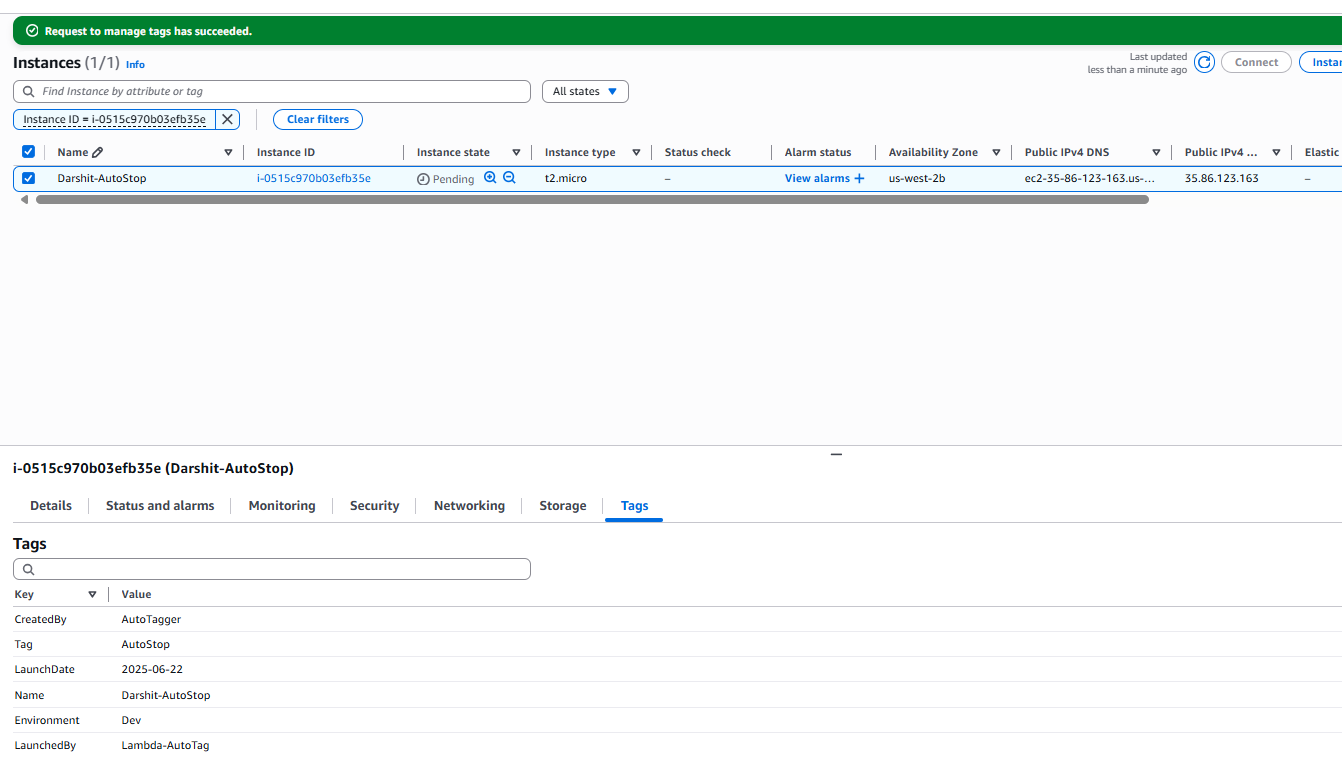
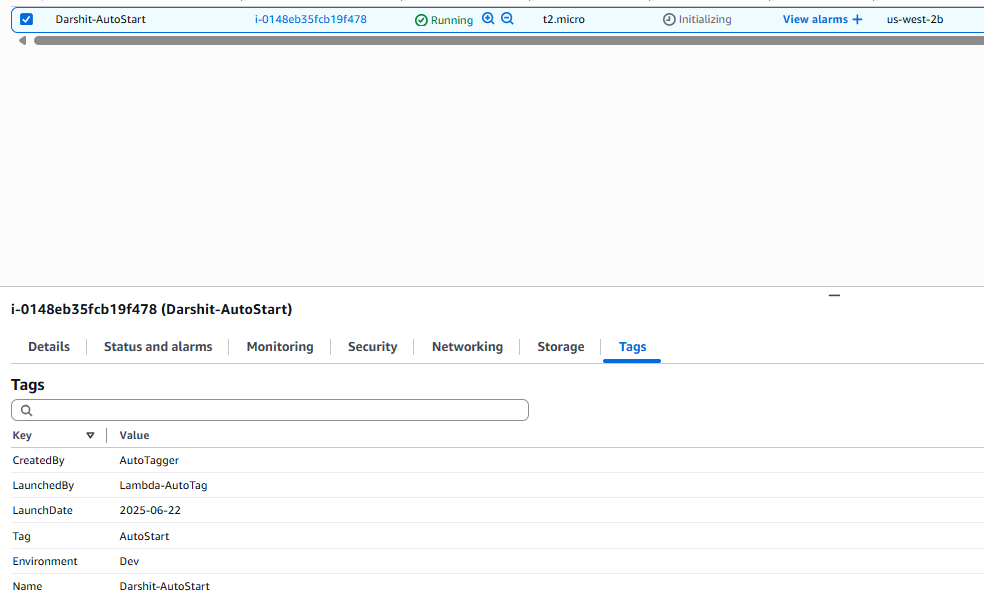
**Task 1: Automated Instance Management Using AWS Lambda and Boto3**

***Objective:****Create a Lambda function that will automatically manage EC2 instances based on their tags.*

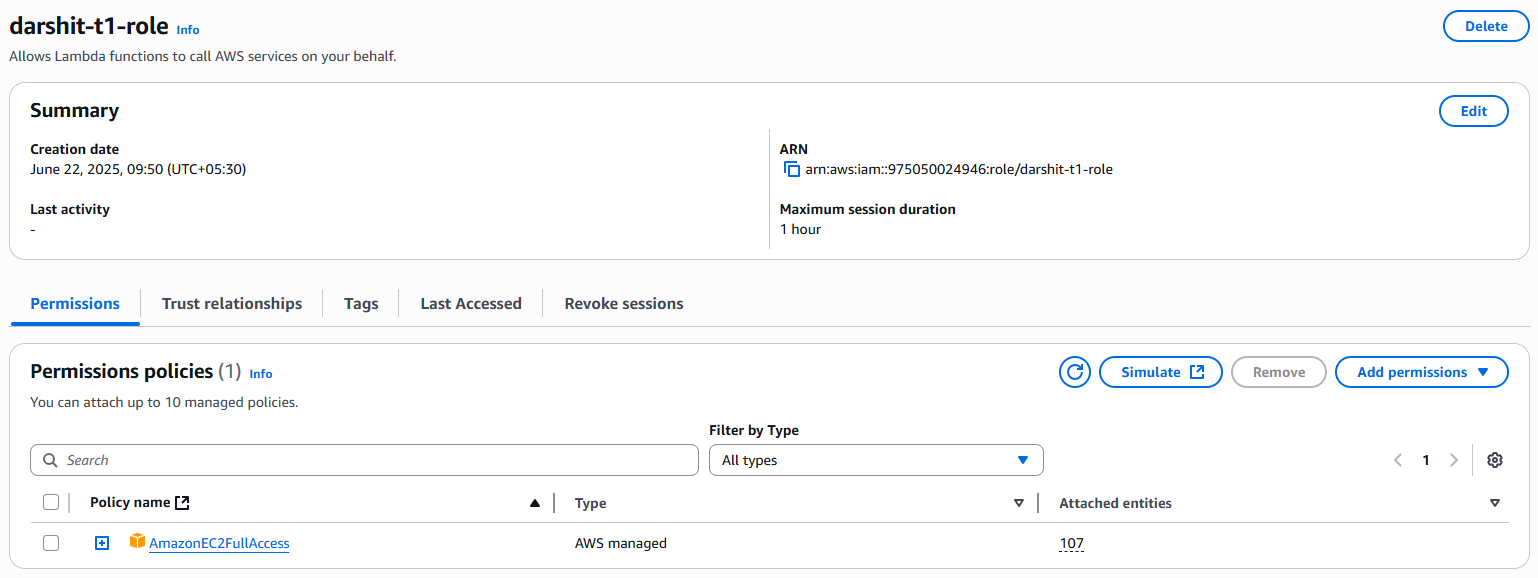
Creating 2 EC2Instances



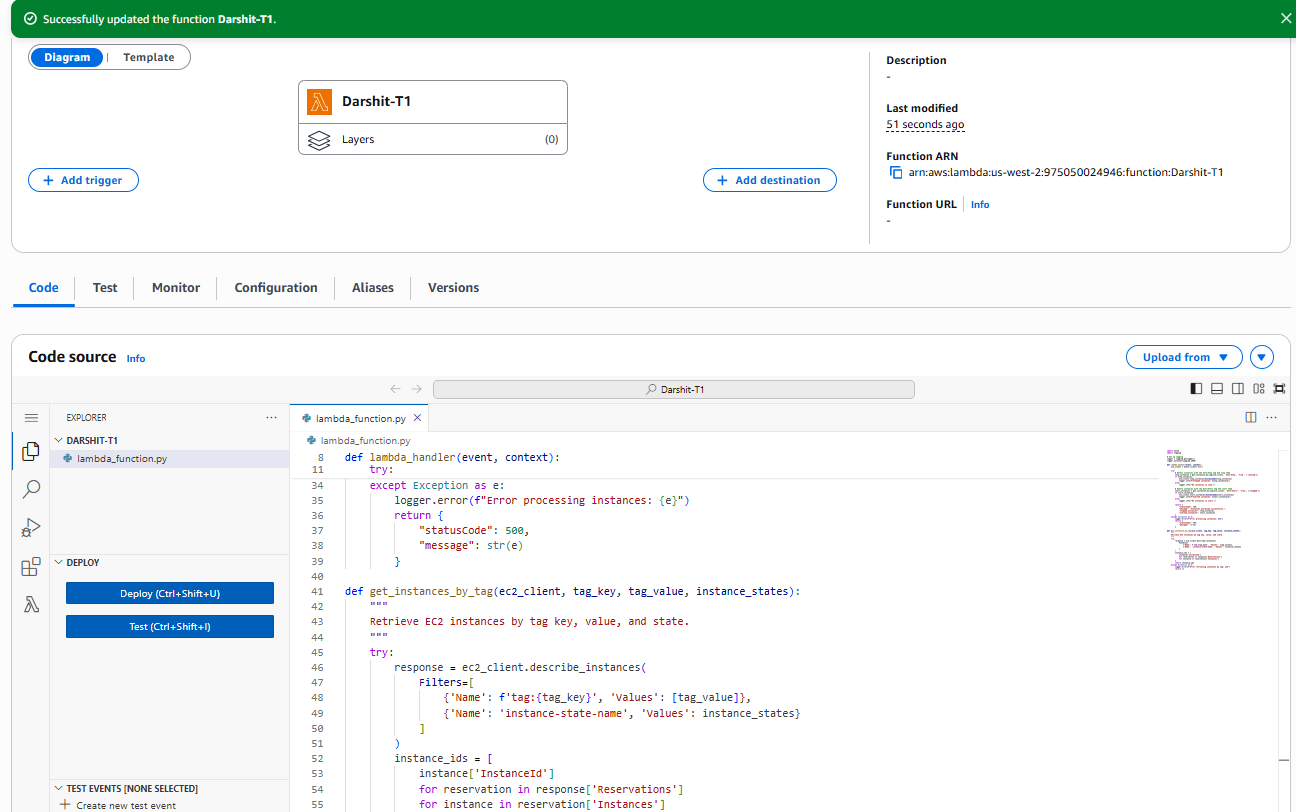


2 EC2 instances have been created with the appropriate tags.

IAM Role Created



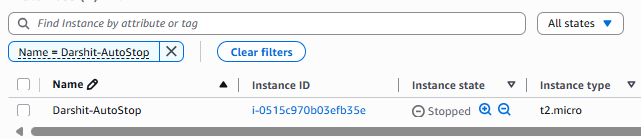
Lambda Function created.



On Running the function, the end summary clearly shows an instance being stopped.



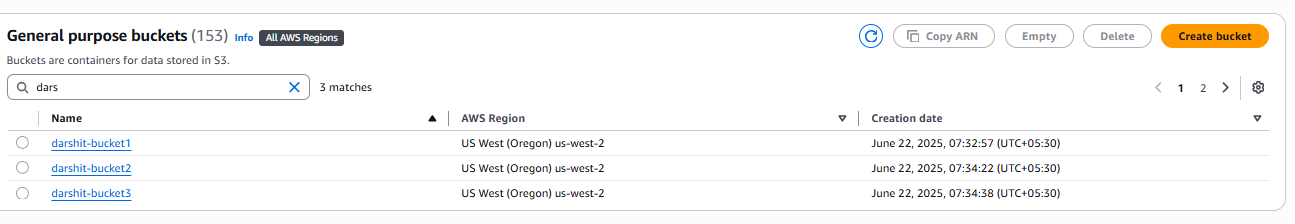
When checking at the Instance page, we can see that an instance is indeed stopped.



Task 3: **Monitor Unencrypted S3 Buckets Using AWS Lambda and Boto3**

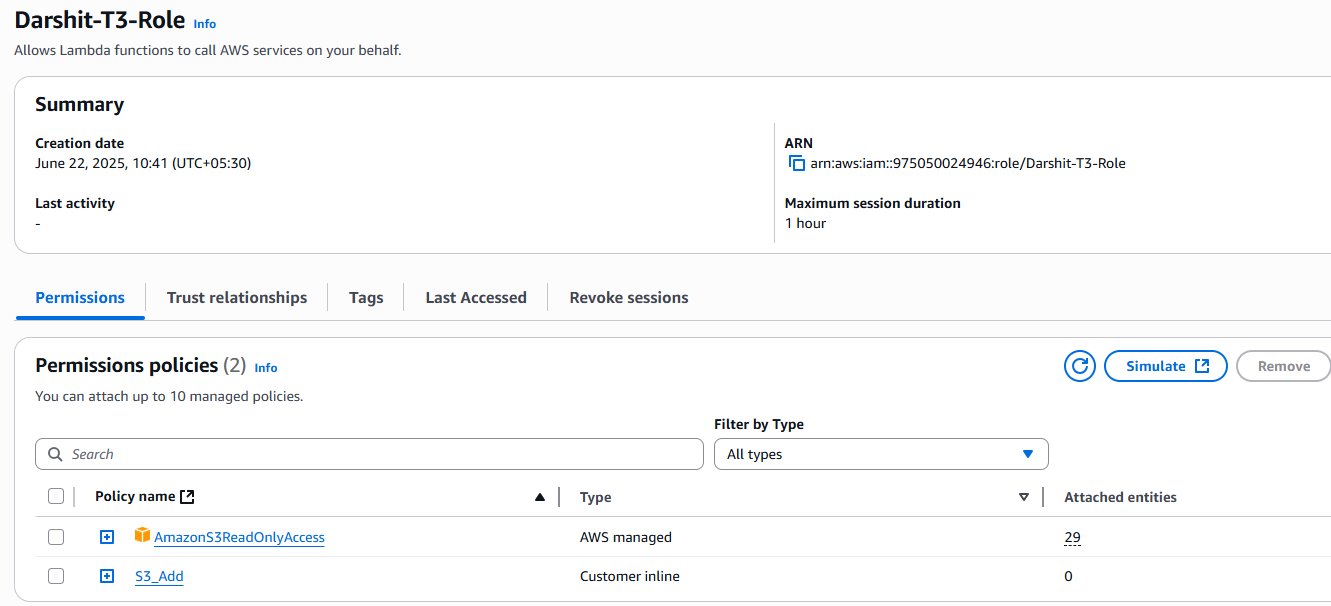
**Objective:**To enhance your AWS security posture by setting up a Lambda function that detects any S3 bucket without server-side encryption.

S3 Bucket Creation

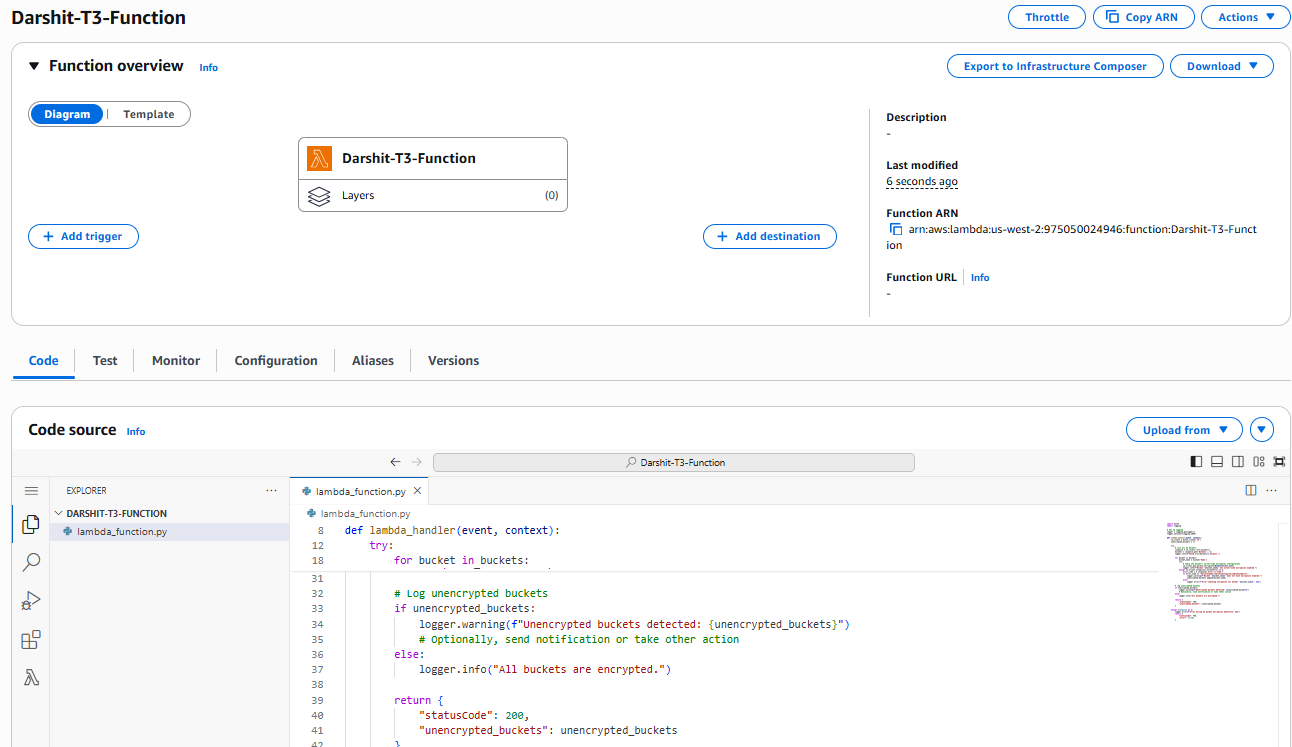


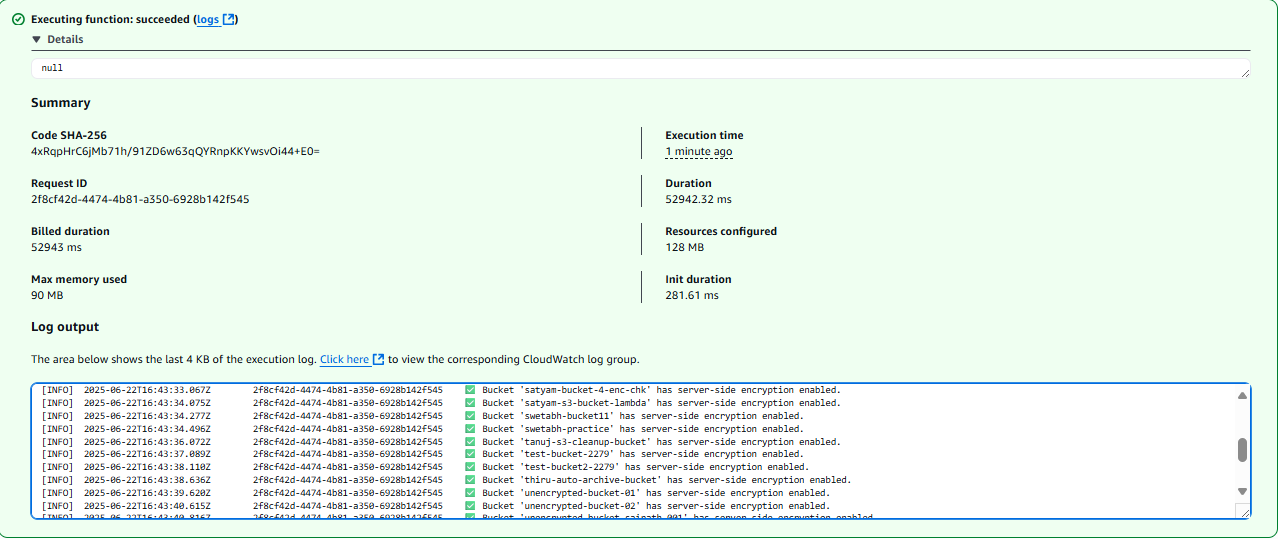
3 buckets are created with \*1 and \*3 without server side encryption.

IAM Roles Creation



Lambda Function Creation

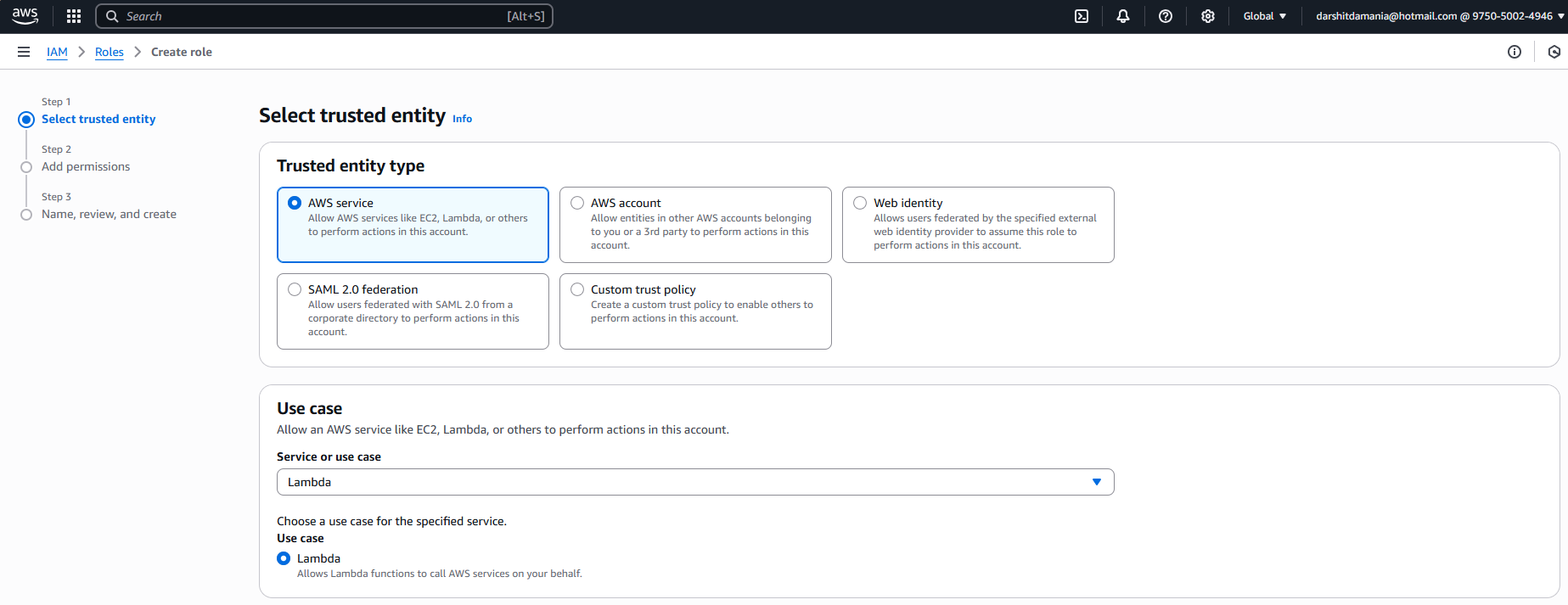


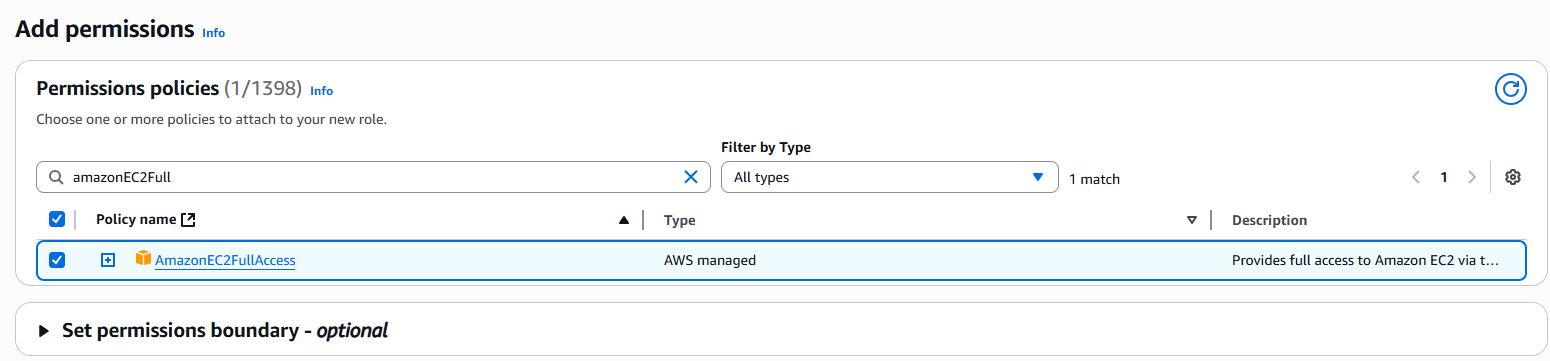


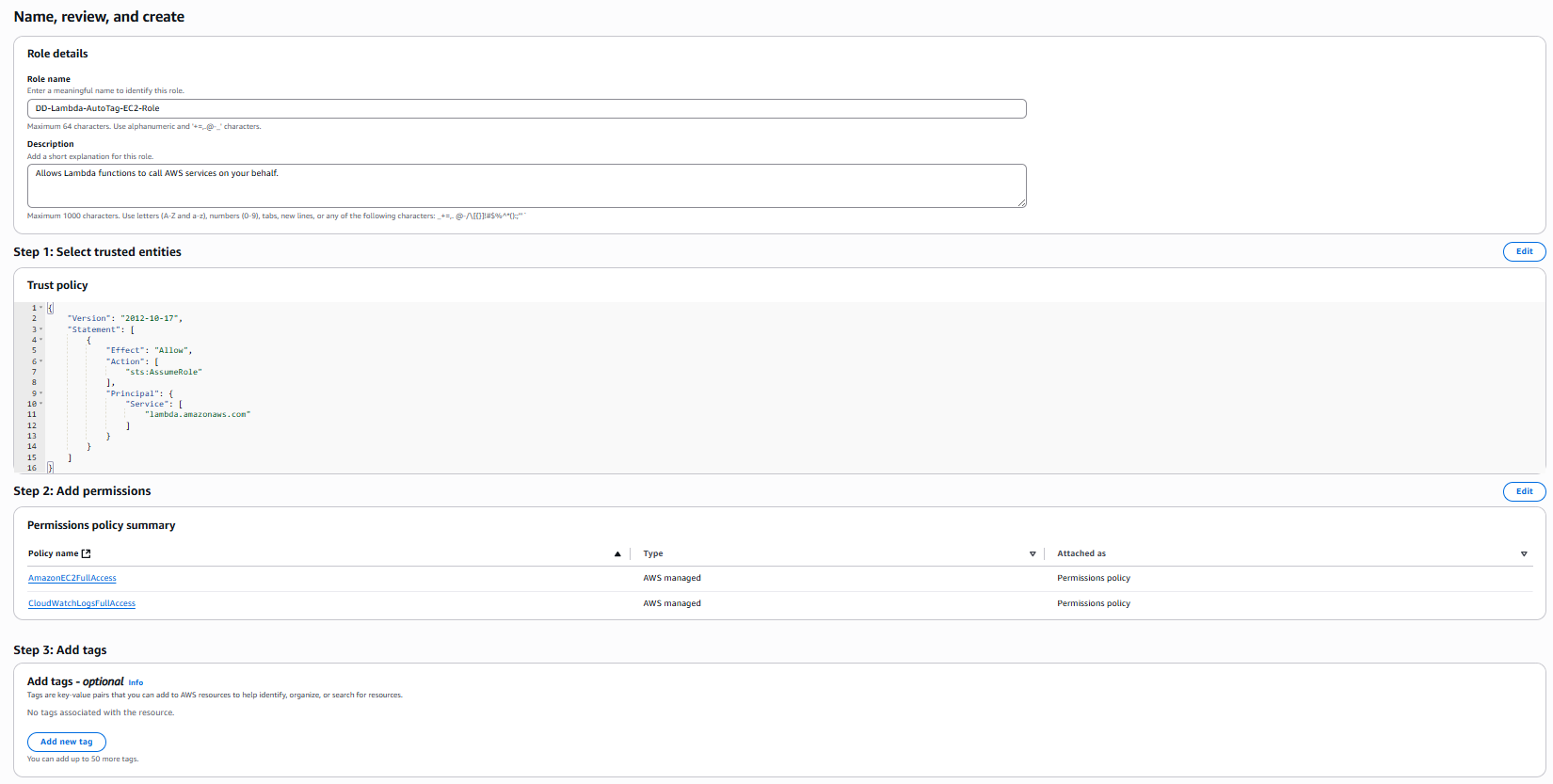
Task 5: **Auto-Tagging EC2 Instances on Launch Using AWS Lambda and Boto3**

***Objective: Learn to automate the tagging of EC2 instances as soon as they are launched, ensuring better resource tracking and management.***

Creating IAM Roles

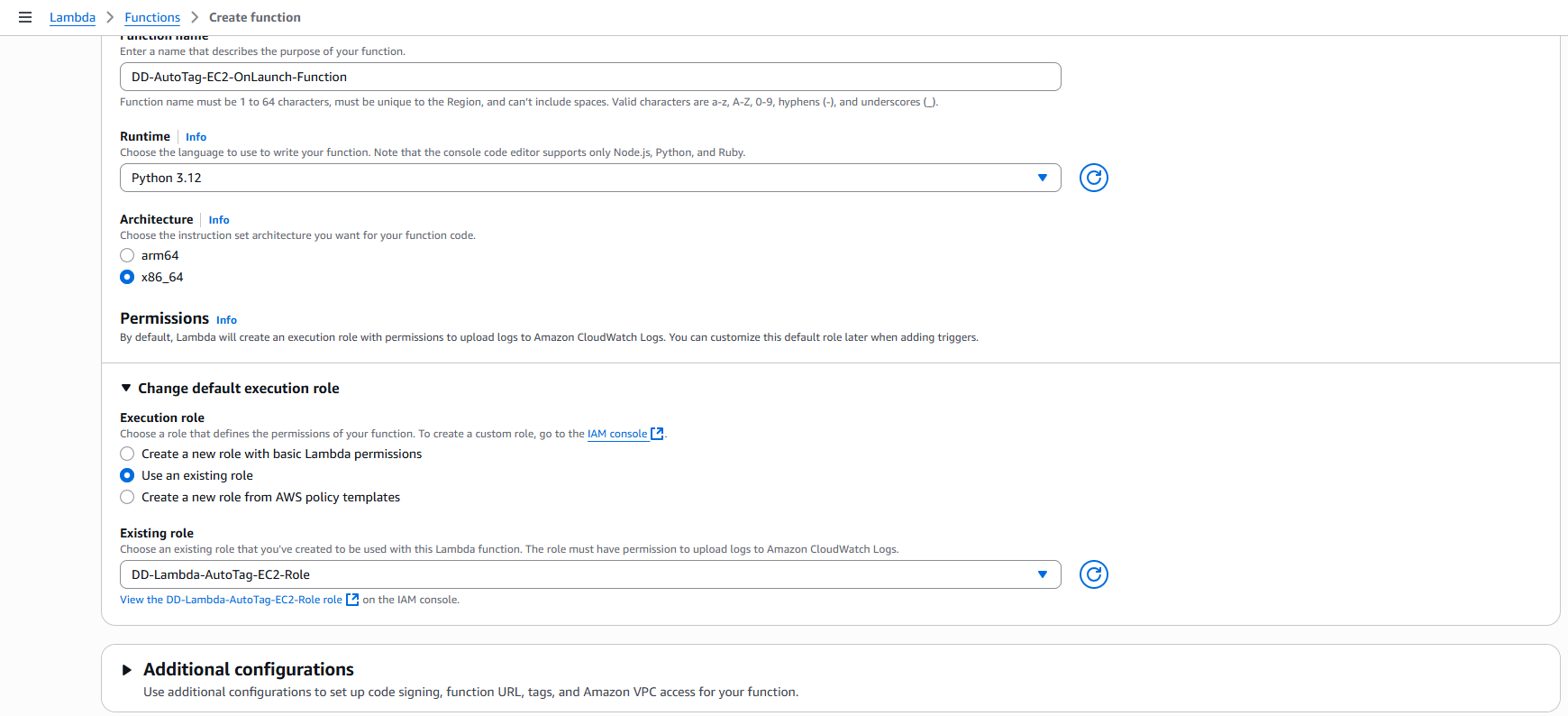


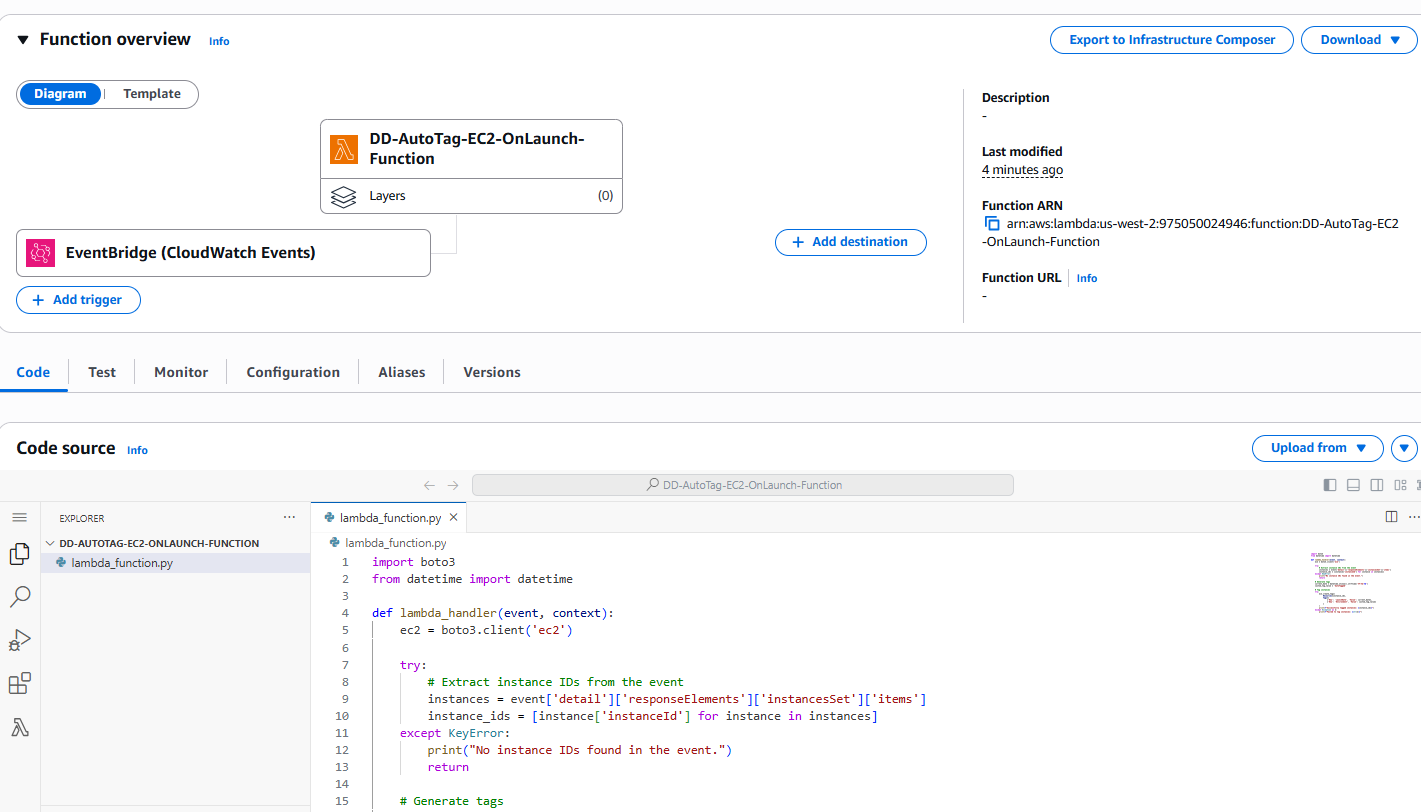




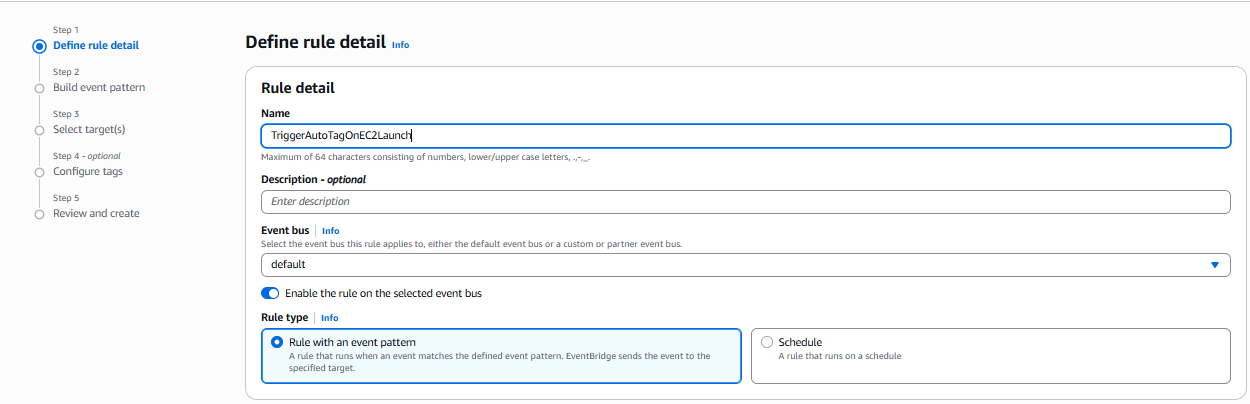


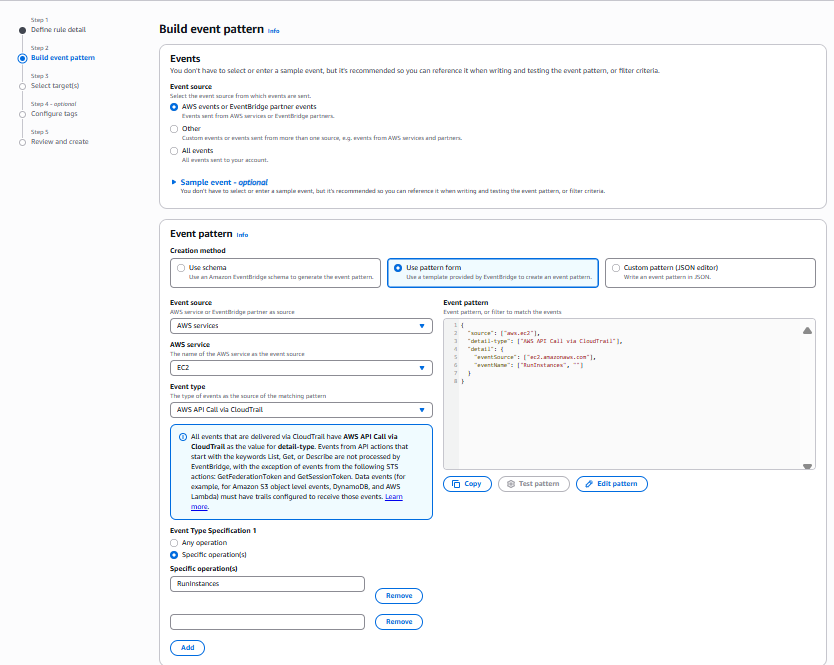
Creating Lambda Function

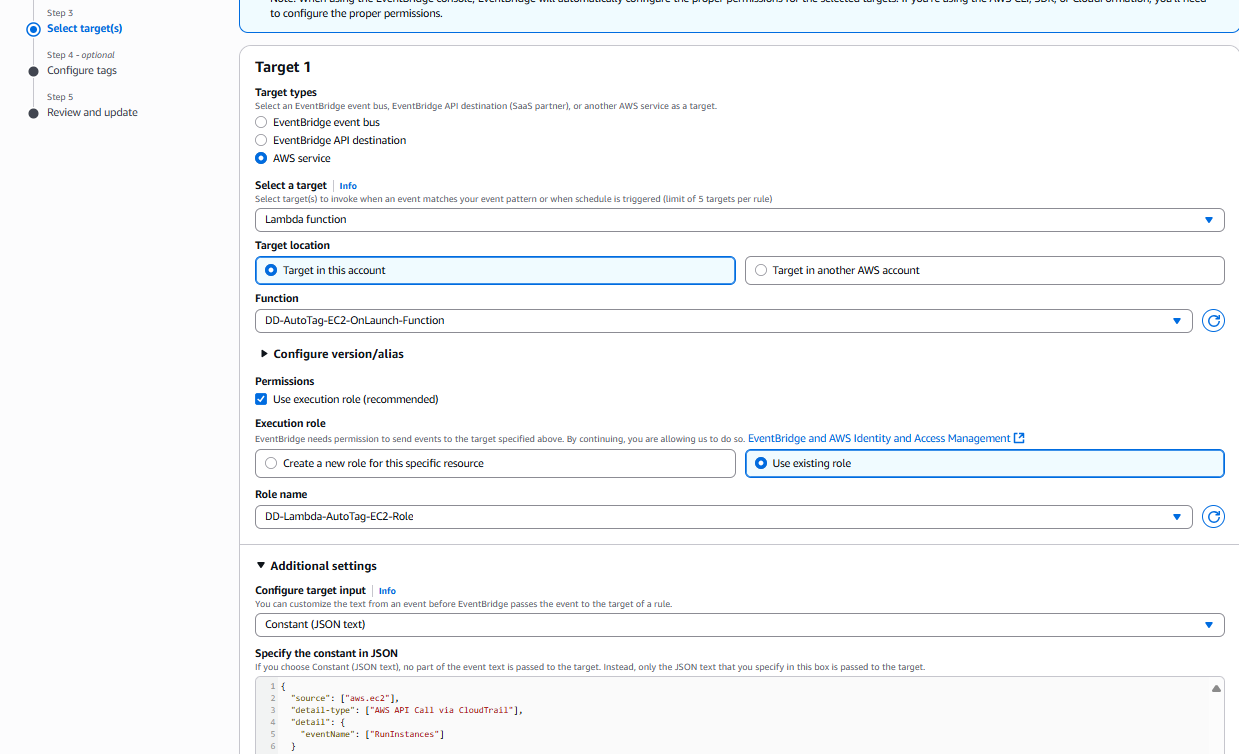


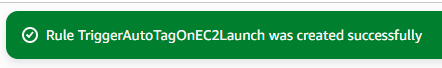


Creating Rule

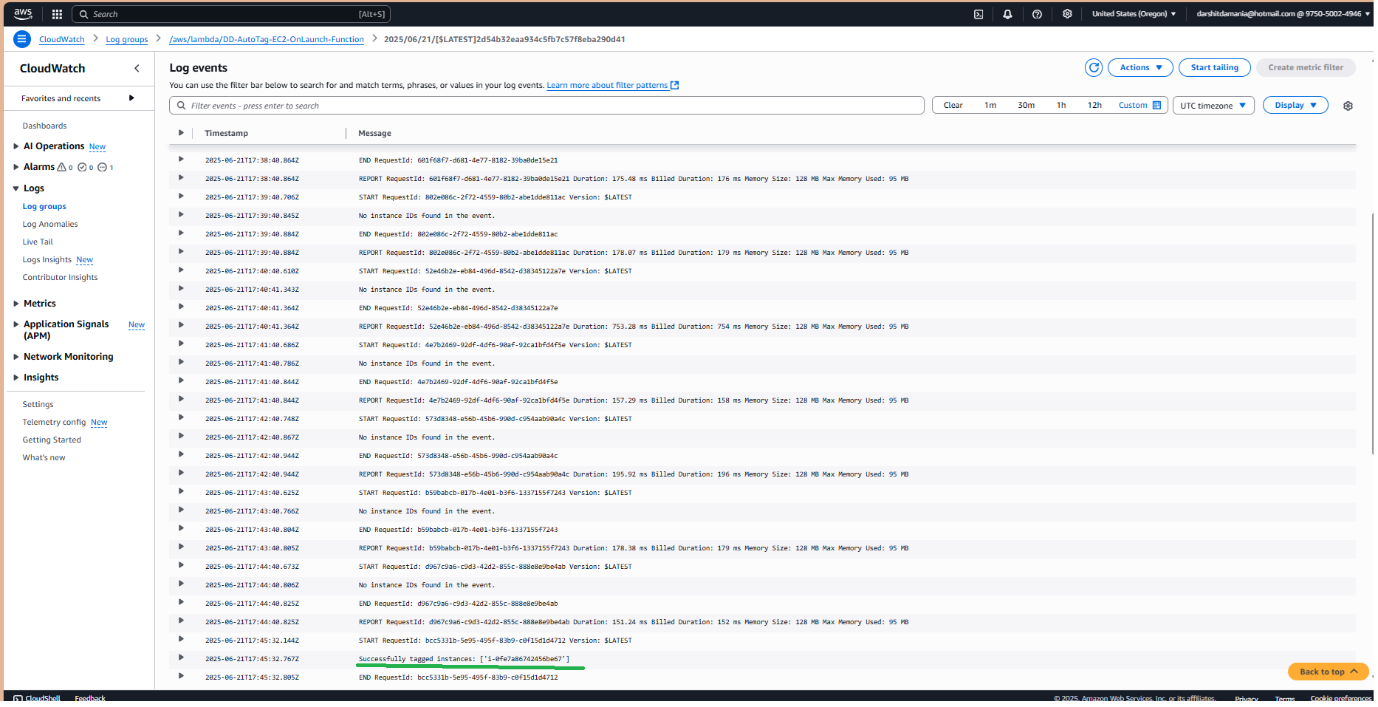




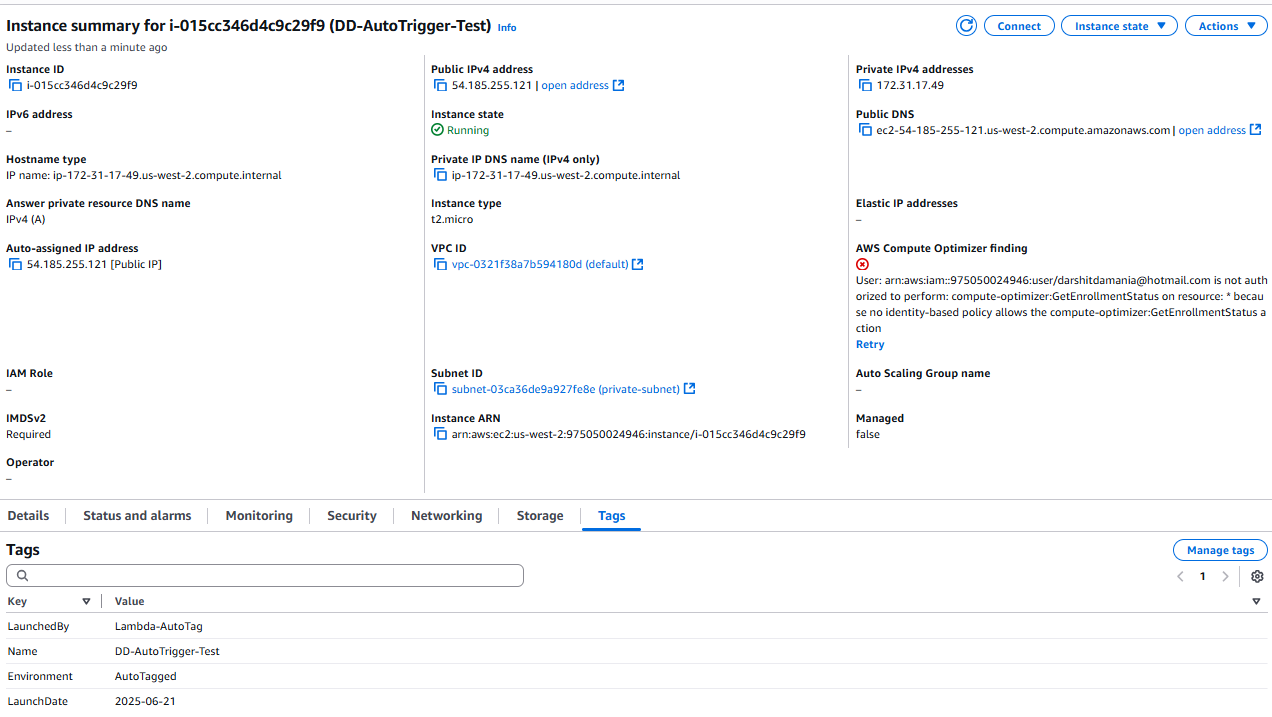




Performing the CloudWatch Activities



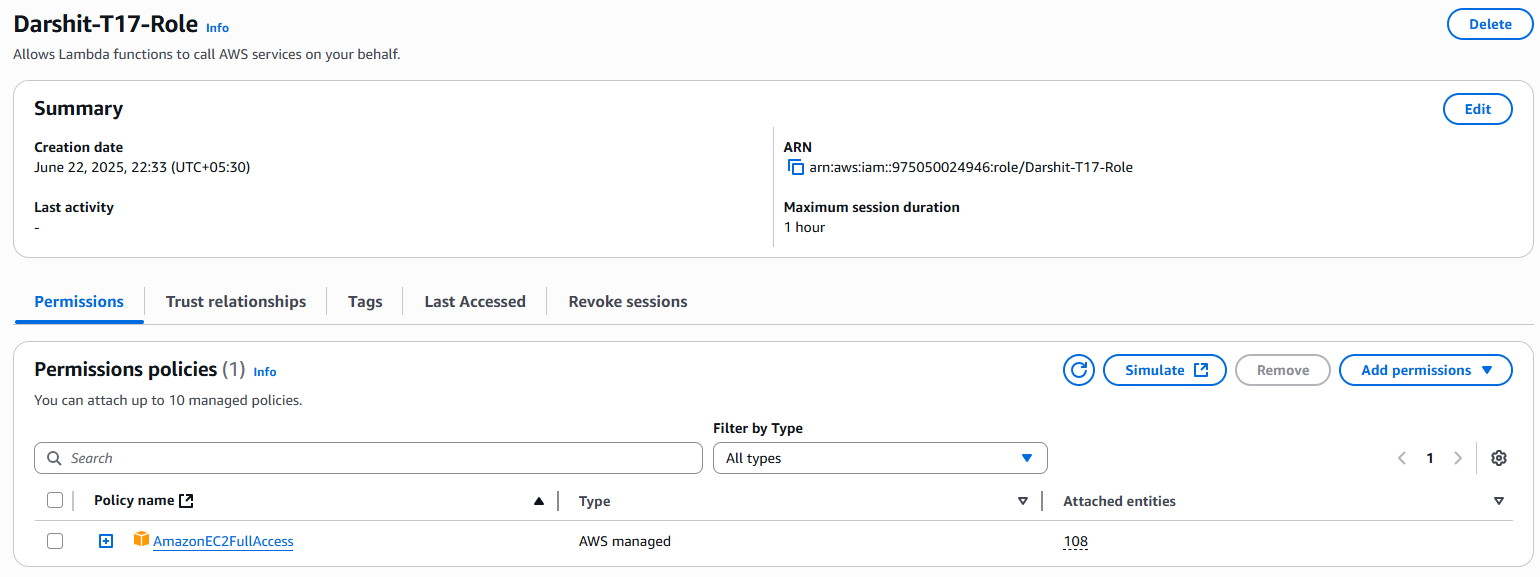
Verification of the Tag on the EC2 instances created



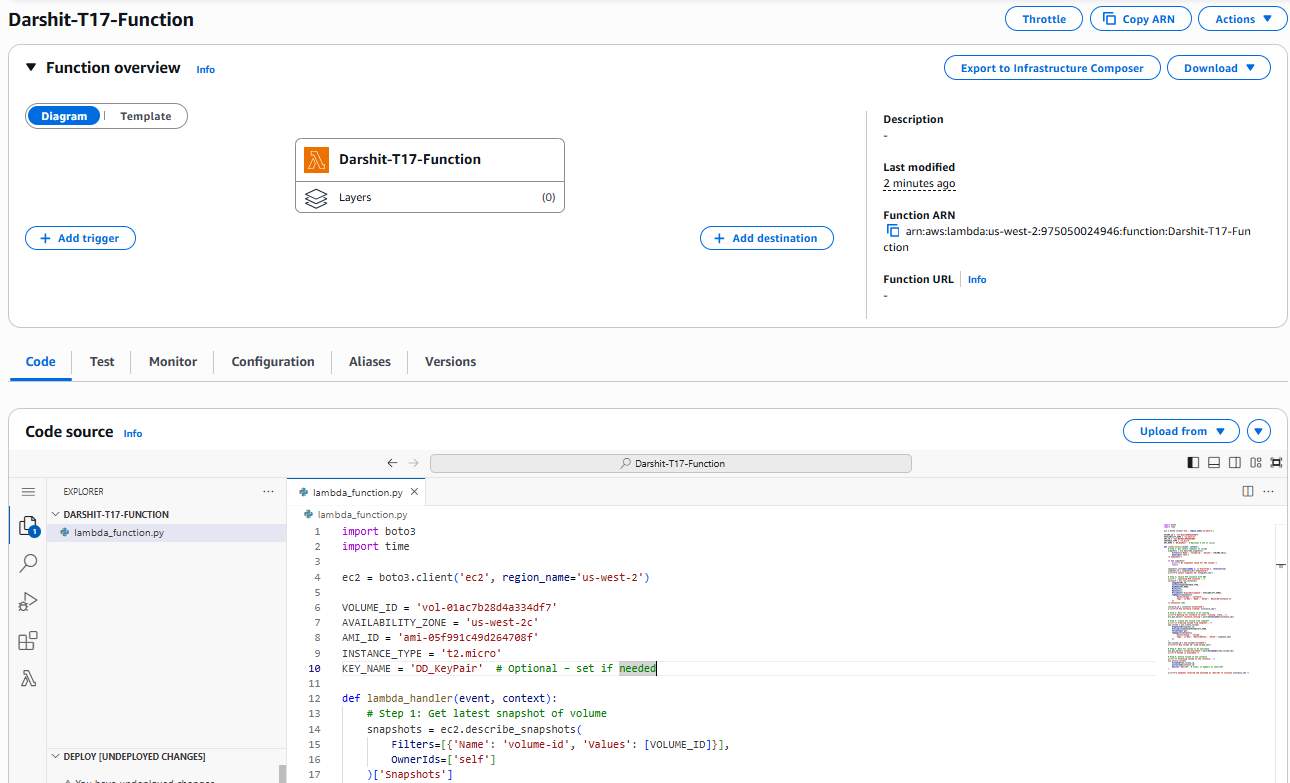
Task 17: **Restore EC2 Instance from Snapshot**

***Objective:****Automate the process of creating a new EC2 instance from the latest snapshot using a Lambda function.*

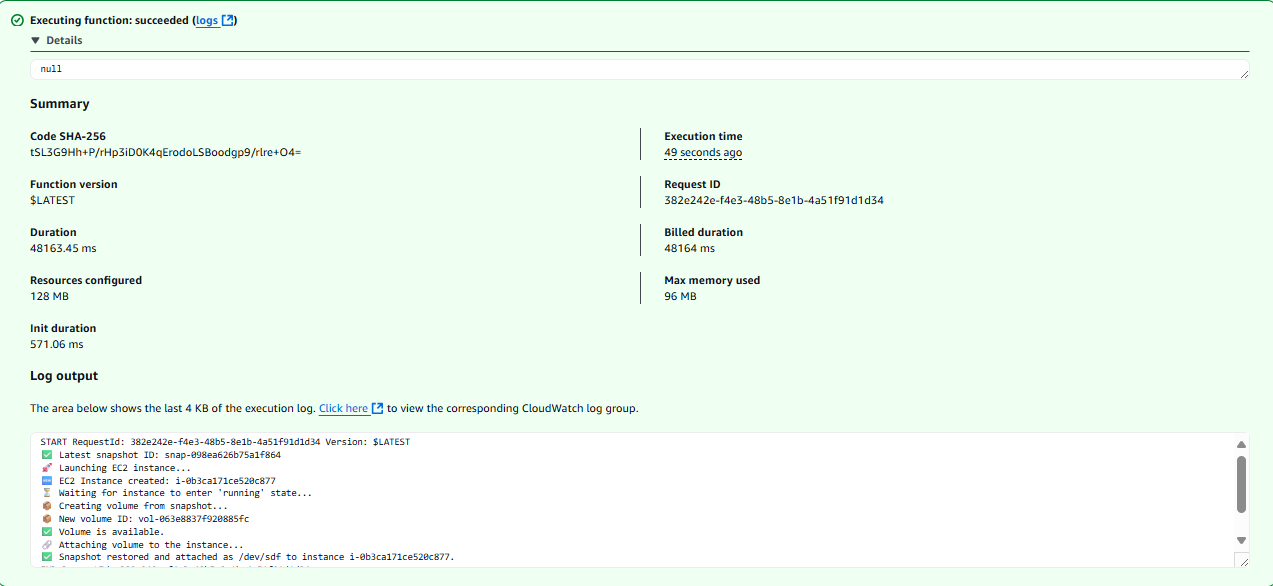
Creating the IAM Role



Lambda Function



Test Result from the Lambda Function



Checking back on the EC2 instances, seen below is the EC2 instance created from the information provided in the Lambda Function.

