Ganpat University
॥ विद्यया समाजोत्कर्षः ॥
Institute of Computer Technology

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Sub: CCE(Cloud Computing Essentials)

Branch: CBA

Batch:71

----------PRACTICAL 06----------

Zara and her Team Members are associated with a start-up company as a solution architects which provides consultancy solutions on AWS Cloud Platform. They got their project and details as follows:

They have users who are going to work on their project. Task is to create an isolated network for their project using VPC. In three tier architecture there is one web server and one database server given to their team. As per the requirement of Project, they need 2 networks in a single VPC as per below where they want to have 4 different subnets. [2 Public + 2 Private Subnets].

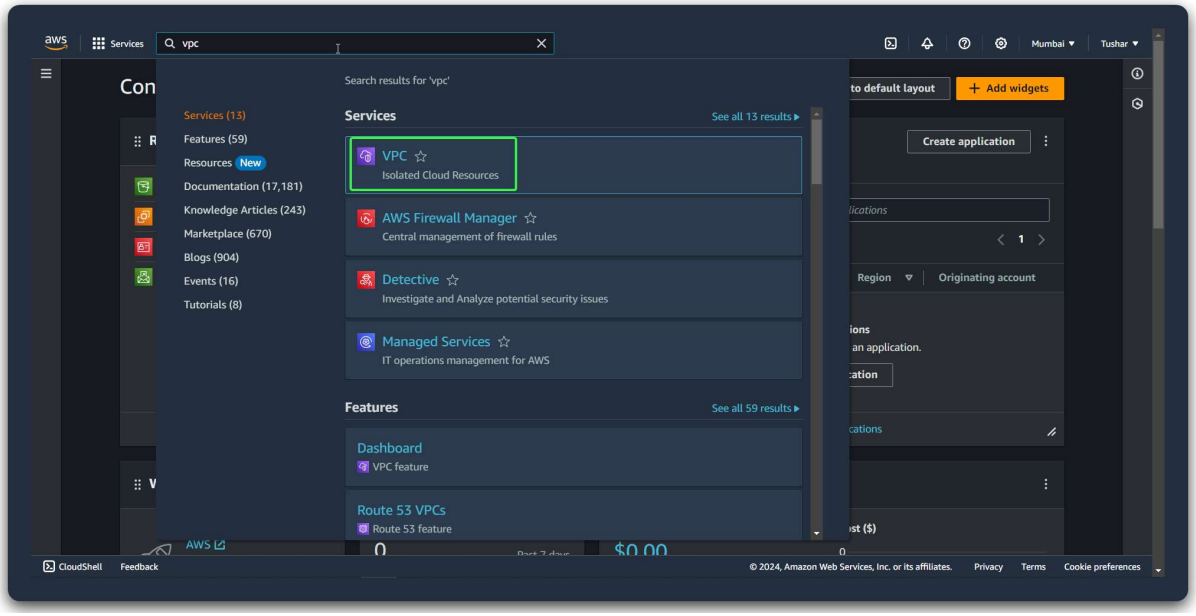
Web Server – 10.0.0.0/24: Public
Database – 10. 0.1.0/24: Private

Additional Subnets must be created for VPC that spans multiple Availability Zones as per below:
Web Server Backup – 10.0.2.0/24: Public
Database Backup – 10. 0.3.0/24: Private

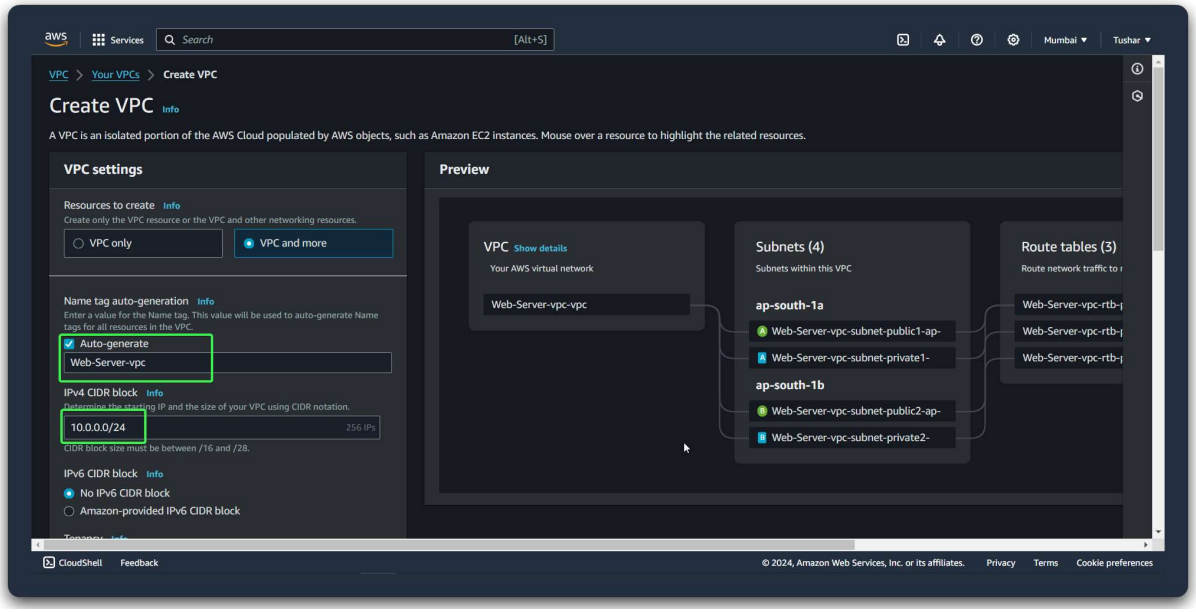
Tasks to be done:

1. Create a VPC & Subnets as per attachments.
2. Create and configure security group for a) Web Server & b) DB Server.
3. Manage inbound traffic for security.

First we have to create the 4vpc.

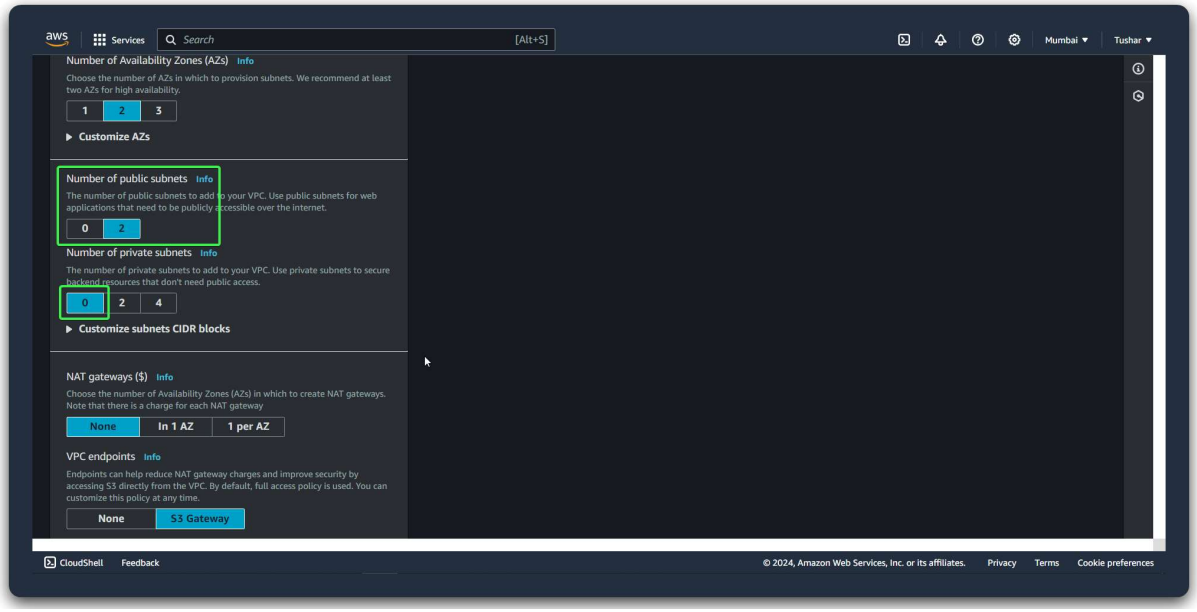


Webserver: 10.0.0.0/24 (public):

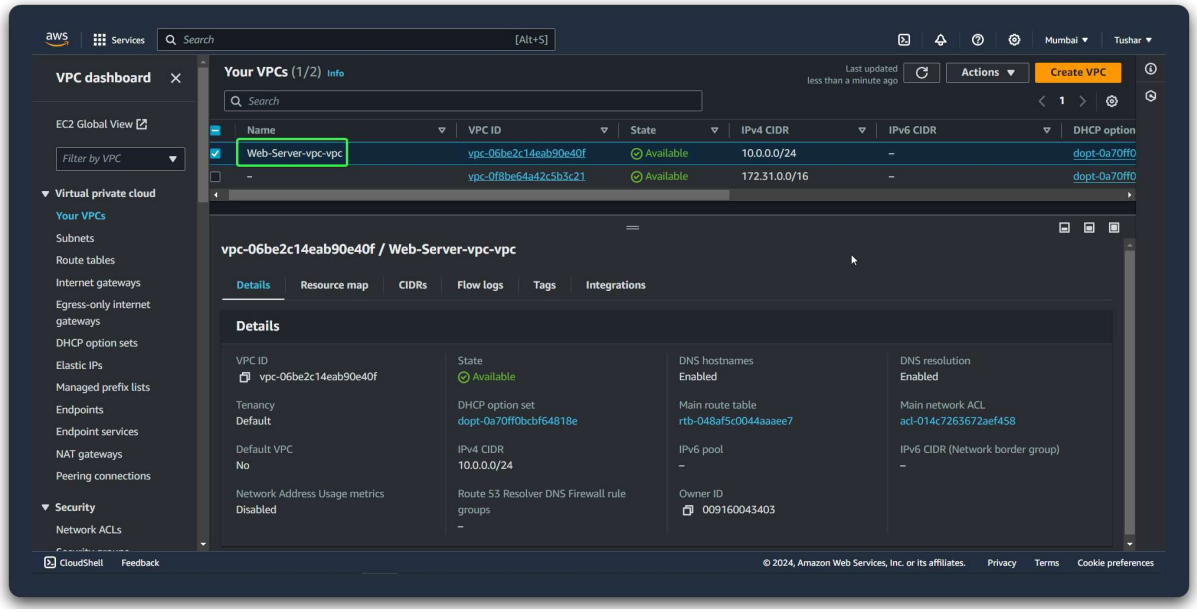


Select the VPC and more and give the name and IPv4 CIDR block

Select the number of private subnets as 0 and public subnets as 2

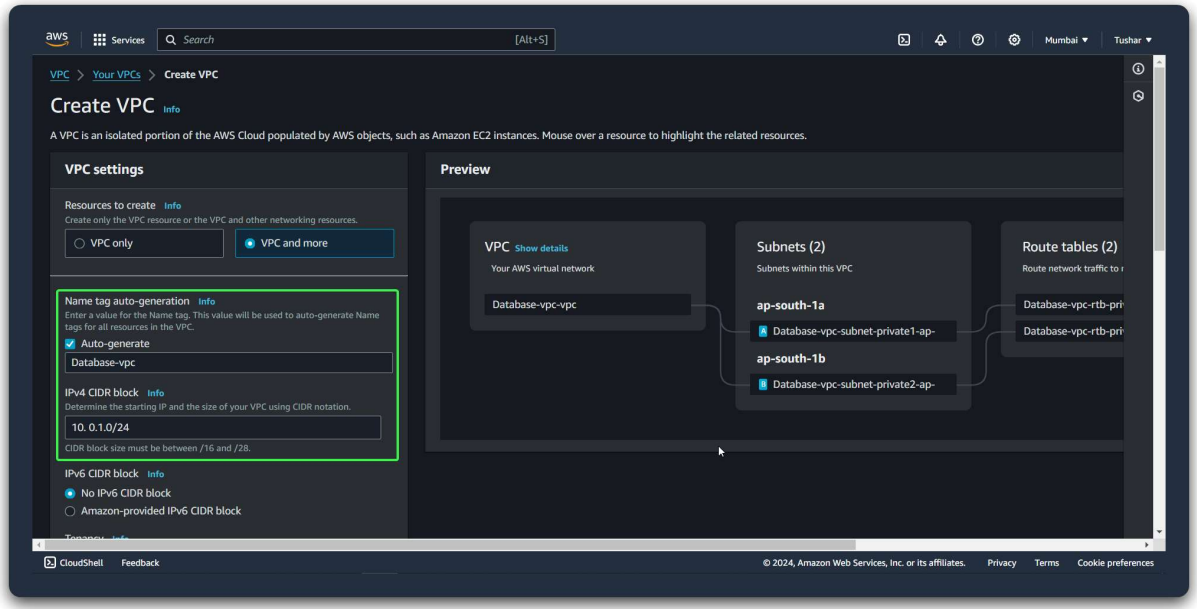


Then hit the create button as you can see below our VPC has been created successfully.

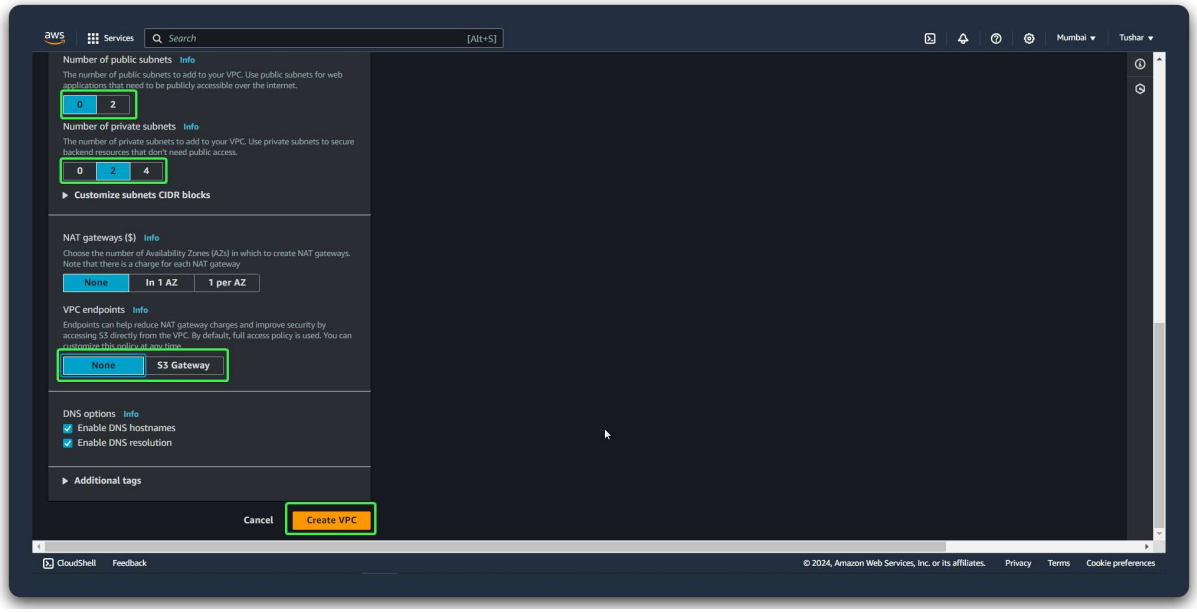


» Database: 10. 0.1.0/24: (private):

Select VPC and more and give the name of the VPC as Database

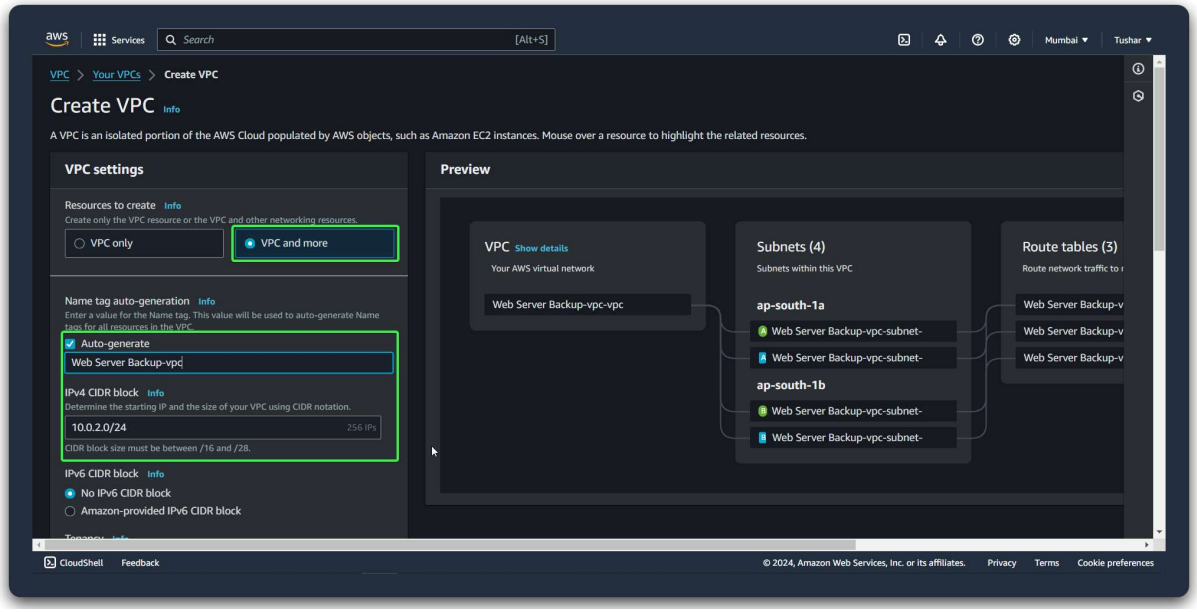


Here select the number of private subnets as 2 and the number of public subnets as 0, and hit the create button

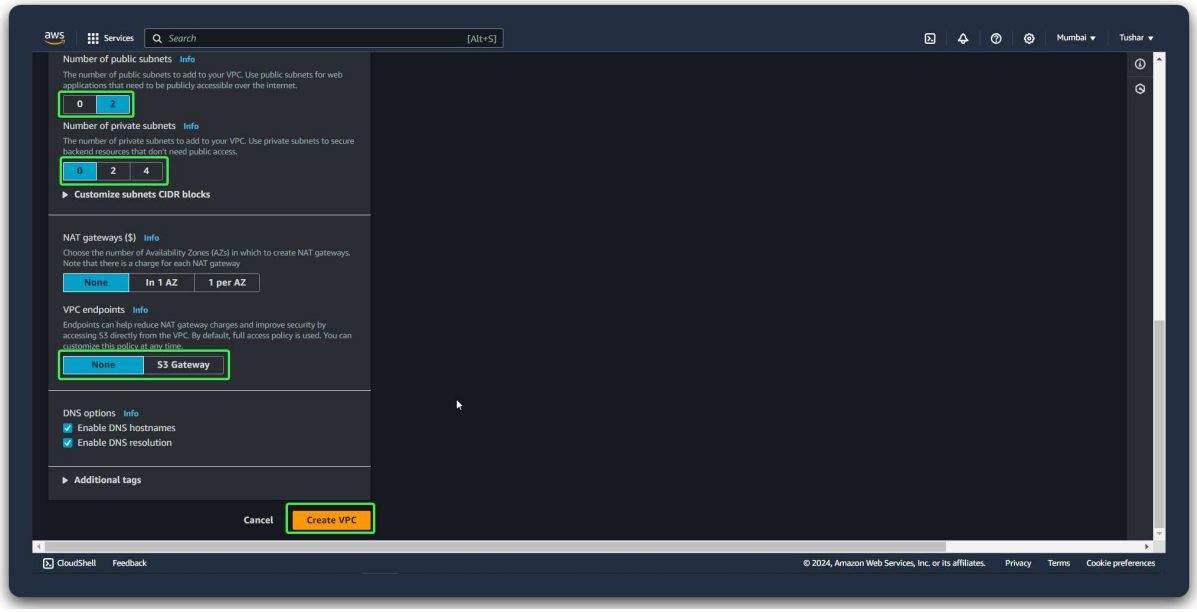


» Webserver-backup: 10. 0.2.0/24: (public):

Select VPC and more and give the name of VPC

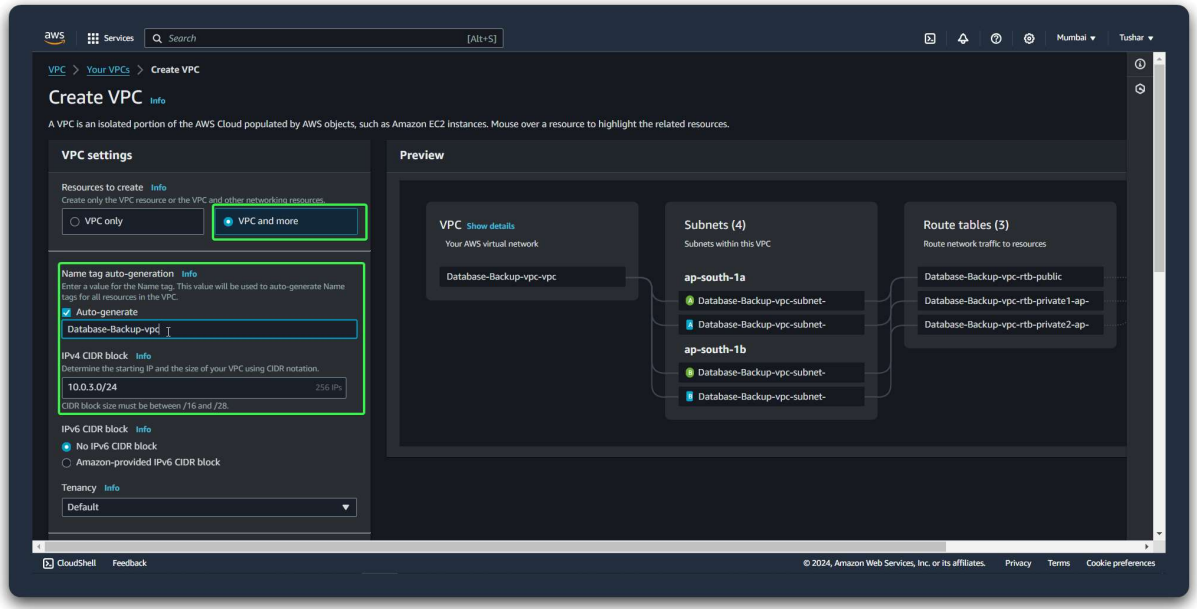


Select the number of private subnets as 0 and public subnets as 2, and hit create button

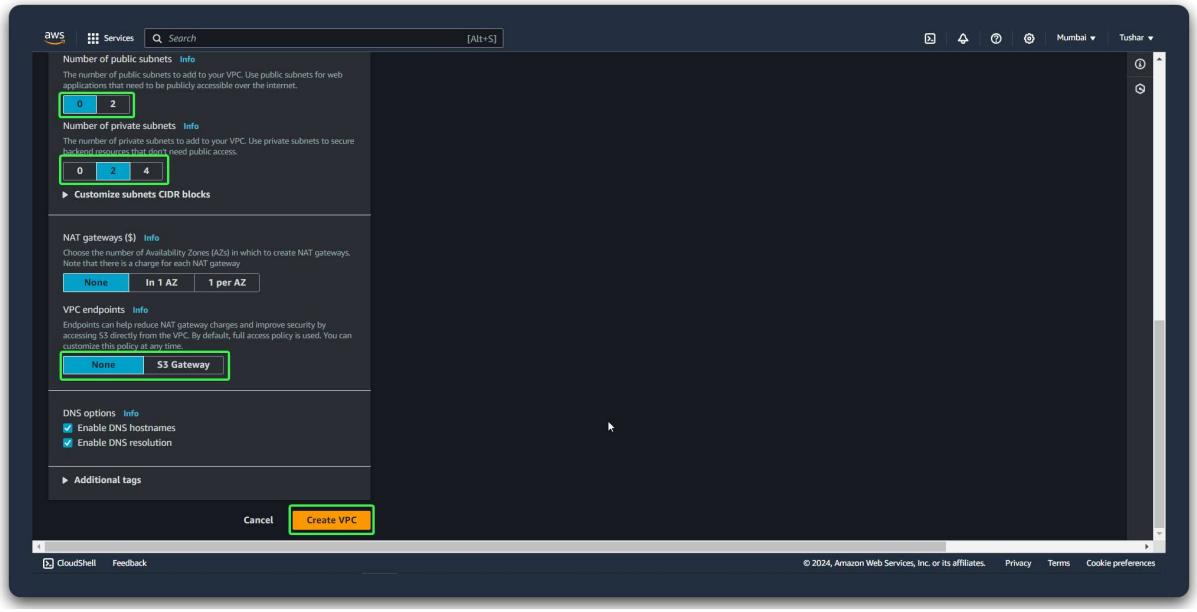


» Database backup: 10.0.3.0/24: (private):

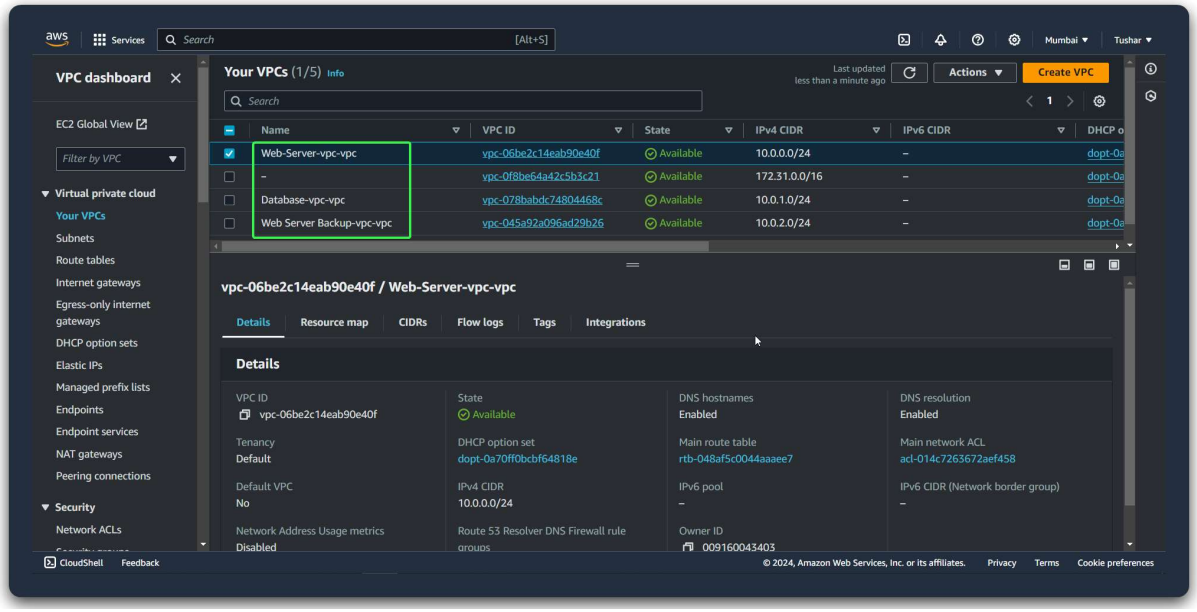
Select the VPC and more and give the name of the vpc



Select number of public subnet as 0 and number of private subnet as 2

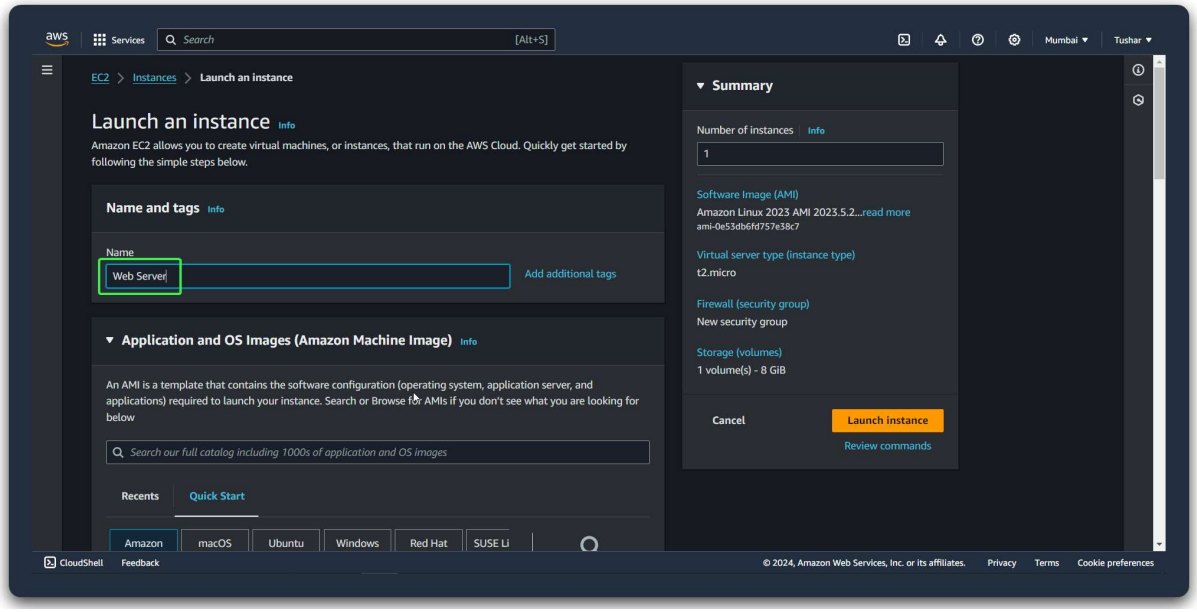


As you can see the all the 4 VPC are there

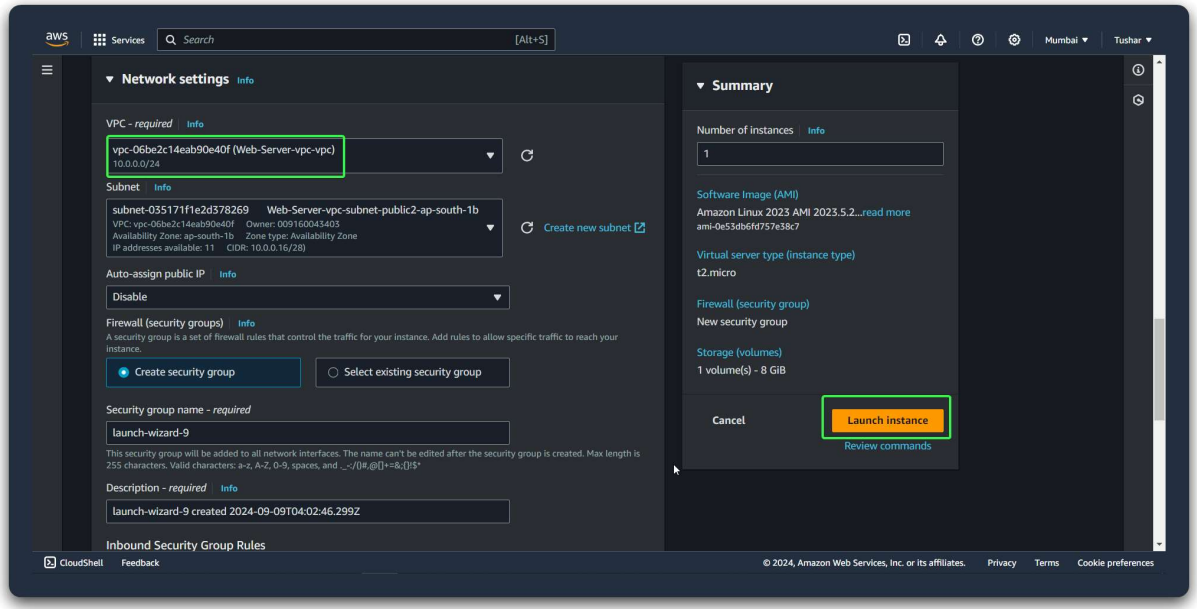


Now create the four instance and connect the cretaed VPc to it

» Webserver:

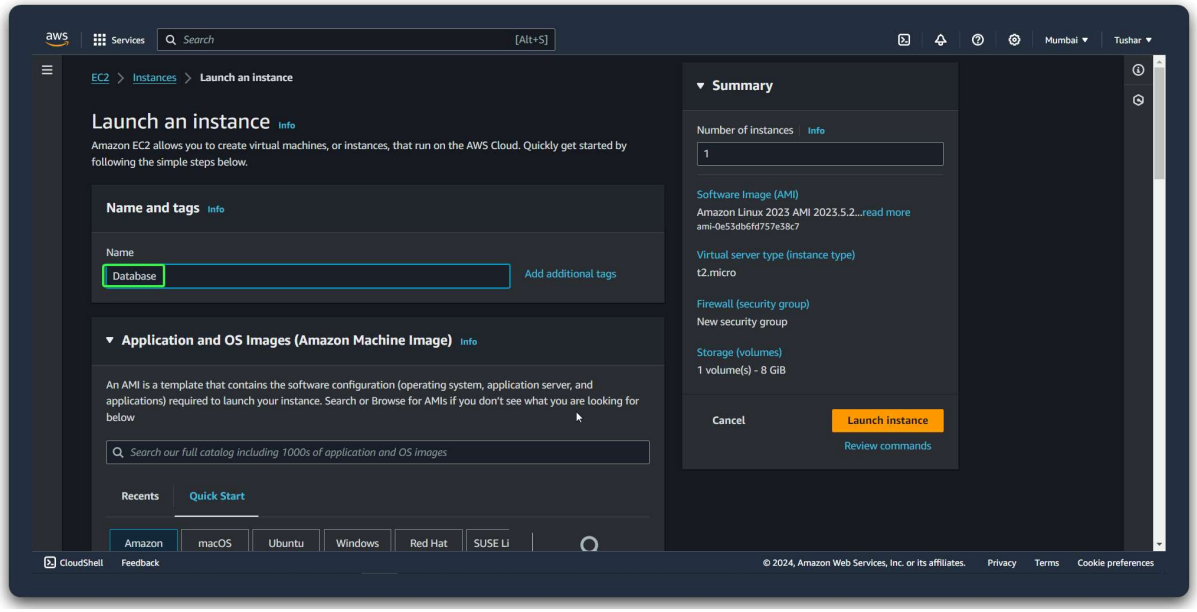


In the network select the Created VPC for the webserver then ,hit launch Instance Button

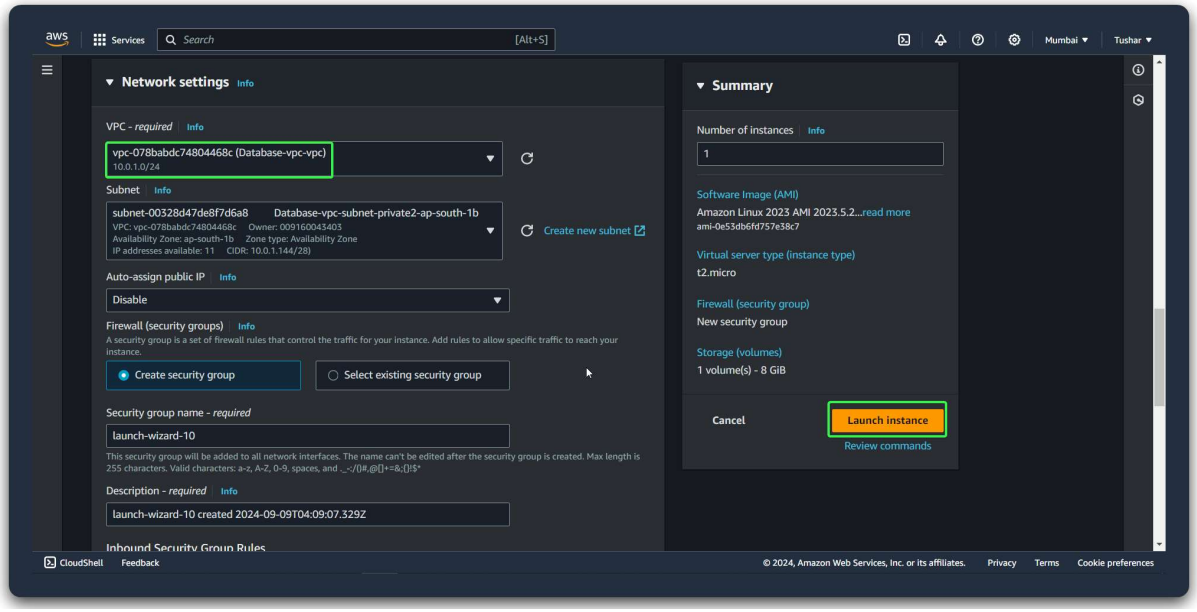


Database:

Create the Second instance with the name of the database

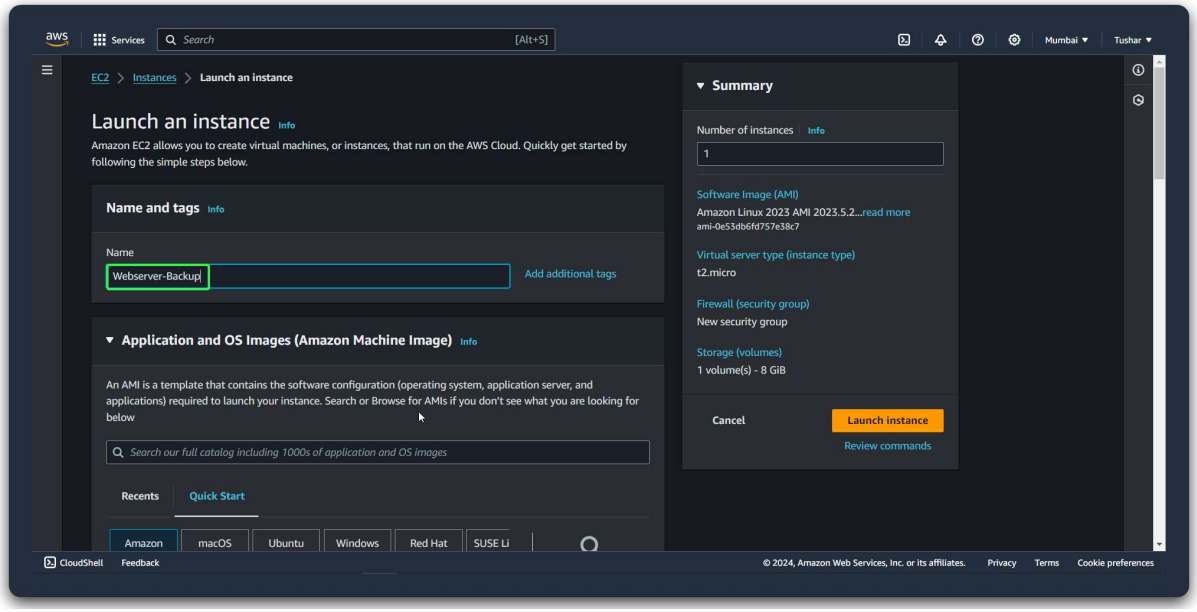


In the network select the Created VPC for the Database ,then hit the Launch instance button

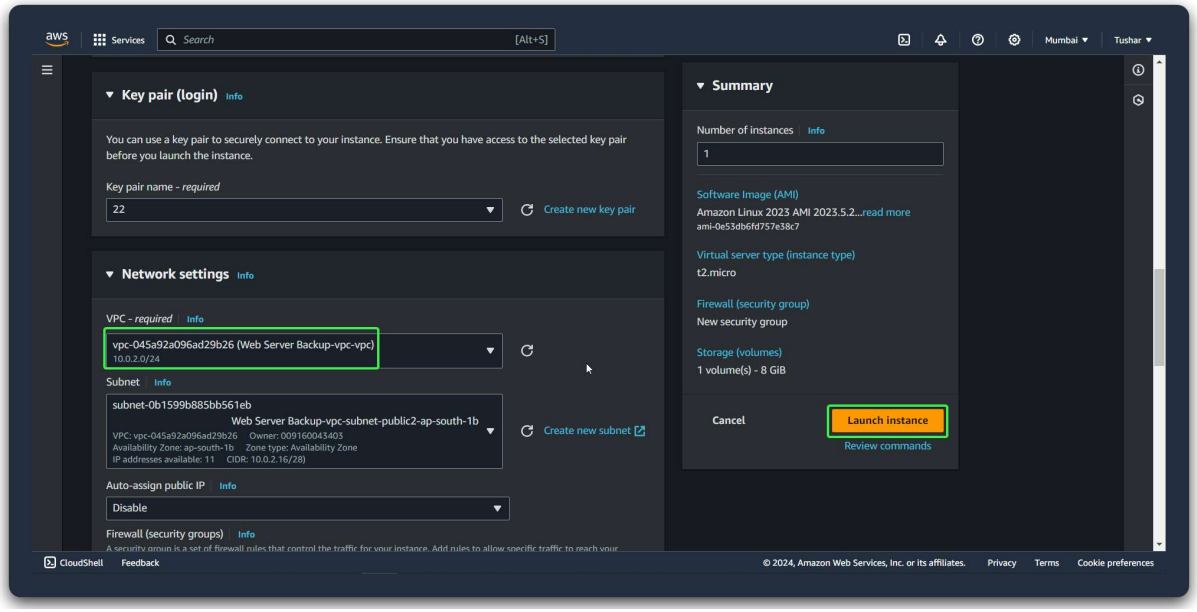


Webserver-Backup:

Create the third instance with the name of webserver-backup

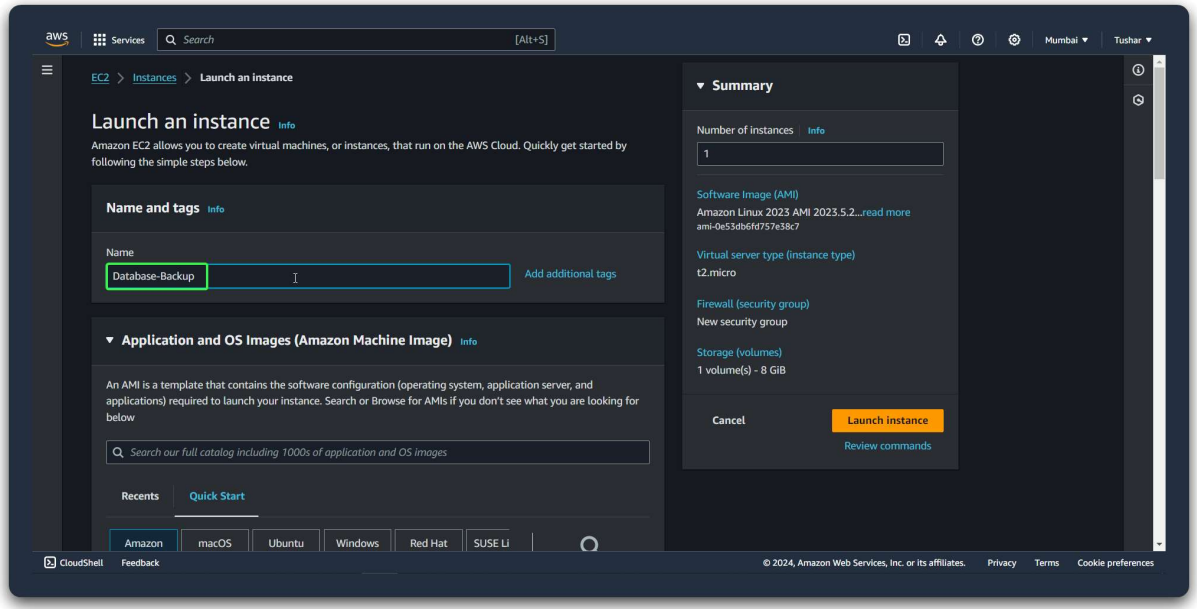


In the network select the Created VPC for the webserver backup ,then hit the Launch instance button

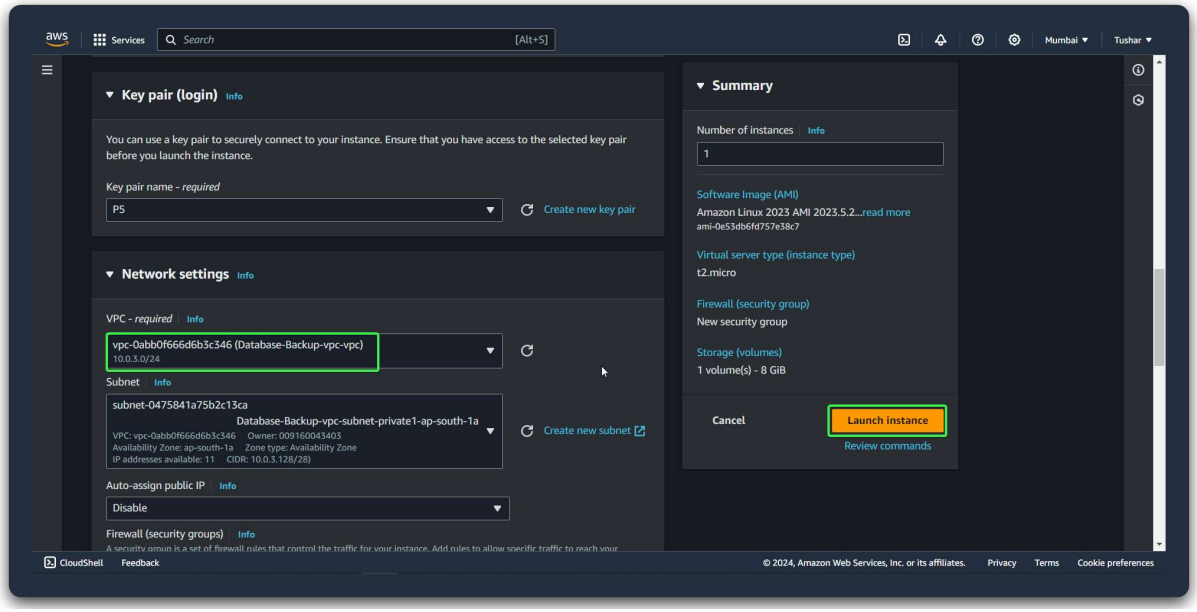


Database-Backup:

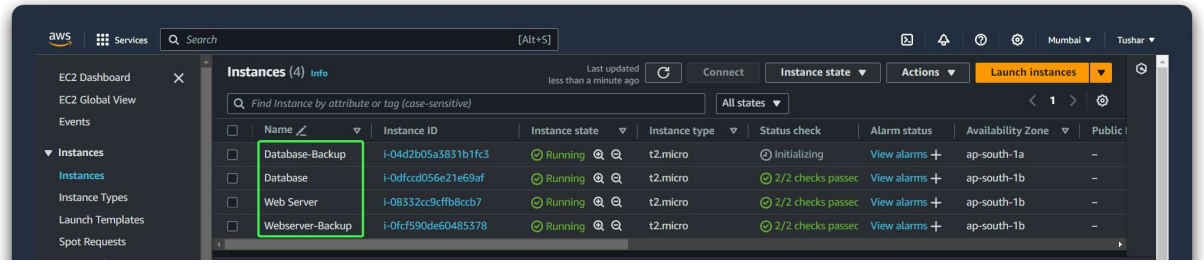
Create the fourth instance with the name of database-backup



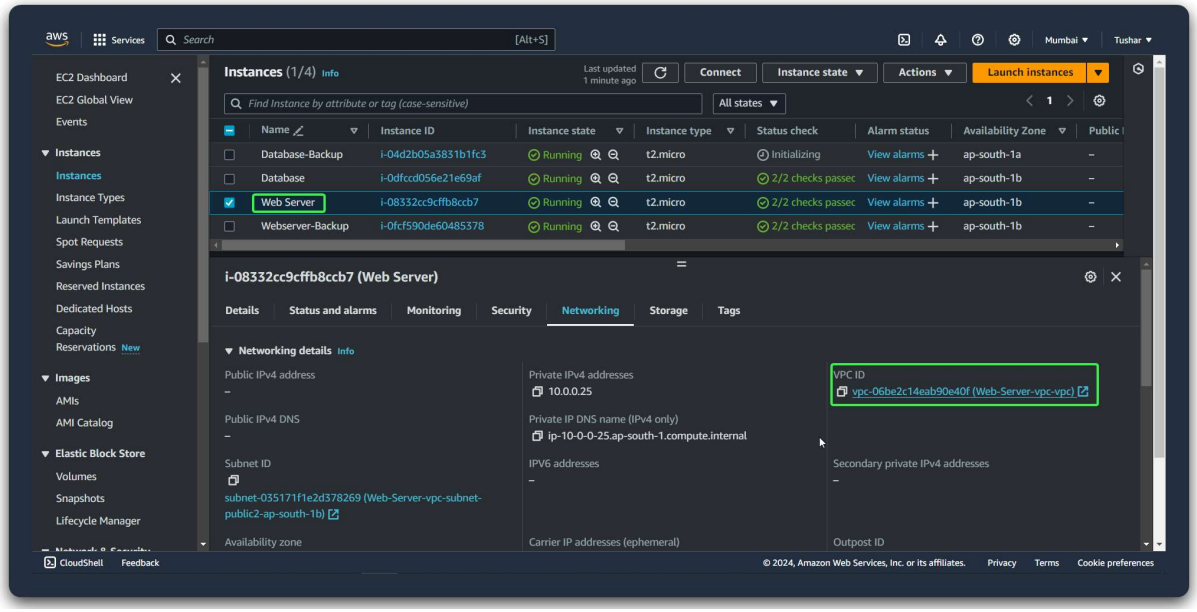
In the network select the Created VPC for the Database-backup, then hit the Launch instance button

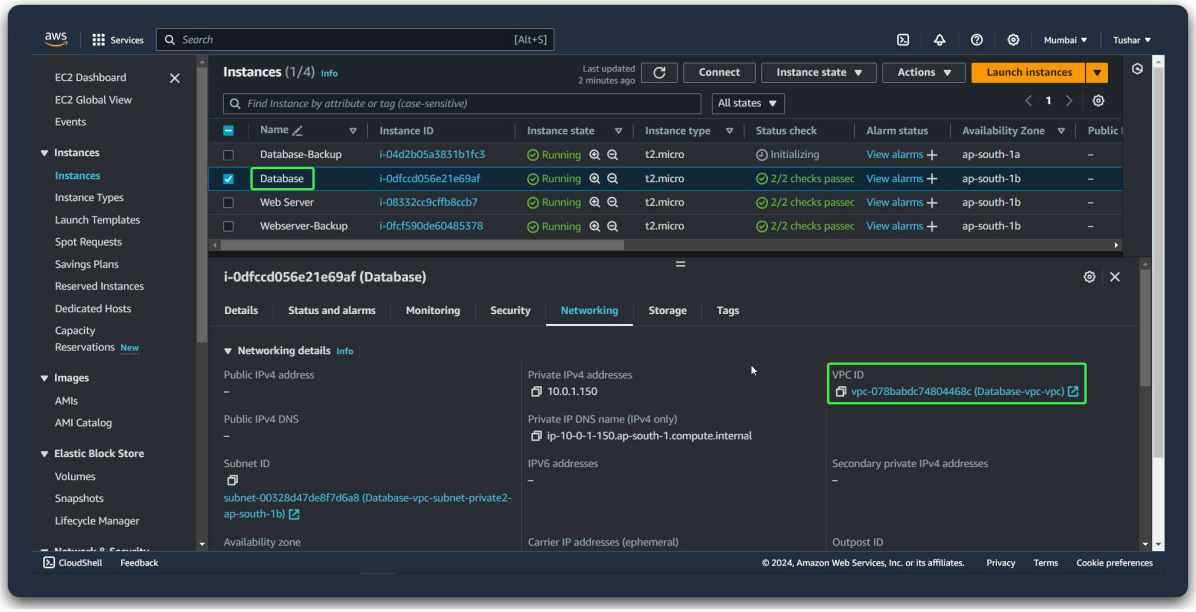


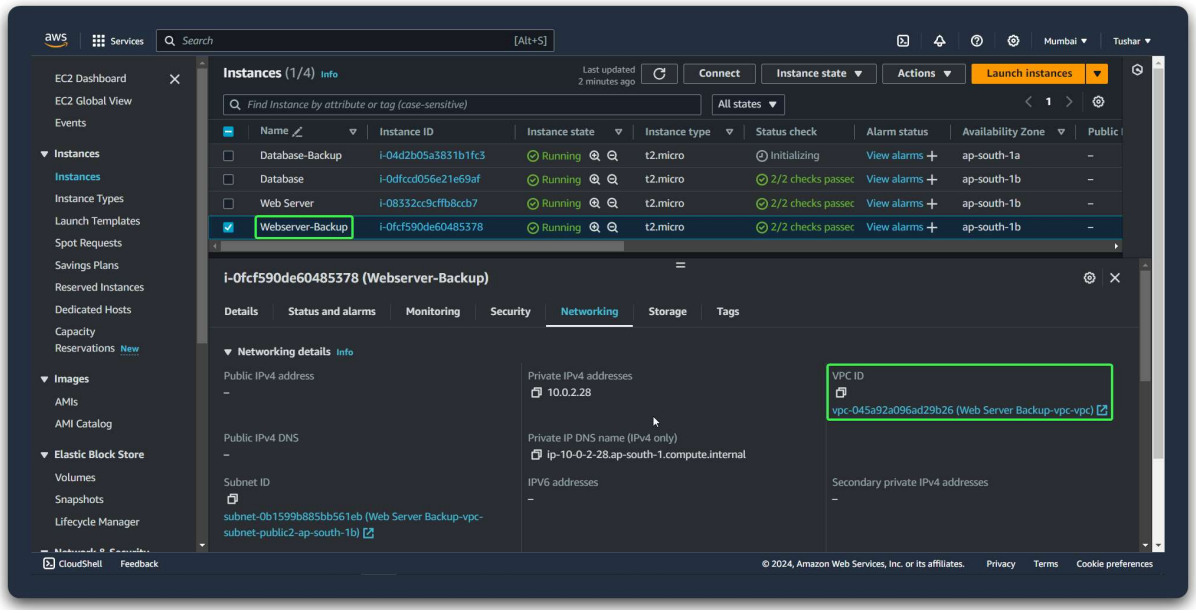
Now as you can see all the Instances have Launched successfully:

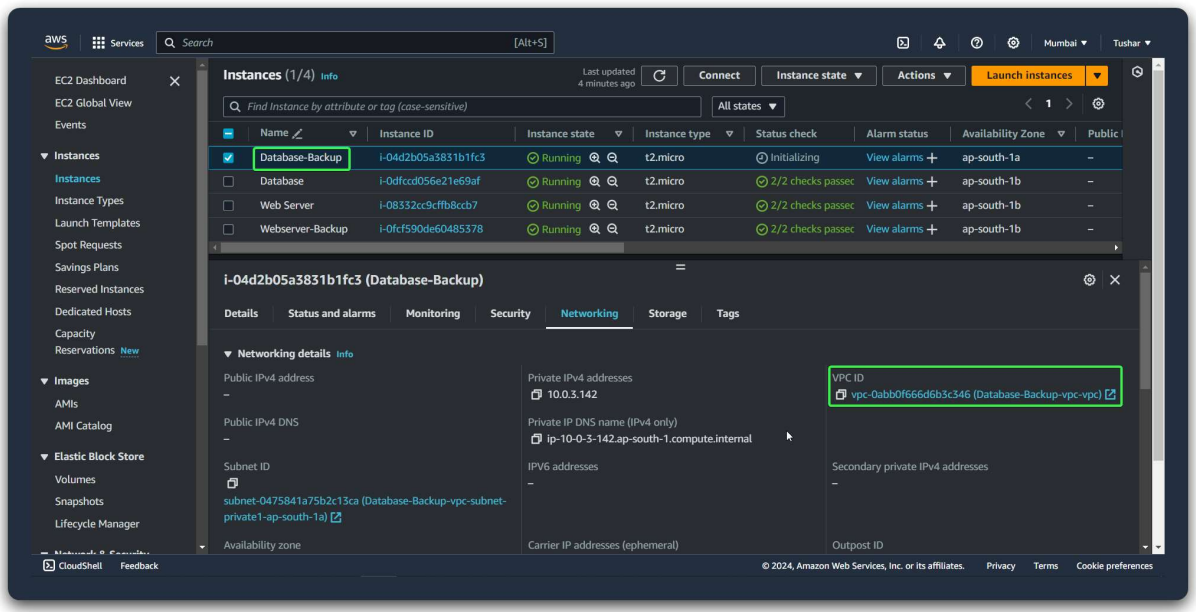


Here we can see all the instances are connected with their VPC




Instances (1/4) Info
Database-Backup i-04d2b05a3831b1fc3 Running t2.micro Initializing ap-south-1a
Database i-0dfccd056e21e69af Running t2.micro 2/2 checks passed ap-south-1b
Web Server i-08332cc9cffb8ccb7 Running t2.micro 2/2 checks passed ap-south-1b
Webserver-Backup i-0fcf590de60485378 Running t2.micro 2/2 checks passed ap-south-1b
i-0dfccd056e21e69af (Database)
Networking details Info
Public IPv4 address –
Private IPv4 addresses 10.0.1.150
VPC ID vpc-078babdc74804468c (Database-vpc-vpc)
Public IPv4 DNS –
Private IP DNS name (IPv4 only) ip-10-0-1-150.ap-south-1.compute.internal
Subnet ID subnet-00328d47de8f7d6a8 (Database-vpc-subnet-private2-ap-south-1b)
IPV6 addresses –
Secondary private IPv4 addresses –
Availability zone
Carrier IP addresses (ephemeral)
Outpost ID


Instances (1/4) Info
Database-Backup i-04d2b05a3831b1fc3 Running t2.micro Initializing ap-south-1a
Database i-0dfccd056e21e69af Running t2.micro 2/2 checks passed ap-south-1b
Web Server i-08332cc9cffb8ccb7 Running t2.micro 2/2 checks passed ap-south-1b
Webserver-Backup i-0fcf590de60485378 Running t2.micro 2/2 checks passed ap-south-1b
i-0fcf590de60485378 (Webserver-Backup)
Networking details Info
Public IPv4 address –
Private IPv4 addresses 10.0.2.28
VPC ID vpc-045a92a096ad29b26 (Web Server Backup-vpc-vpc)
Public IPv4 DNS –
Private IP DNS name (IPv4 only) ip-10-0-2-28.ap-south-1.compute.internal
Subnet ID subnet-0b1599b885bb561eb (Web Server Backup-vpc-subnet-public2-ap-south-1b)
IPV6 addresses –
Secondary private IPv4 addresses –


Instances (1/4) Info
Database-Backup i-04d2b05a3831b1fc3 Running t2.micro Initializing ap-south-1a
Database i-0dfccd056e21e69af Running t2.micro 2/2 checks passed ap-south-1b
Web Server i-08332cc9cffb8ccb7 Running t2.micro 2/2 checks passed ap-south-1b
Webserver-Backup i-0fcf590de60485378 Running t2.micro 2/2 checks passed ap-south-1b
i-04d2b05a3831b1fc3 (Database-Backup)
Networking details Info
Public IPv4 address –
Private IPv4 addresses 10.0.3.142
VPC ID vpc-0abb0f666d6b3c346 (Database-Backup-vpc-vpc)
Public IPv4 DNS –
Private IP DNS name (IPv4 only) ip-10-0-3-142.ap-south-1.compute.internal
Subnet ID subnet-0475841a75b2c13ca (Database-Backup-vpc-subnet-private1-ap-south-1a)
IPV6 addresses –
Secondary private IPv4 addresses –
Availability zone
Carrier IP addresses (ephemeral)
Outpost ID