Virtual Coffee Shop Launch

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Status	Done

Solution for a Virtual Coffee Shop Launch

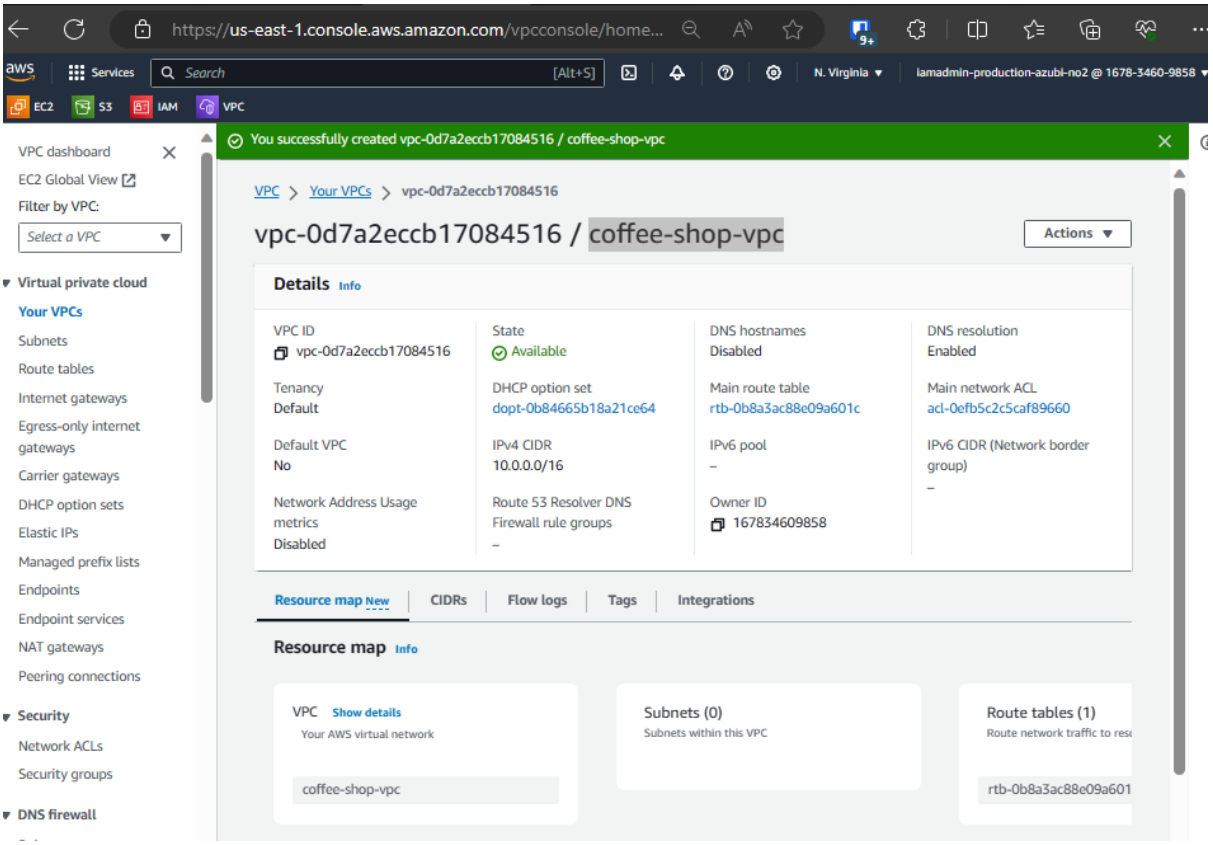
On going working through the solution for a project that I was assigned, I decided to outline my journey through it here with the thought that it might help someone.

Problem:

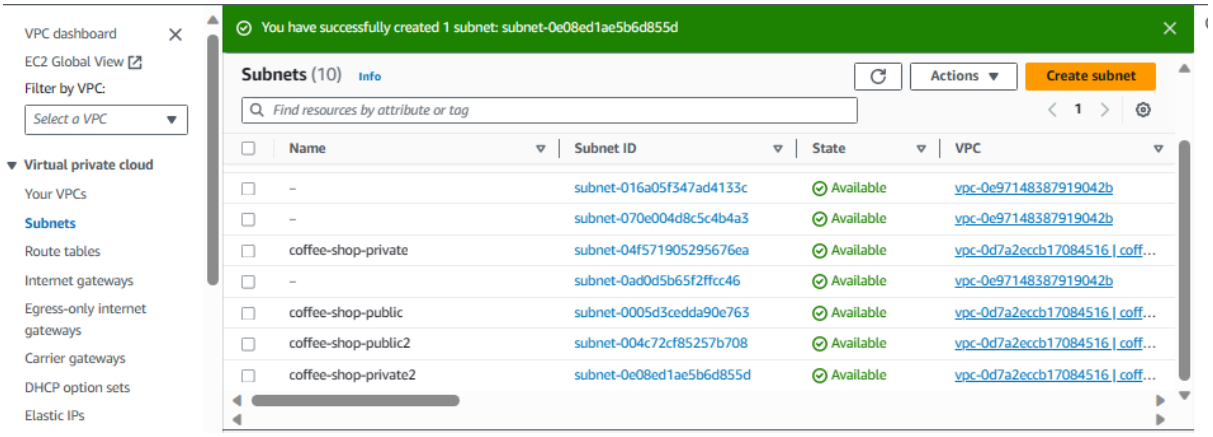
You're the cloud engineer for a virtual coffee shop chain that wants to move their operations to the cloud. They need a scalable and cost-effective solution to ensure their website and backend are always up and running.

Solution:

In order to achieve the end result of this project, I created a VPC called “**coffee-shop-vpc**”.

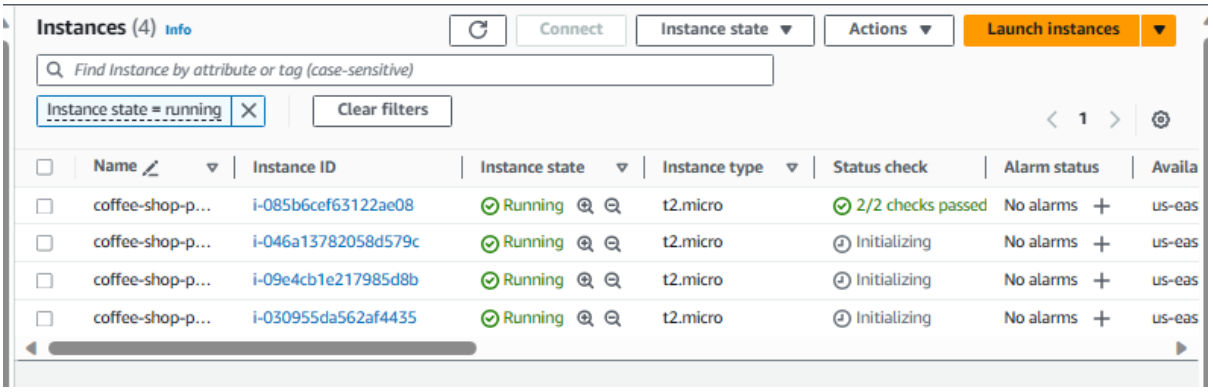


Then, created 2 subnets (one public and the other private) in 2 Availability zones, (named “coffee-shop-public” as the public subnet) and (”coffee-shop-private” as the private subnet), in “us-east-1a” and “us-east-1d” AZs respectively to ensure high availability always.

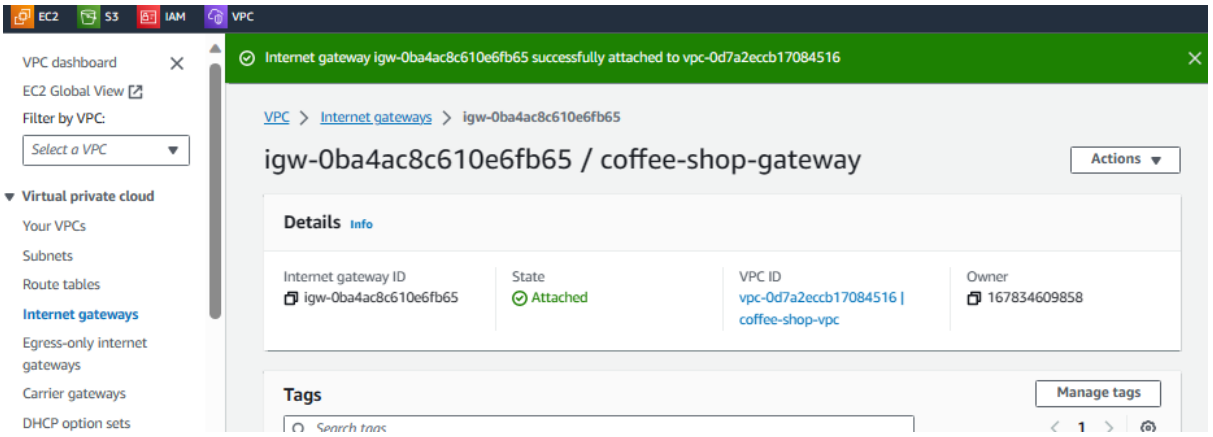


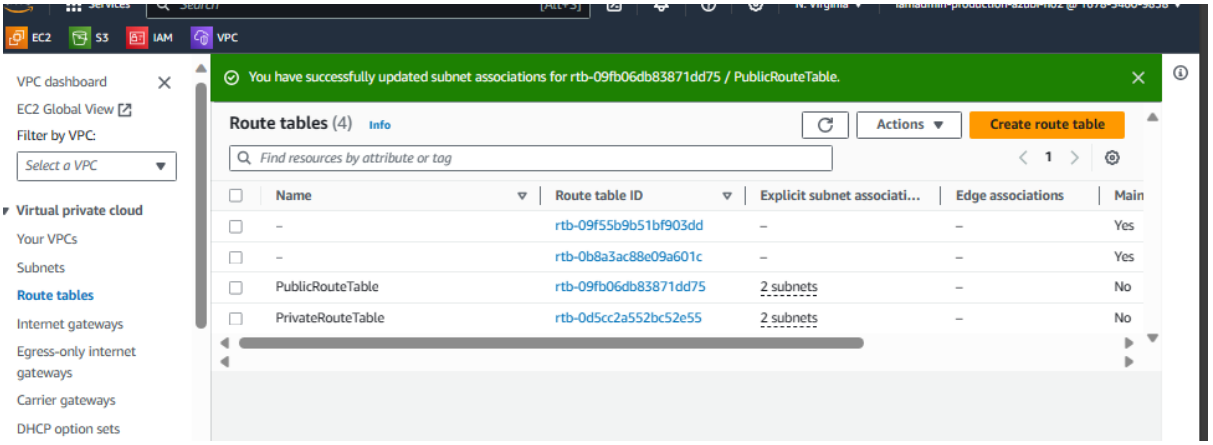
Launched EC2 instance named “coffee-shop-public” in the public subnet and EC2 instance named “coffee-shop-private” in the private subnet (Making 2 instances in the 2 different AZs).

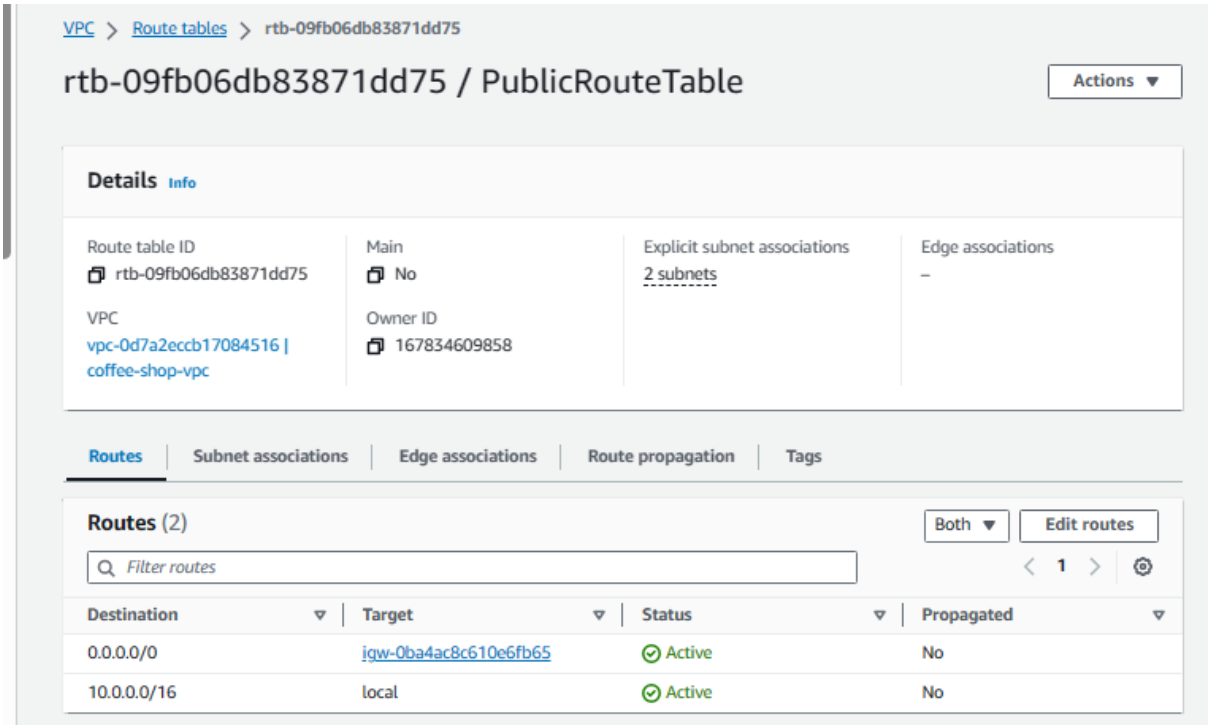
Then, I setup the security groups for each instance, while creating them, to control inbound and outbound traffic.



Added an Internet Gateway for the “coffee-shop-vpc” for access to the public internet and a NAT Gateway for the private subnet for access from the private subnet to the outside but not the other way around. And added the necessary Public and Private Route Tables and associated them with the custom VPC for routing within and for exiting the VPC.



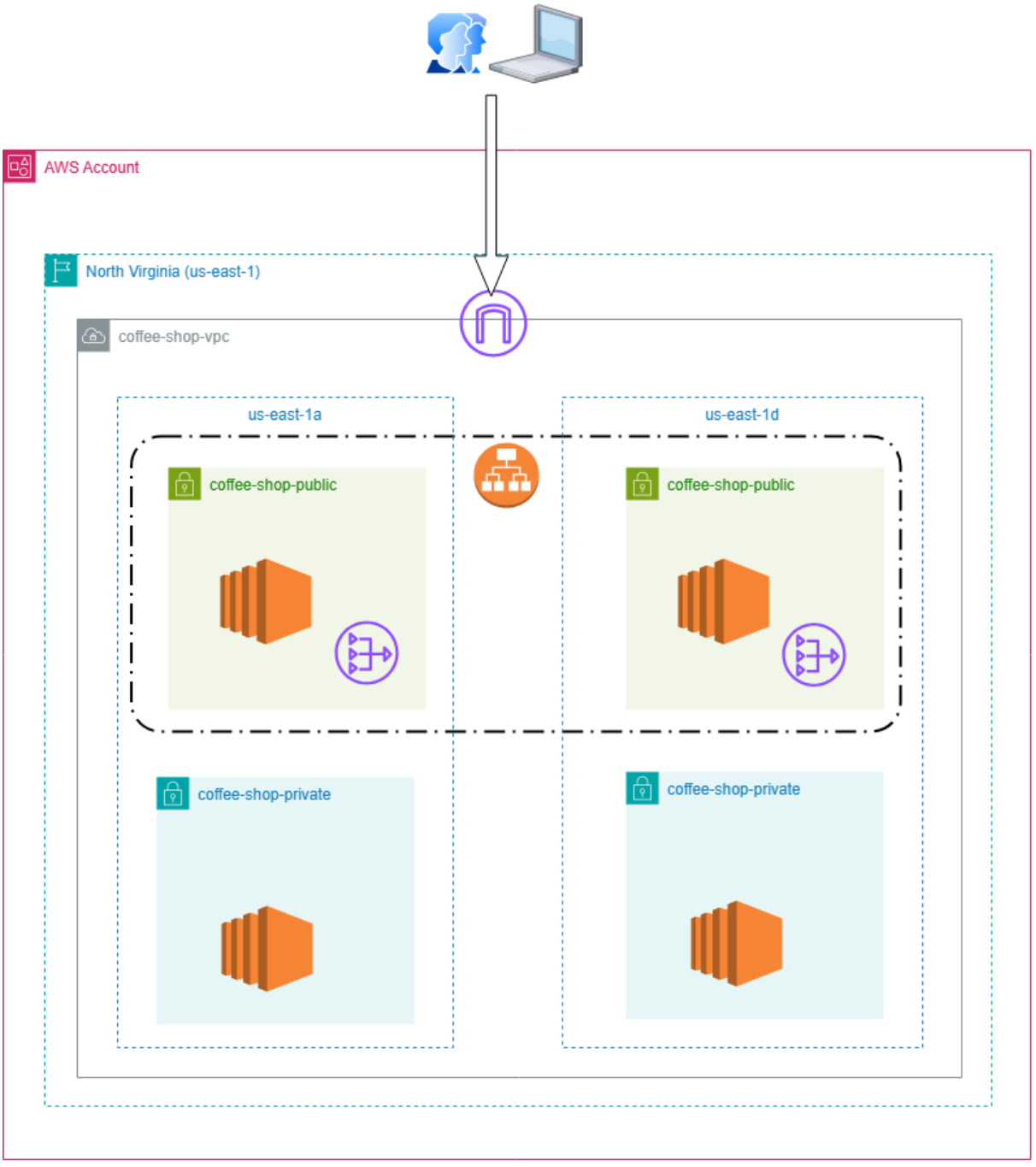




And setup Network ACLs to provide additional layer of security.

And finally, created and configured an Application Load Balancer in order to ensure smooth and balanced flow of traffic across multiple instances in a target group to provide maximum throughput and availability.

VIRTUAL COFFEE SHOP LAUNCH



You can view the associated GitHub here