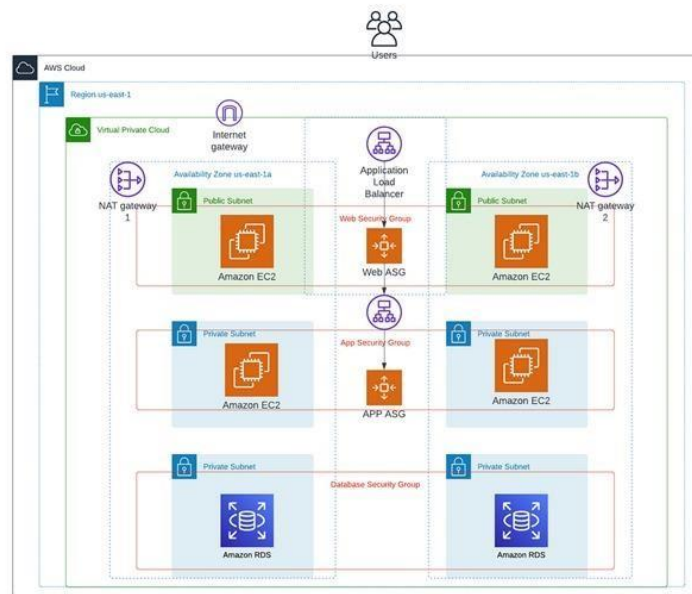


Creating a 3-Tier Architecture for Web Applications in AWS



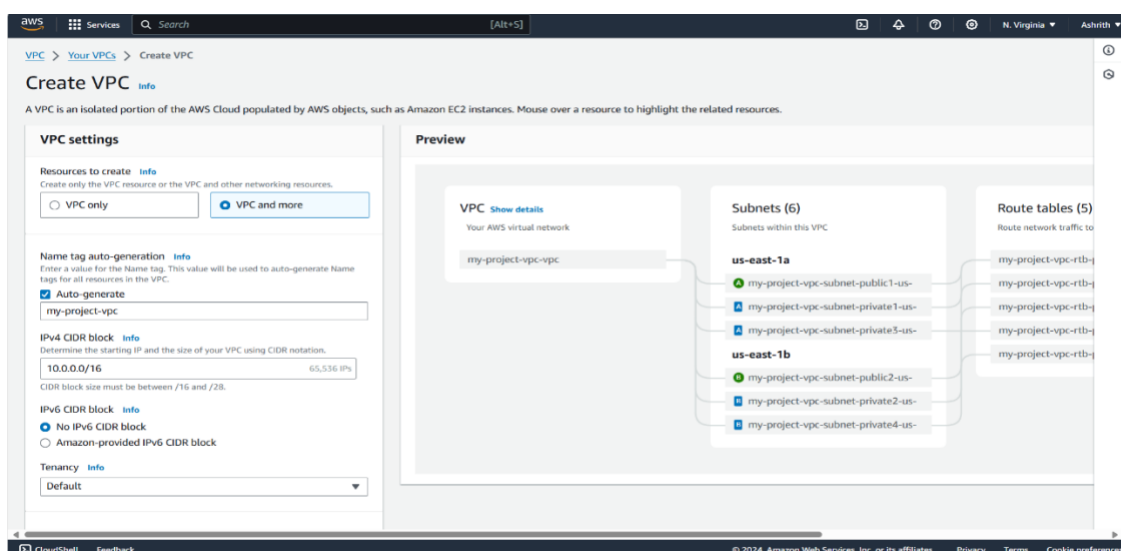
A three-tier architecture in AWS (Amazon Web Services) involves structuring applications into three distinct layers: Presentation, Application, and Data. Each tier has specific responsibilities and can be implemented using various AWS services to ensure scalability, security, and manageability.

This network consists of:

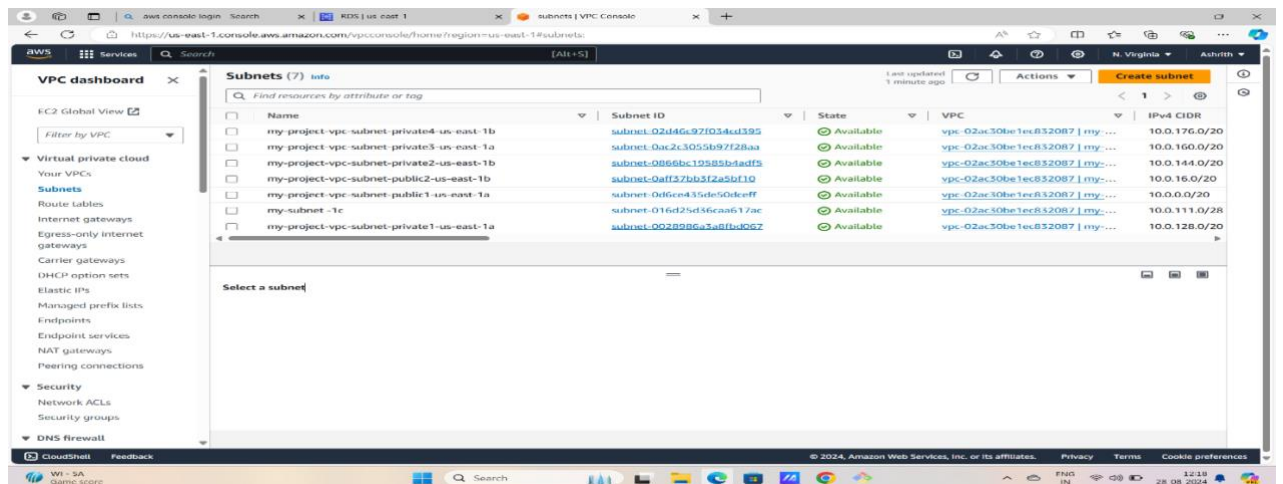
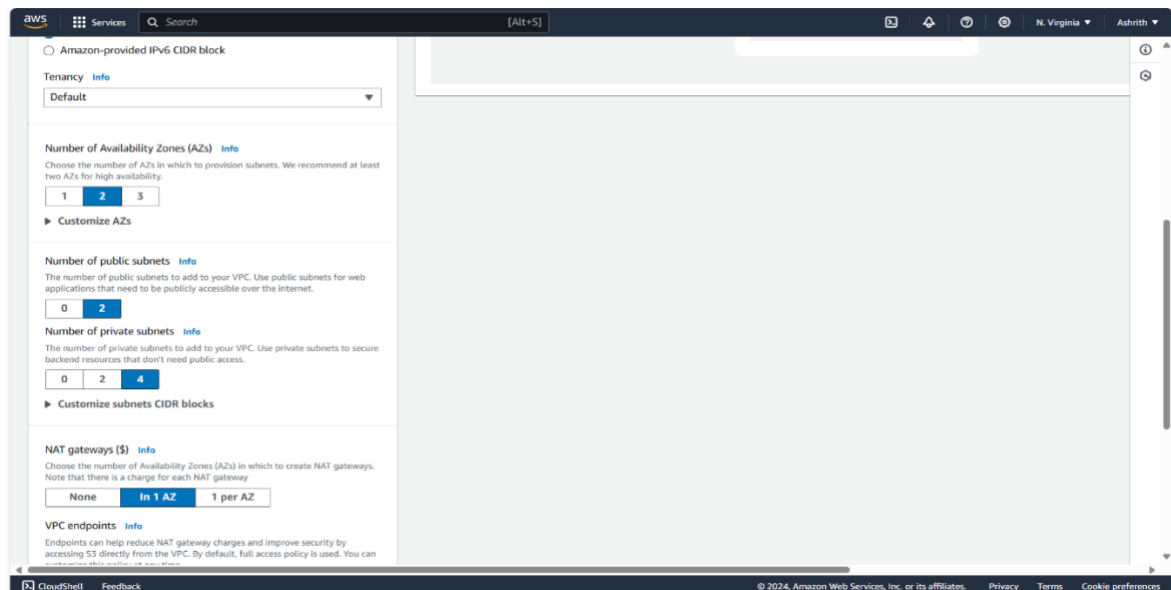
- A VPC.
- Two (2) public subnets spread across two availability zones (Web Tier).
- Two (2) private subnets spread across two availability zones (Application Tier).
- Two (2) private subnets spread across two availability zones (Database Tier).
- One (1) public route table that connects the public subnets to an internet gateway.
- One (1) private route table that will connect the Application Tier private subnets and a NAT gateway.
- Load Balancers, Auto-Scaling Groups and Database.

Steps for creating 3- Tier Architecture:

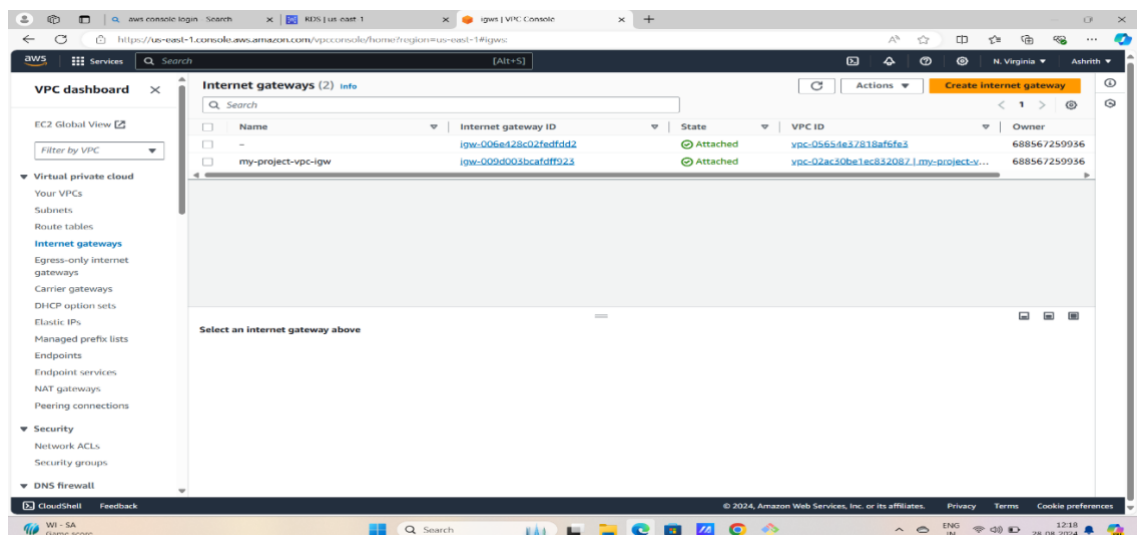
- Create VPC, Subnets, Route tables.



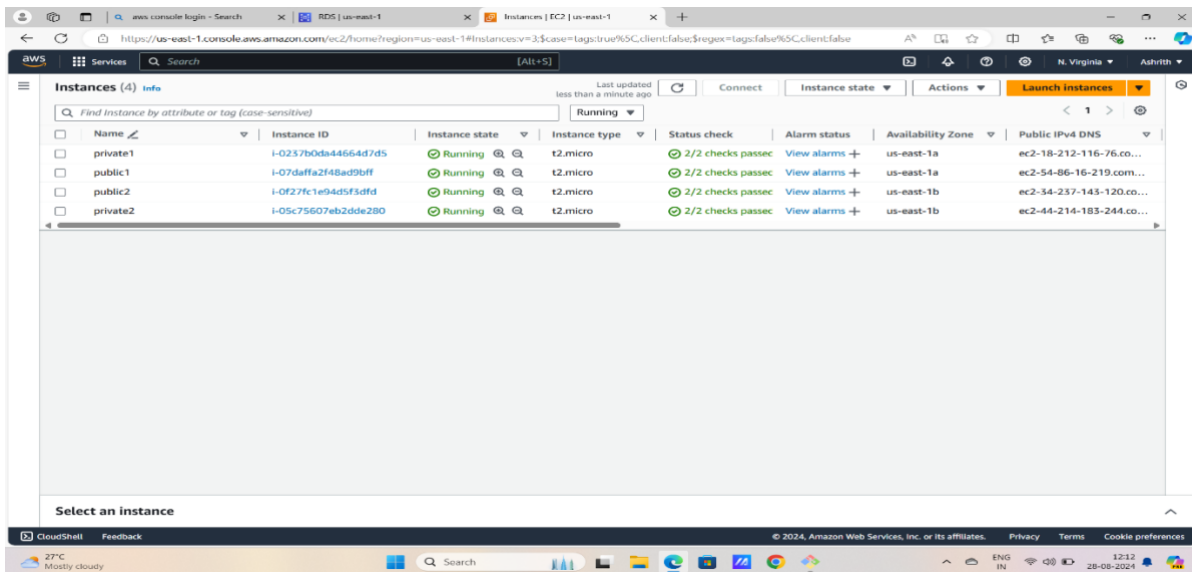
- Create 2 public subnets and 4 private subnets.



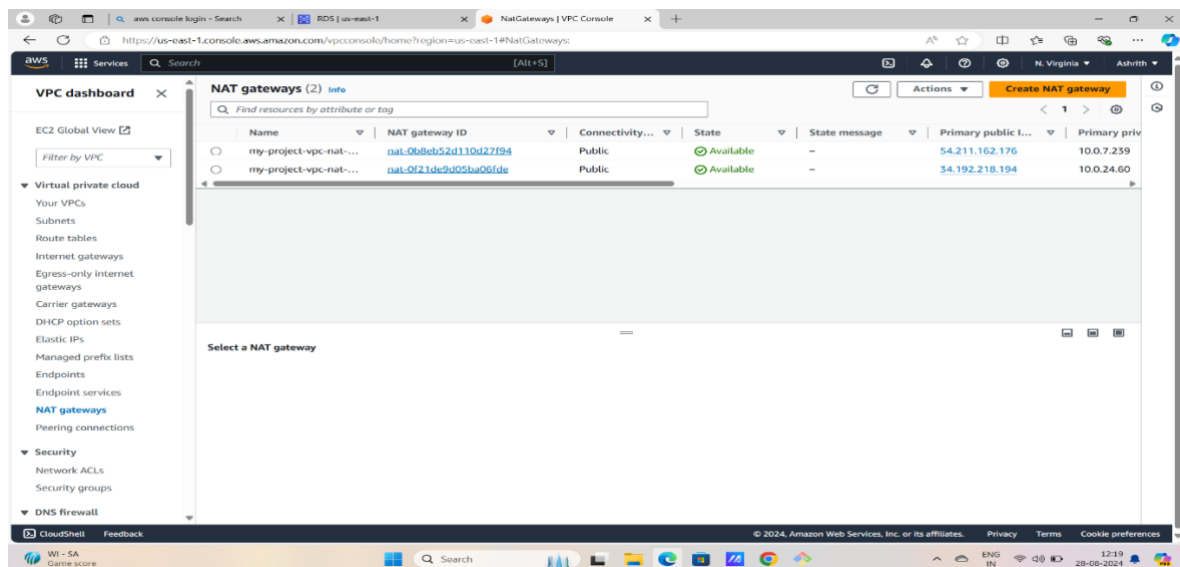
- Create one Internet gateway and attach with VPC.



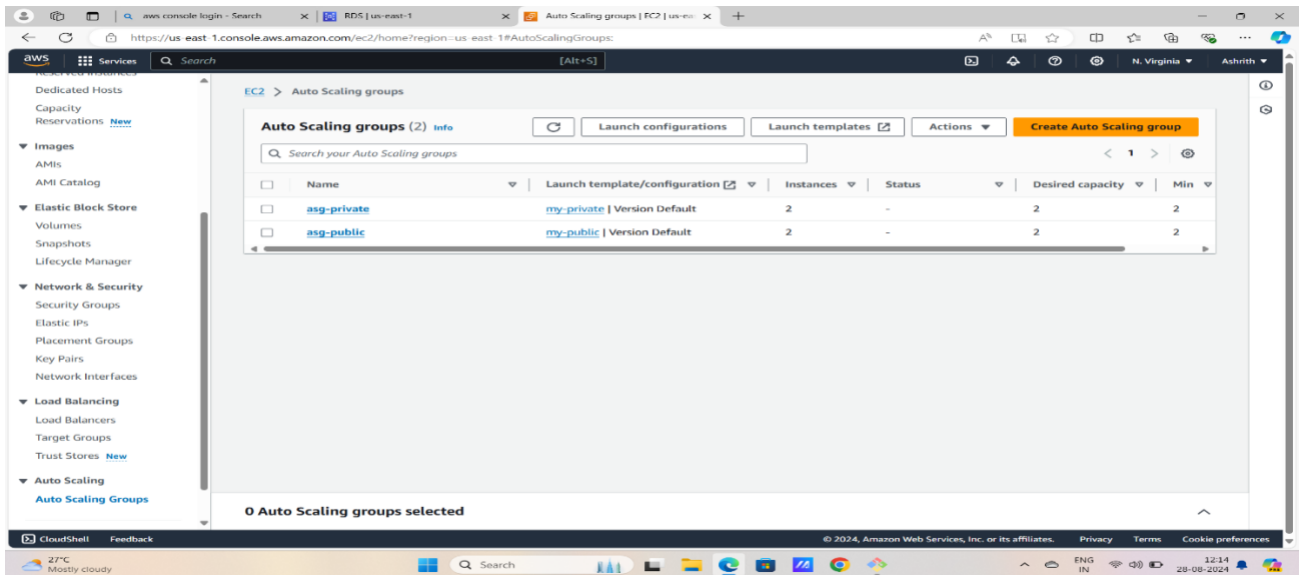
- Create EC2 Instances 2 public and 2 private Instances in **us-east-1a** and **us-east-1b** regions.



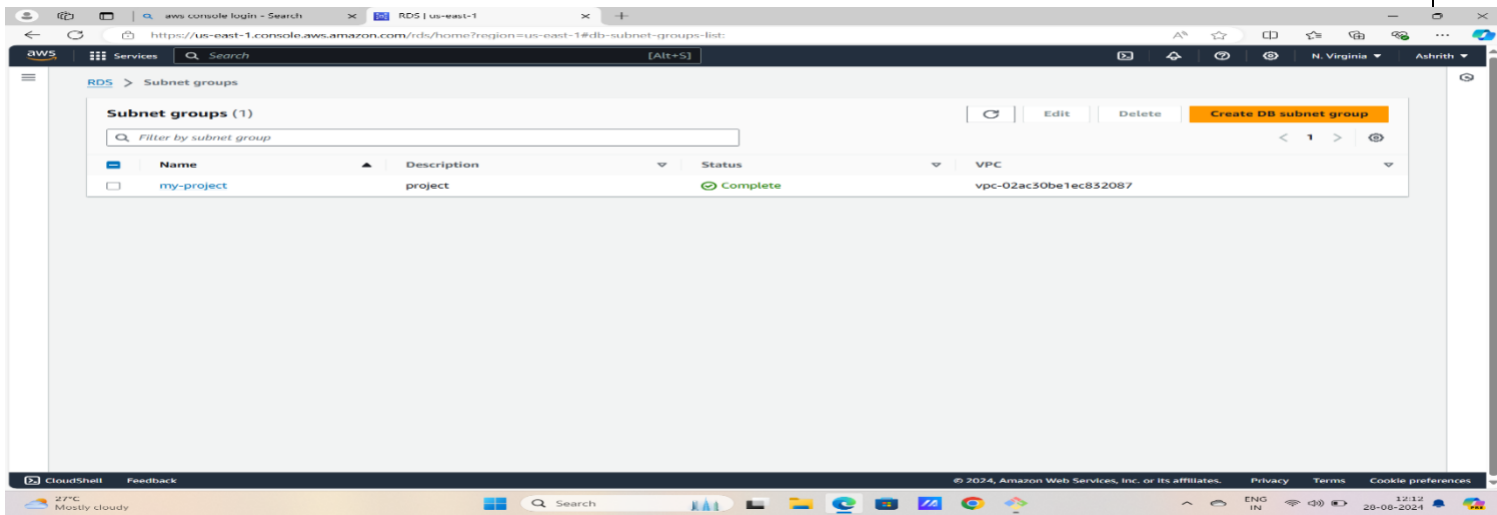
- Create 2 NAT gateways for 2 regions.



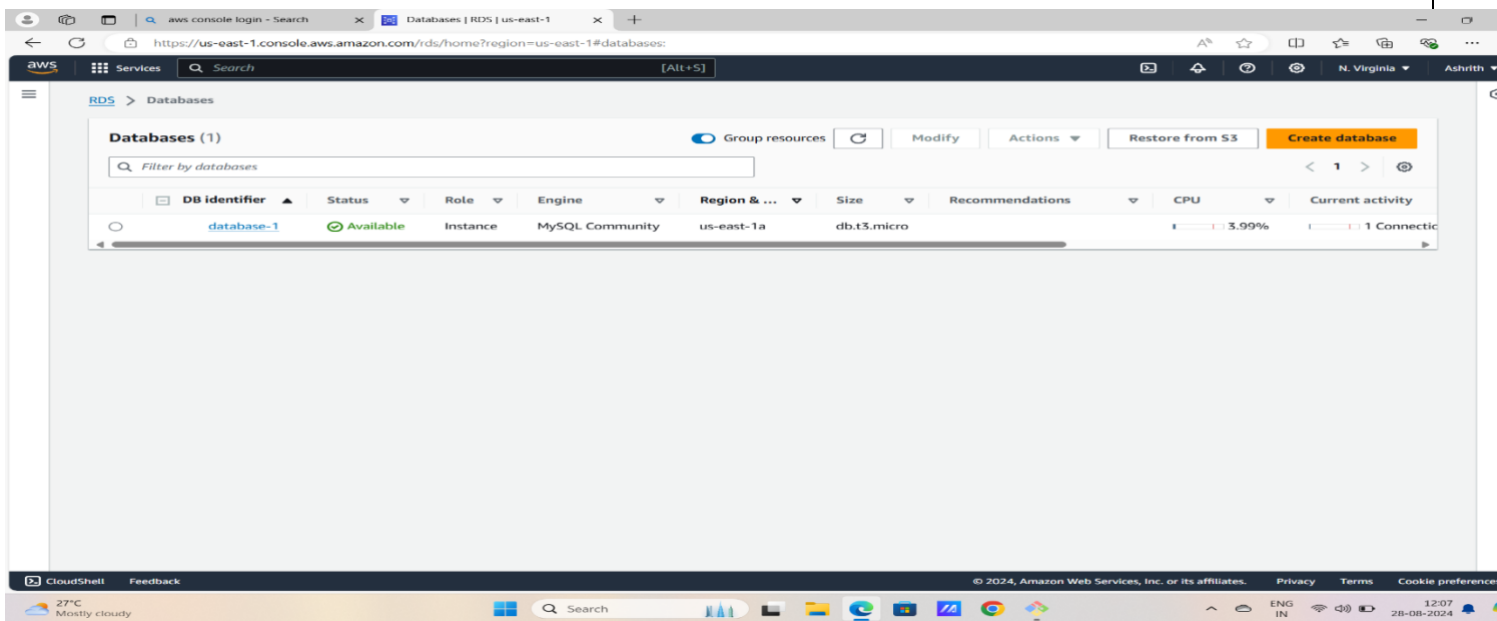
- Create Target groups.



- Add remaining 2 private subnets to the RDS subnet group.



- Create a MySQL database cluster.



- Connecting System to the instance(ubuntu) and attaching database to an Instance.

```
root@ip-10-0-7-72:~# mysql -h database-1.c3241ukgwc2.us-east-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 27
Server version: 8.0.35 Source distribution

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.00 sec)

mysql>
```

- Create a database, Use Database and create a table in database and Insert data into it..