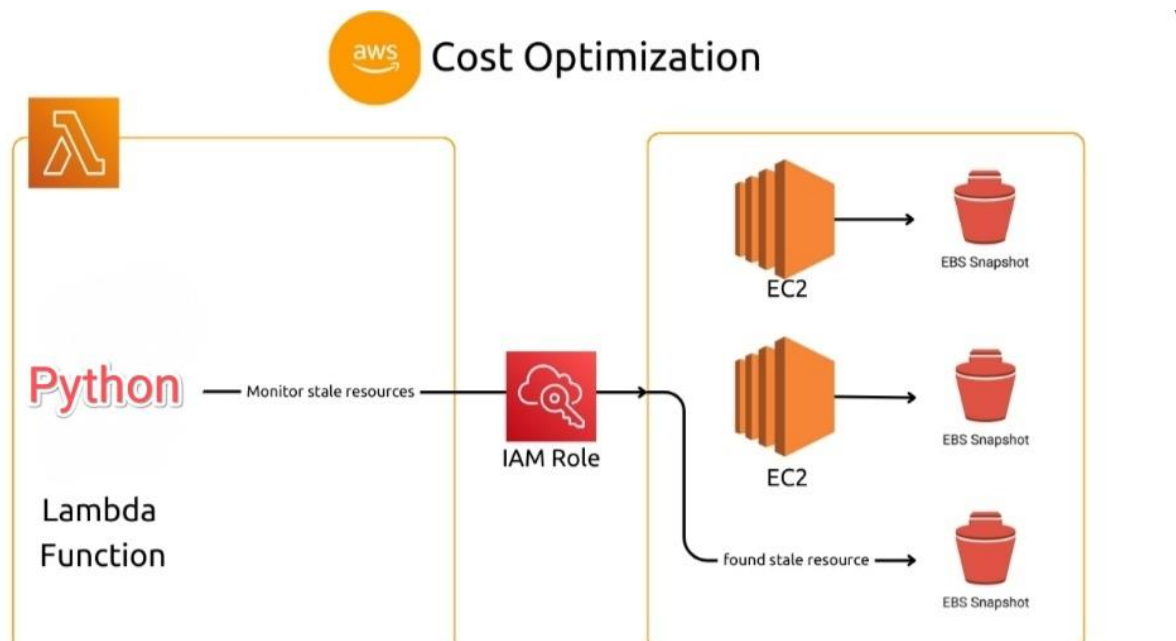


Cost-Effective Snapshot Management with AWS Lambda

In this project, I developed a Python-based AWS Lambda function to optimize cloud costs by automatically deleting snapshots of volumes and EC2 instances that are no longer in use.



Key highlights of the project:

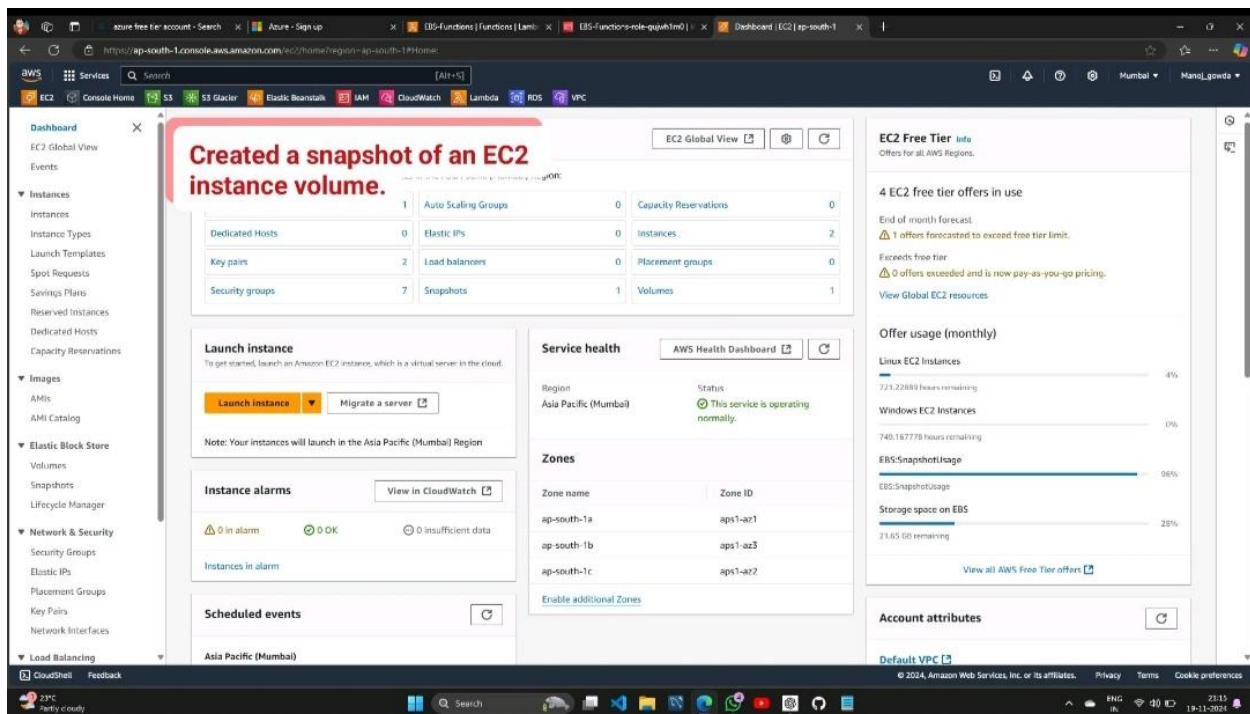
- **Efficient Cloud Management:** Automates the cleanup of unused snapshots to ensure cost-effective storage management.
- **Optimized Execution Time:** Adjusted the default code execution time from 3 seconds to 5 seconds to prevent errors, carefully balancing functionality and cost. Increasing the execution time beyond 5 seconds would have resulted in higher AWS charges, so this decision prioritized cost efficiency.

- **Proper Permissions:** Configured the necessary IAM permissions for the Lambda function to perform the required actions securely.

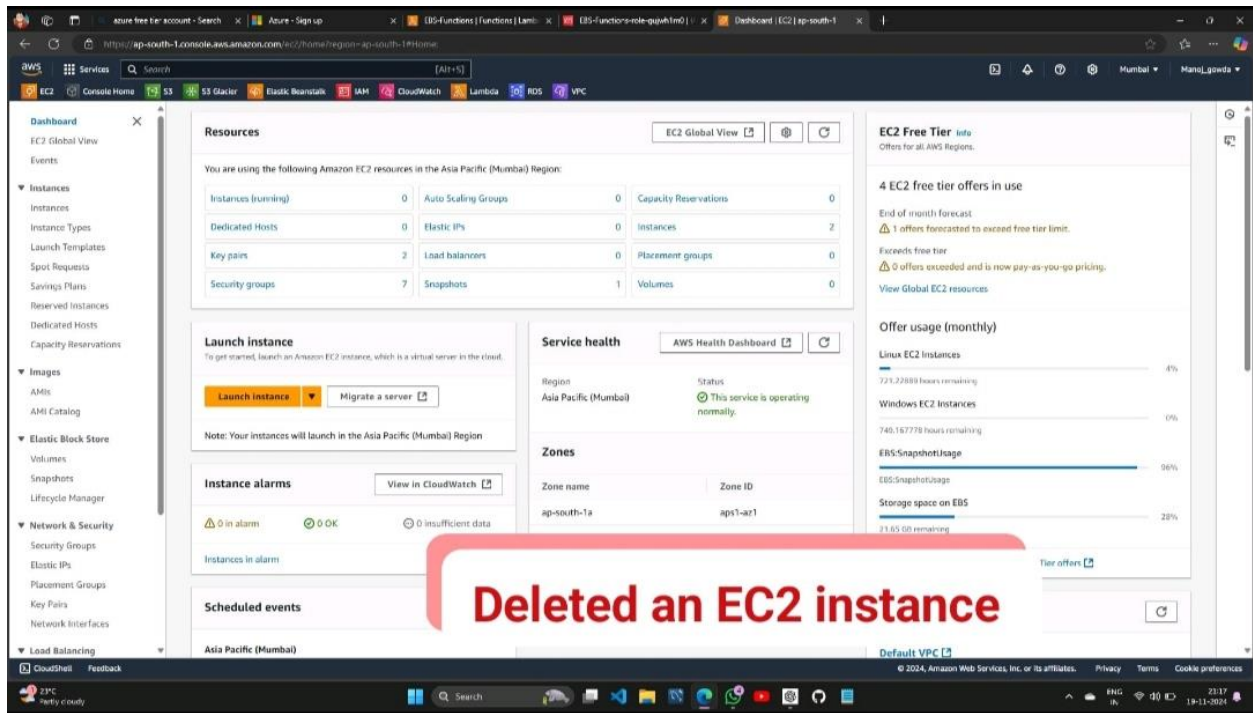
This project demonstrates the importance of cost optimization in cloud infrastructure while leveraging AWS services effectively.

Screenshots :

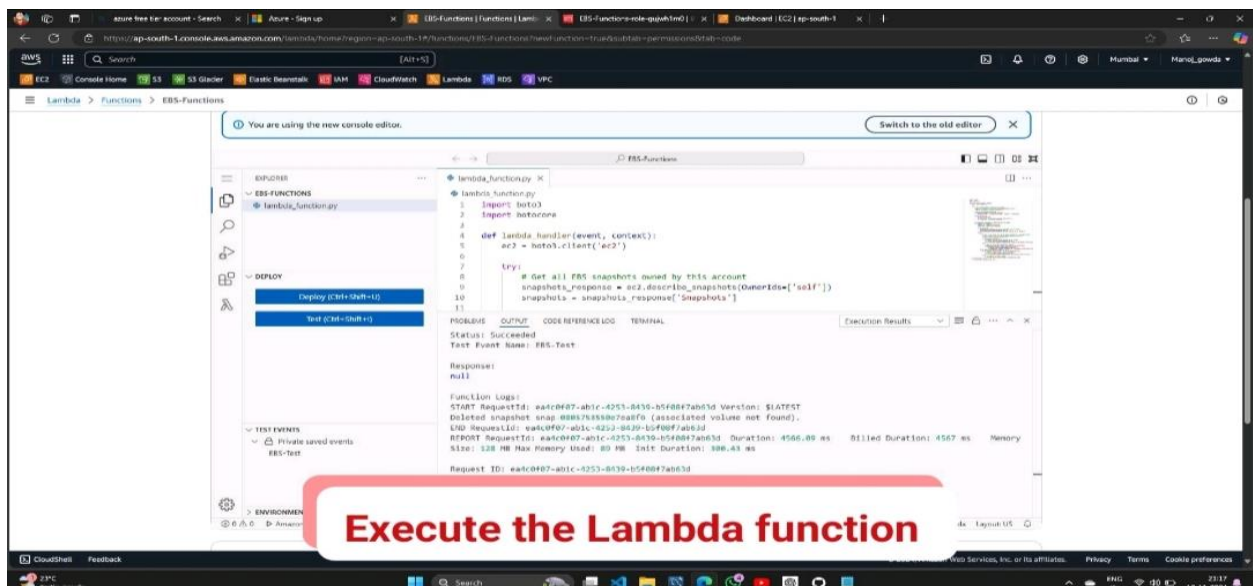
1.Created a snapshot using EC2



2. Execute the Lambda function



3. Lambda function deleted the snapshot



4. Deleted an EC2 instance

The screenshot shows the AWS Management Console for the Asia Pacific (Mumbai) region. The left sidebar contains navigation links for various AWS services. The main content area is divided into several sections:

- Resources:** A table showing the count of various EC2 resources. The counts are: Instances (running) 0, Auto Scaling Groups 0, Capacity Reservations 0, Dedicated Hosts 0, Elastic IPs 0, Instances 2, Key pairs 2, Load balancers 0, Placement groups 0, Security groups 7, Snapshots 0, and Volumes 0.
- Lambda functions deleted the snapshot:** A central announcement with a red banner. It includes a note: "Your instances will launch in the Asia Pacific (Mumbai) Region" and a button to "Migrate a server".
- Instance alarms:** A section showing the status of instance alarms. It indicates "0 in alarm", "0 OK", and "0 insufficient data".
- Scheduled events:** A section showing the status of scheduled events. It indicates "0 in alarm", "0 OK", and "0 insufficient data".
- Zones:** A table showing the status of availability zones. The zones are: ap-south-1a (Zone ID: ap-s1-az1), ap-south-1b (Zone ID: ap-s1-az2), and ap-south-1c (Zone ID: ap-s1-az3).
- EC2 Free Tier:** A section on the right side of the dashboard. It shows that 4 EC2 free tier offers are in use. It includes a forecast for the end of the month, indicating that 1 offer is forecasted to exceed the free tier limit. It also shows the usage of various EC2 services, including Linux EC2 Instances, Windows EC2 Instances, EBS SnapshotUsage, and Storage space on EBS.