

Devops Assignment-3

Praveen Kumar Chukkapalli

Creating a new VPC in AWS :

→ CIDR Range is 10.0.0.0/16 which gives 65,536 usable Ip's

us-east-1.console.aws.amazon.com/vpconsole/home?region=us-east-1#CreateVpc:createMode=vpcOnly

aws Services Search [Option+S]

VPC > Your VPCs > Create VPC

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.

My_First_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

Done with new VPC Creation

us-east-1.console.aws.amazon.com/vpconsole/home?region=us-east-1#VpcDetails:VpcId=vpc-0ca1a7804dd34364c

aws Services Search [Option+S]

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You successfully created vpc-0ca1a7804dd34364c / My_First_VPC

VPC > Your VPCs > vpc-0ca1a7804dd34364c

vpc-0ca1a7804dd34364c / My_First_VPC [Actions](#)

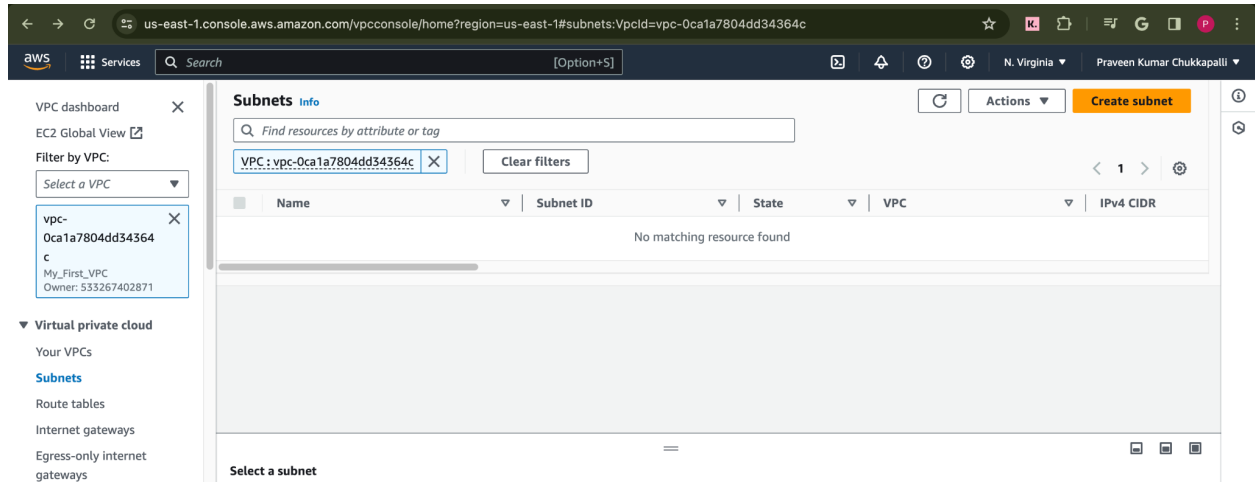
Details [Info](#)

VPC ID vpc-0ca1a7804dd34364c	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-07757af0e9b2ee585	Main route table rtb-06ef716e1732a12df	Main network ACL acl-041c4f772cadbd1cf
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 533267402871	

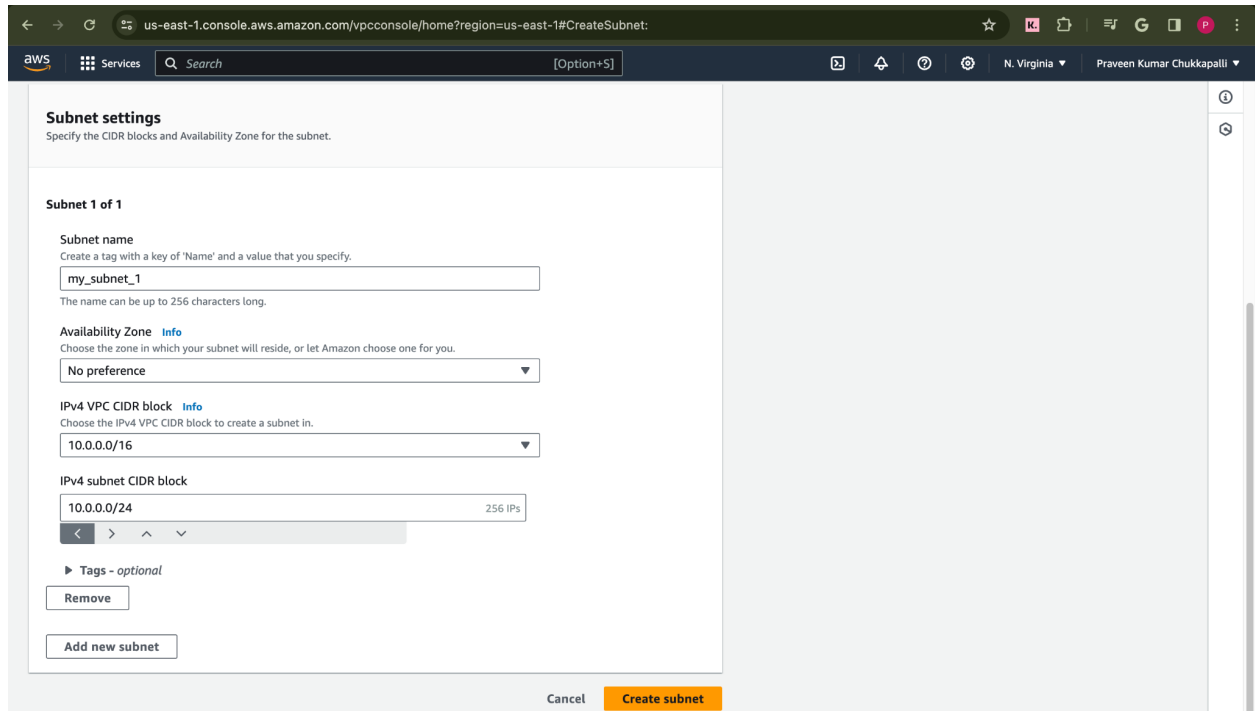
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Defining Subnets in the created VPC :



Creating Subnet -1 with subnet CIDR Range (10.0.0.0/24):



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Creating subnet-2 with CIDR Range (10.0.1.0/24): :

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the IPv4 VPC CIDR block to create a subnet in.

IPv4 subnet CIDR block
 256 IPs
< > ^ v

Tags - optional

Two Subnets have been created within the created VPC and each subnet usable IP's are 251 (should be 256) as first 4 and last IP address of CIDR range will be reserved by AWS.

Subnets (2) [Info](#)

VPC: vpc-0ca1a7804dd34364c

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR
<input type="checkbox"/>	my_subnet_1	subnet-0f99c127fb3ab5ee2	Available	vpc-0ca1a7804dd34364c My...	10.0.0.0/24
<input type="checkbox"/>	my_subnet_2	subnet-0237181711aa3d95a	Available	vpc-0ca1a7804dd34364c My...	10.0.1.0/24

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Agile vs DevOps

Agile:

- Focus primarily on iterative development and incremental delivery of software.
- Agile is mainly a development methodology.
- Its primary Goal is to deliver a high-quality product through frequent releases and customer feedback.

DevOps:

- Focus primarily on Collaboration and automation across the entire software development lifecycle.
- DevOps includes both development and operations.
- Its primary Goal is to achieve faster, more reliable software delivery through continuous integration and deployment(CI/CD).

DevOps KPI's :

Key Performance Indicators (KPIs) in DevOps are crucial for measuring the efficiency, effectiveness, and overall success of the development and operations processes. Some of the Popular KPI's are :

1. Deployment Frequency
2. Lead Time for Changes
3. Mean Time to Recover (MTTR)
4. Change Failure Rate
5. Deployment Success Rate
6. Infrastructure as Code (IaC) Compliance
7. Code Churn
8. Test Automation Coverage etc.