC and require internet access, you'll need to manually attach an internet gateway to your custom VPC.

Fact 4: Default Security Group

What is Default Security Group?

In a default VPC, every instance that you launch is automatically associated with the default security group if you don't specify a different security group at launch.

Why use Default Security Group?

It acts as a built-in firewall for controlling inbound and outbound traffic at the instance level.

How to use Default Security Group?

This is automatically assigned at instance launch if no other security group is specified.

Not using then be ready with?

If you're not using the default security group, you must set up your own custom security groups, and ensure that your instances are associated with them.

Fact 5: Auto-assign Public IP

What is Auto-assign Public IP?

AWS can automatically assign a public IP address to your instances at launch in a default VPC.

Why use Auto-assign Public IP?

This allows your instances to be immediately reachable from the internet.

How to use Auto-assign Public IP?

This feature is automatically enabled for all instances launched in a default VPC, unless specified otherwise.

Not using then be ready with?

If you disable this feature, you'll need to manually assign public IP addresses or use Elastic IPs if you want your instances to be reachable from the internet.

Fact 6: Default Route Table

What is Default Route Table?

Each default VPC comes with a default route table that controls the traffic flow of the subnets.

Why use Default Route Table?

It simplifies the process of managing traffic routes for your instances.

How to use Default Route Table?

This is automatically assigned when a default VPC is created.

Not using then be ready with?

If you're not using the default route table, you must create and manage your own route tables.

Fact 7: Default NACL

What is Default NACL?

Each default VPC has a modifiable network access control list (NACL) that controls inbound and outbound traffic at the subnet level.

Why use Default NACL?

It provides an additional layer of security for your subnets in a VPC.

How to use Default NACL?

This is automatically assigned when a default VPC is created.

Not using then be ready with?

If you don't use the default NACL, you will need to create and manage your own NACLs.

Fact 8: Default VPC Deletion

What is Default VPC Deletion?

You can delete a default VPC, but it can't be restored to your account.

Why consider Default VPC Deletion?

You might delete it if you want a non-default VPC environment.

How to manage Default VPC Deletion?

Default VPC deletion can be performed through the AWS Management Console, AWS CLI, or AWS SDKs.

Not using then be ready with?

If you delete your default VPC, be prepared to manage and configure your own custom VPCs.

Fact 9: Main Route Table

What is Main Route Table?

The main route table controls the default traffic routing for all the subnets in your default VPC.

Why use Main Route Table?

It simplifies the management of traffic routing for all your subnets.

How to use Main Route Table?

This is automatically assigned when a default VPC is created.

Not using then be ready with?

If you're not using the main route table, you must create and manage your own route tables.

Fact 10: VPC Peering with Default VPC

What is VPC Peering with Default VPC?

You can establish VPC peering connections between your default VPC and other VPCs in your AWS account or with a different AWS account in the same region or between regions.

Why use VPC Peering with Default VPC?

This allows you to route traffic between VPCs using private IPv4 addresses or IPv6 addresses.

How to use VPC Peering with Default VPC?

You can create a VPC peering connection using the Amazon VPC console, AWS CLI, or AWS SDKs.

Not using then be ready with?

If you're not using VPC peering, you need to be prepared to manage communication between VPCs via different methods, such as VPNs or AWS Direct Connect.