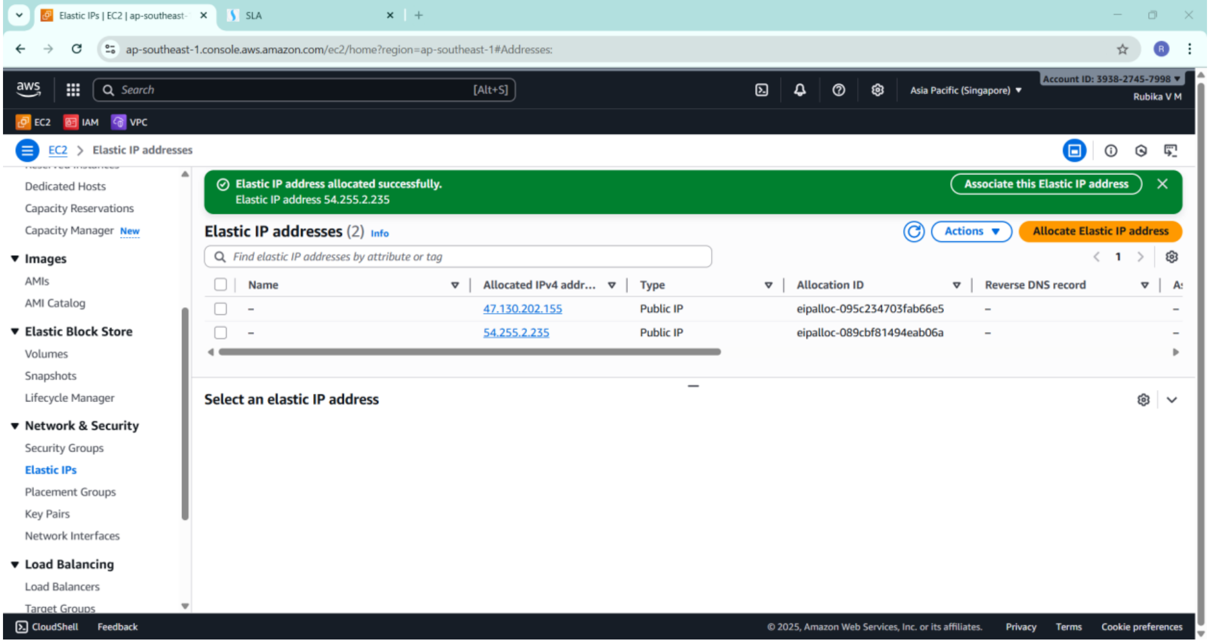
Task 15

Delete the unused elastic IP through Lambda

AWS Lambda is a serverless compute service offered by Amazon Web Services (AWS) that allows users to run code without provisioning or managing servers. It operates on an event-driven, pay-as-you-go model.



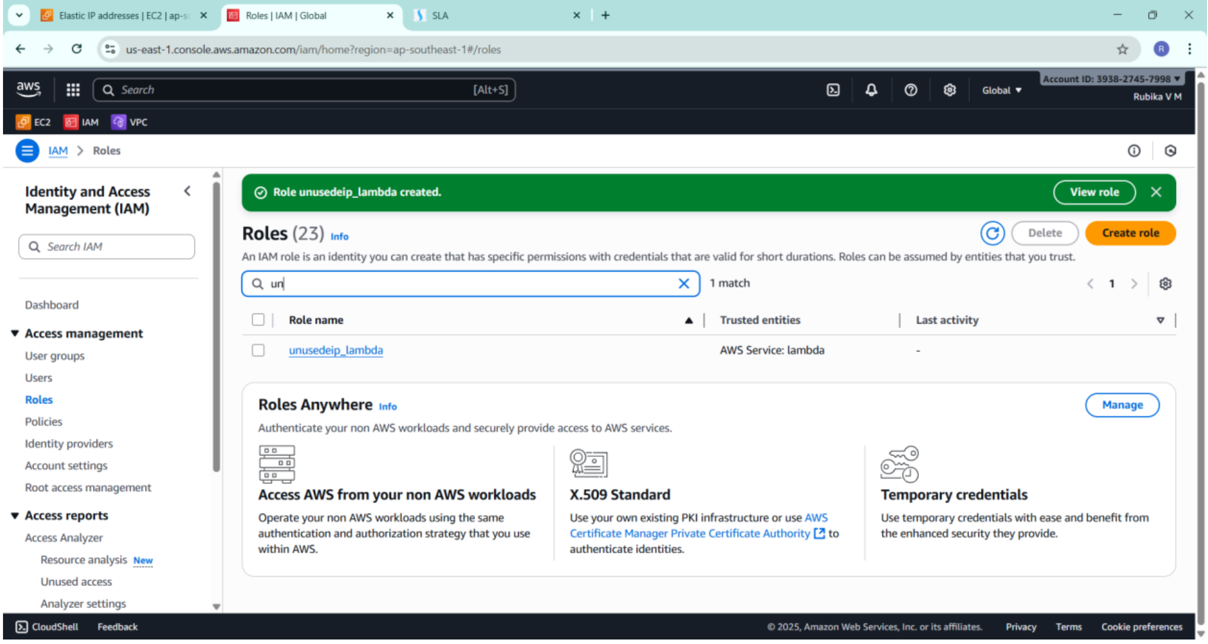
Elastic IP address allocated successfully.
Elastic IP address 54.255.2.235

Elastic IP addresses (2) Info

Find elastic IP addresses by attribute or tag

Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record
–	47.130.202.155	Public IP	eipalloc-095c234703fab66e5	–
–	54.255.2.235	Public IP	eipalloc-089cbf81494eab06a	–

Select an elastic IP address



Role unusedeip_lambda created.

Roles (23) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

un

1 match

Role name	Trusted entities	Last activity
unusedeip_lambda	AWS Service: lambda	-

Roles Anywhere Info

Authenticate your non AWS workloads and securely provide access to AWS services.

Access AWS from your non AWS workloads

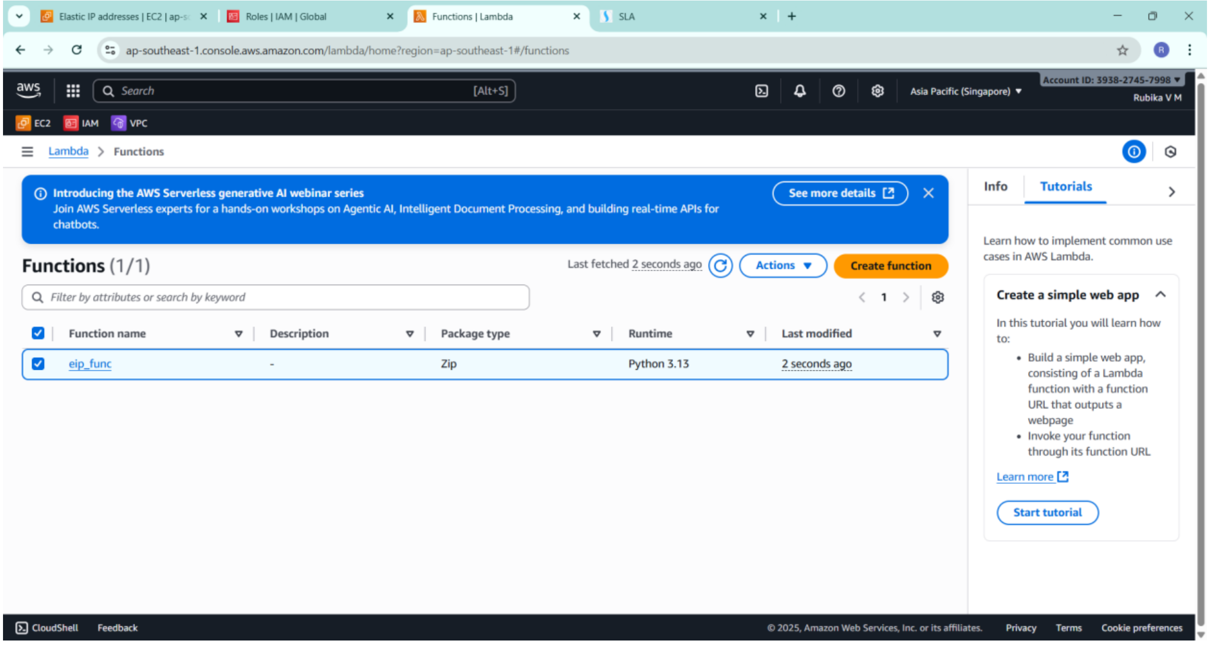
Operate your non AWS workloads using the same authentication and authorization strategy that you use within AWS.

X.509 Standard

Use your own existing PKI infrastructure or use AWS Certificate Manager Private Certificate Authority to authenticate identities.

Temporary credentials

Use temporary credentials with ease and benefit from the enhanced security they provide.


Elastic IP addresses | EC2 | ap-s
Roles | IAM | Global
Functions | Lambda
SLA
ap-southeast-1.console.aws.amazon.com/lambda/home?region=ap-southeast-1#/functions
Search [Alt+S]
Asia Pacific (Singapore)
Account ID: 3938-2745-7998
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EC2
IAM
VPC
Lambda > Functions

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Join AWS Serverless experts for a hands-on workshops on Agentic AI, Intelligent Document Processing, and building real-time APIs for chatbots.

Functions (1/1)

Last fetched 2 seconds ago

Actions
Create function
Filter by attributes or search by keyword

☑	Function name	Description	Package type	Runtime	Last modified
☑	eip_func	-	Zip	Python 3.13	2 seconds ago

Learn how to implement common use cases in AWS Lambda.

Create a simple web app

In this tutorial you will learn how to:

- Build a simple web app, consisting of a Lambda function with a function URL that outputs a webpage
- Invoke your function through its function URL

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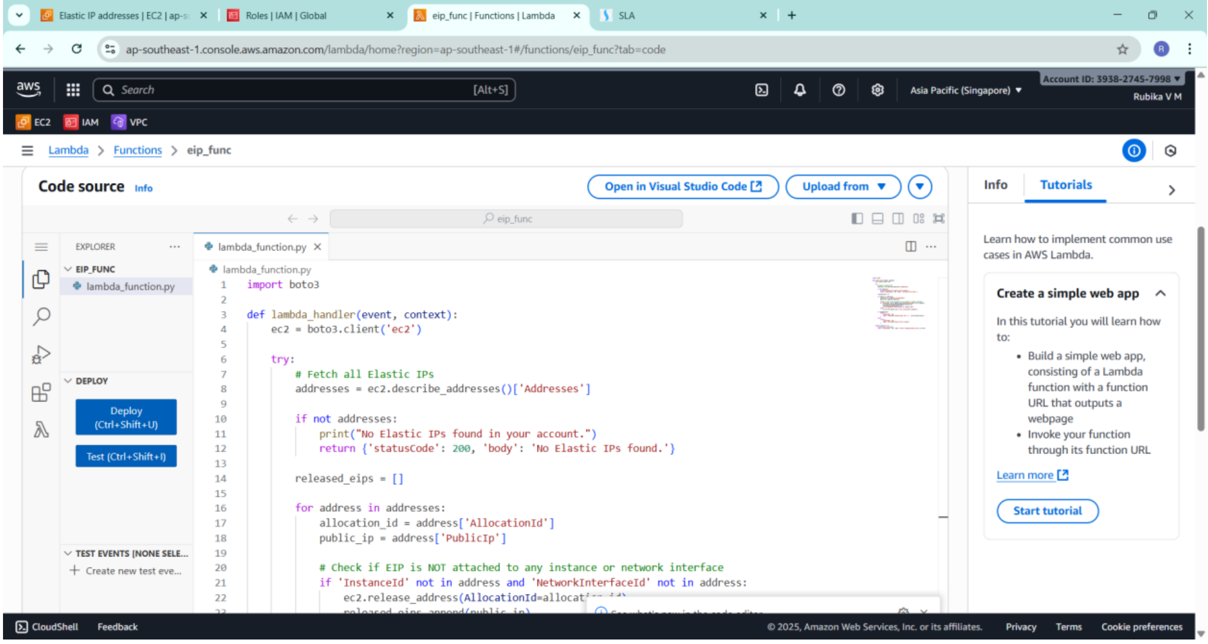
Elastic IP addresses | EC2 | ap-s
Roles | IAM | Global
eip_func | Functions | Lambda
SLA
ap-southeast-1.console.aws.amazon.com/lambda/home?region=ap-southeast-1#/functions/eip_func?tab=code
Search [Alt+S]
Asia Pacific (Singapore)
Account ID: 3938-2745-7998
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EC2
IAM
VPC
Lambda > Functions > eip_func
Code source
Info
Open in Visual Studio Code
Upload from
eip_func
EXPLORER
EIP_FUNC
lambda_function.py
DEPLOY
Deploy (Ctrl+Shift+U)
Test (Ctrl+Shift+I)
TEST EVENTS [NONE SELE...
Create new test eve...

lambda_function.py

```python
import boto3

def lambda_handler(event, context):
    ec2 = boto3.client('ec2')

    try:
        # Fetch all Elastic IPs
        addresses = ec2.describe_addresses()['Addresses']

        if not addresses:
            print("No Elastic IPs found in your account.")
            return {'statusCode': 200, 'body': 'No Elastic IPs found.'}

        released_eips = []

        for address in addresses:
            allocation_id = address['AllocationId']
            public_ip = address['PublicIp']

            # Check if EIP is NOT attached to any instance or network interface
            if 'InstanceId' not in address and 'NetworkInterfaceId' not in address:
                ec2.release_address(AllocationId=allocation_id)
                released_eips.append(public_ip)
```

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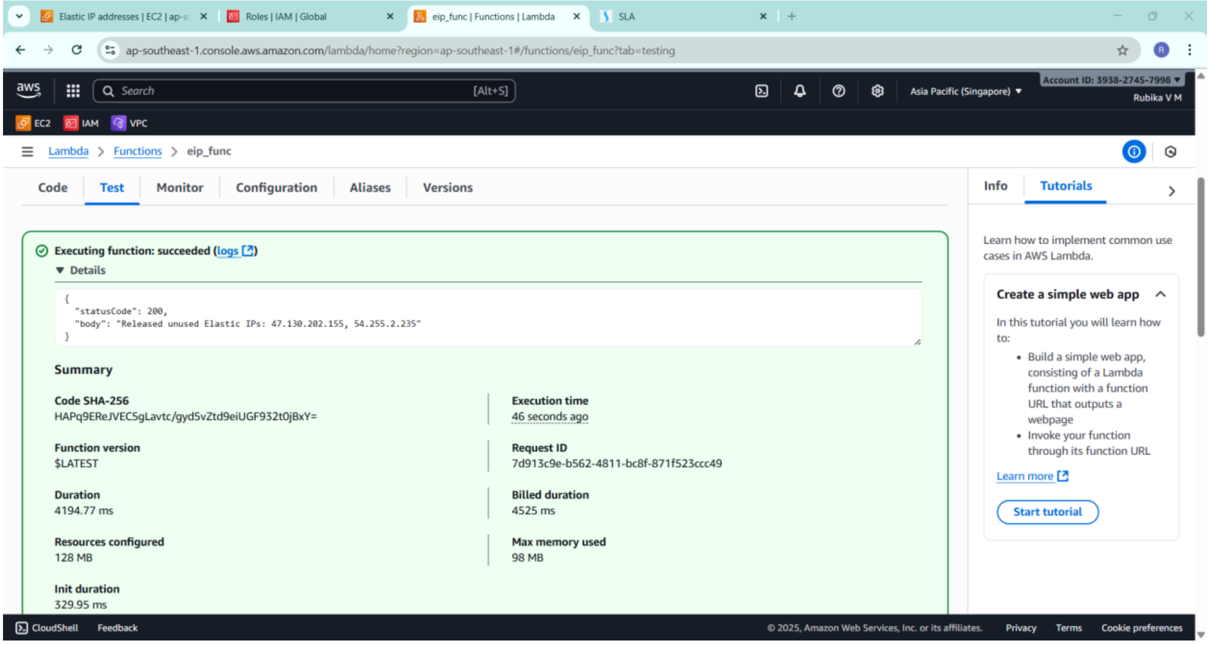
Elastic IP addresses | EC2 | ap-s
Roles | IAM | Global
eip_func | Functions | Lambda
SLA
ap-southeast-1.console.aws.amazon.com/lambda/home?region=ap-southeast-1#/functions/eip_func?tab=testing
Search [Alt+S]
Asia Pacific (Singapore)
Account ID: 3938-2745-7998
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EC2
IAM
VPC
Lambda > Functions > eip_func
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Executing function: succeeded (logs)

▼ Details

```
{
  "statusCode": 200,
  "body": "Released unused Elastic IPs: 47.130.202.155, 54.255.2.235"
}
```

Summary

Code SHA-256
HAPq9EReJVEC5gLavtc/gyd5vZtd9eiUGF932t0jBxY=

Execution time
46 seconds ago

Function version
$LATEST

Request ID
7d913c9e-b562-4811-bc8f-871f523ccc49

Duration
4194.77 ms

Billed duration
4525 ms

Resources configured
128 MB

Max memory used
98 MB

Init duration
329.95 ms

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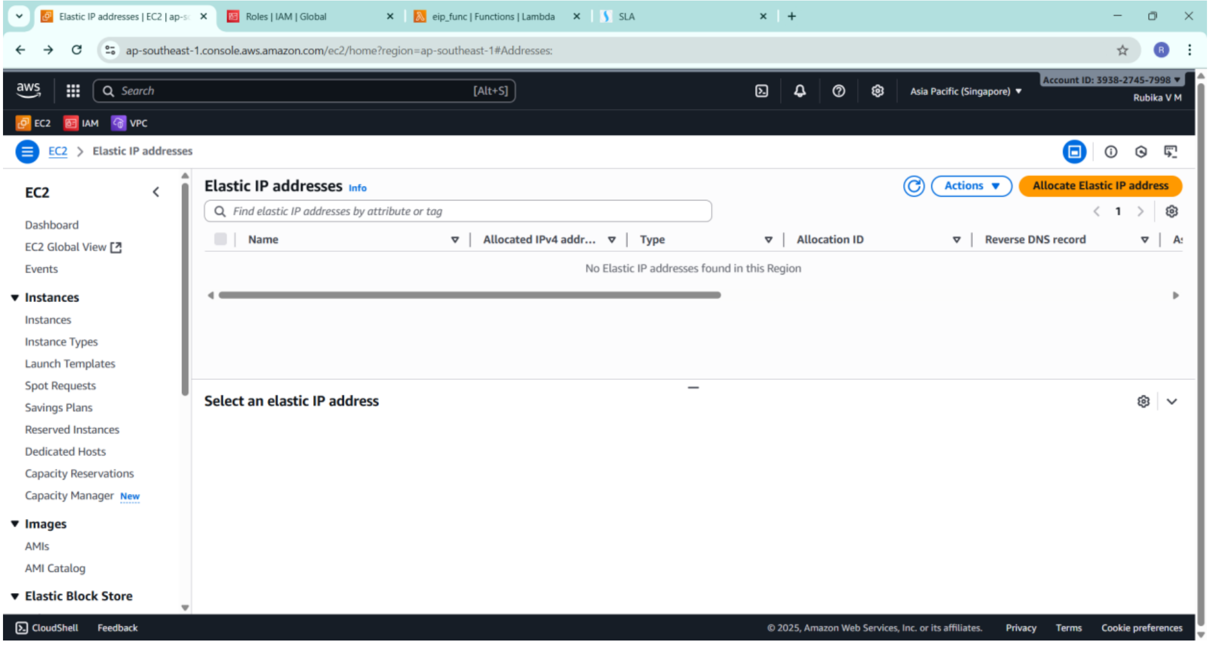
Learn more

Start tutorial



Elastic IP addresses

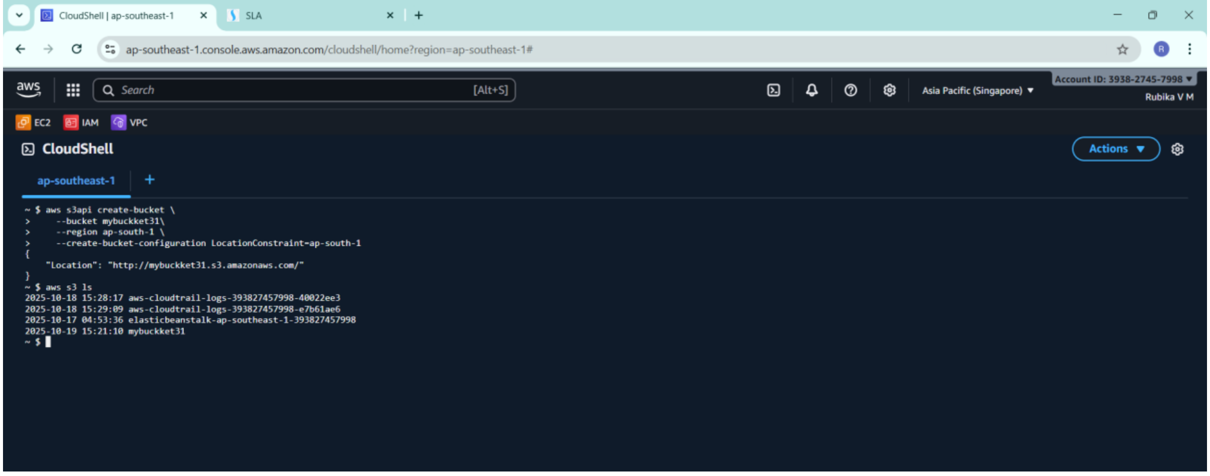
Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record	A:

No Elastic IP addresses found in this Region

Select an elastic IP address

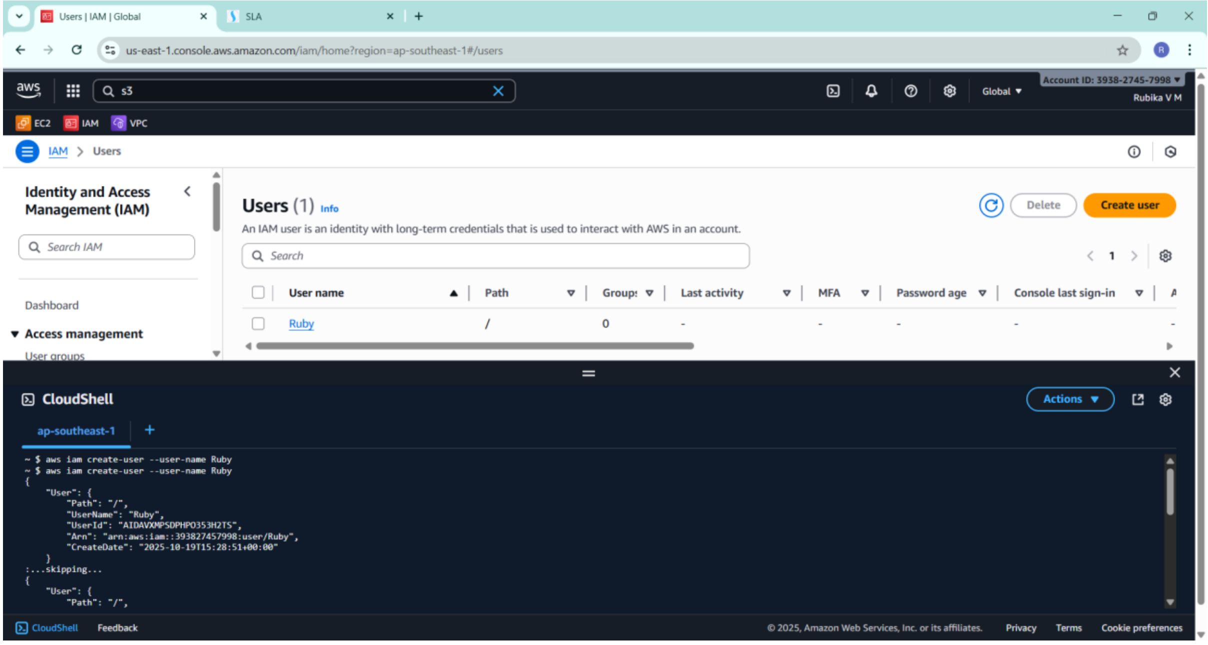
AWS CLI - to create the s3, IAM, Elastic Beanstalk

Creation of s3 through CLI



```
~ $ aws s3api create-bucket \
>     --bucket mybuckket31\
>     --region ap-south-1 \
>     --create-bucket-configuration LocationConstraint-ap-south-1
{
    "Location": "http://mybuckket31.s3.amazonaws.com/"
}
~ $ aws s3 ls
2025-10-18 15:28:17 aws-cloudtrail-logs-393827457998-40022ee3
2025-10-18 15:29:09 aws-cloudtrail-logs-393827457998-e7b61ae6
2025-10-17 04:53:36 elasticbeanstalk-ap-southeast-1-393827457998
2025-10-19 15:21:10 mybuckket31
~ $ 
```

Creation of user through CLI



Users (1)

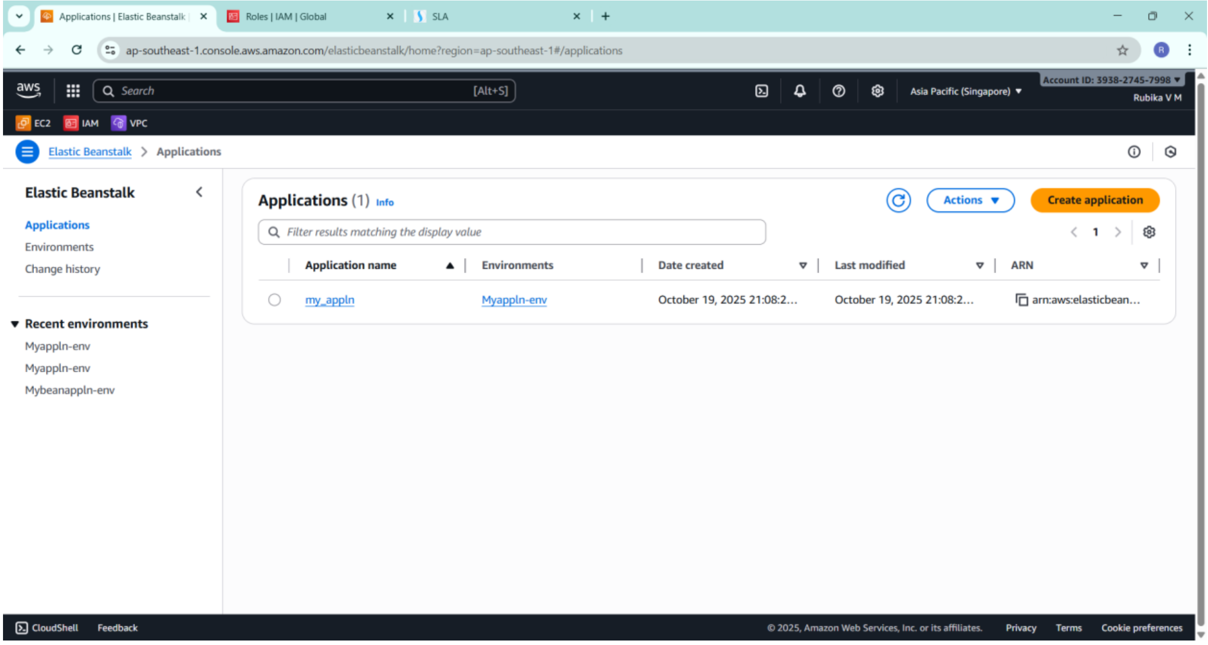
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

User name	Path	Groups	Last activity	MFA	Password age	Console last sign-in
Ruby	/	0	-	-	-	-

```
~ $ aws iam create-user --user-name Ruby
~ $ aws iam create-user --user-name Ruby
{
    "User": {
        "Path": "/",
        "UserName": "Ruby",
        "UserId": "AIDAVXMPSDPHPO353H2TS",
        "Arn": "arn:aws:iam::393827457998:user/Ruby",
        "CreateDate": "2025-10-19T15:28:51+00:00"
    }
:...skipping...
{
    "User": {
        "Path": "/",
```

Elastic beanstalk

- AWS Elastic Beanstalk is a Platform as a Service (PaaS) offered by Amazon Web Services (AWS) that simplifies the deployment and management of web applications and services.
- It allows developers to deploy applications without needing to manage the underlying infrastructure.

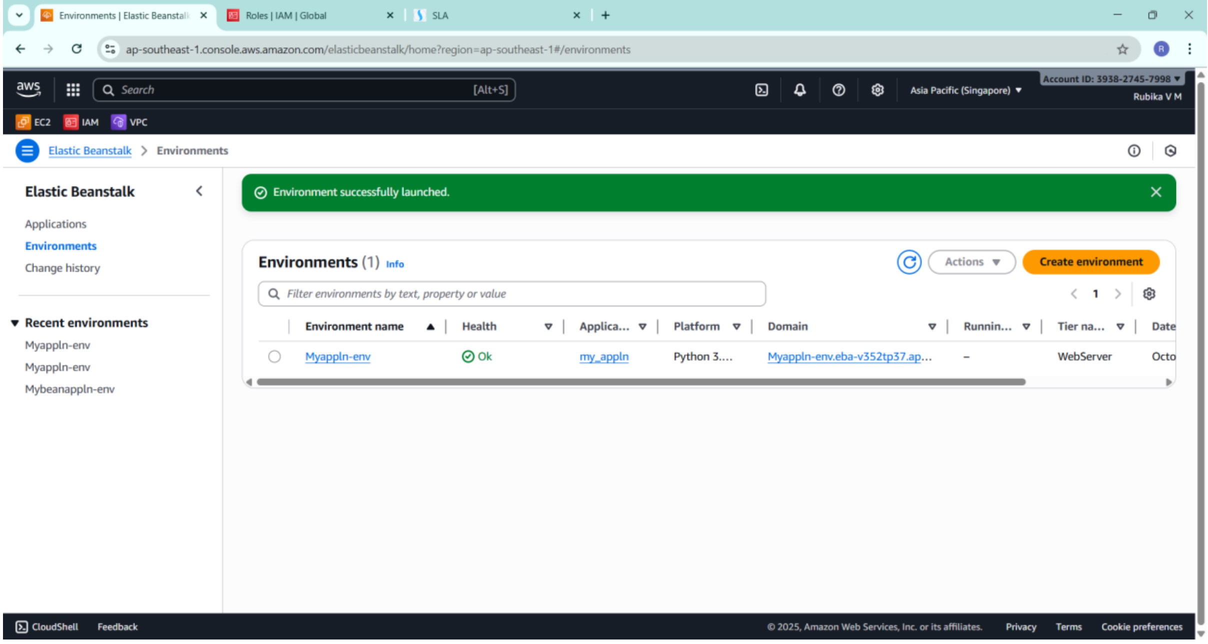


ap-southeast-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-southeast-1#/applications

Elastic Beanstalk > Applications

Applications (1)

	Application name	Environments	Date created	Last modified	ARN
○	my_appln	Myappln-env	October 19, 2025 21:08:2...	October 19, 2025 21:08:2...	arn:aws:elasticbean...



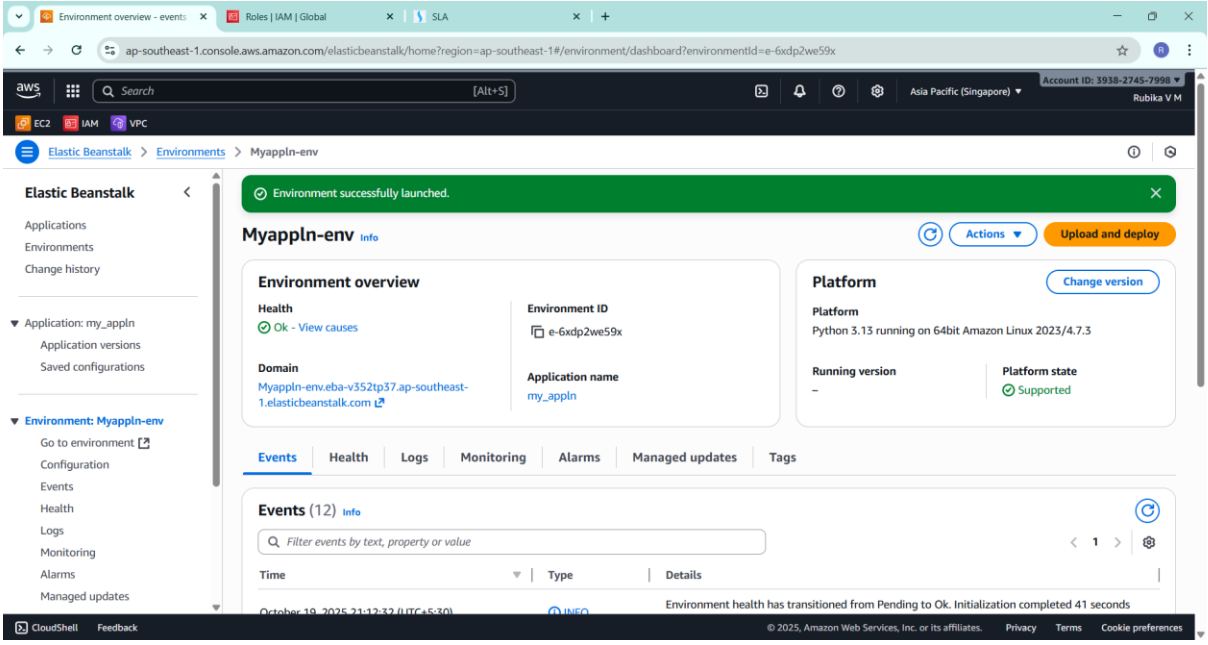
ap-southeast-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-southeast-1#/environments

Elastic Beanstalk > Environments

Environment successfully launched.

Environments (1)

	Environment name	Health	Applica...	Platform	Domain	Runnin...	Tier na...	Date
○	Myappln-env	✓ Ok	my_appln	Python 3....	Myappln-env.eba-v352tp37.ap...	–	WebServer	Octo



ap-southeast-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-southeast-1#/environment/dashboard?environmentId=e-6xdp2we59x

Account ID: 3938-2745-7998
Rubika V M

Elastic Beanstalk > Environments > Myappln-env

Application: my_appln

Environment: Myappln-env

Environment successfully launched.

Myappln-env

Environment overview

Health: Ok - View causes

Environment ID: e-6xdp2we59x

Domain: Myappln-env.eba-v352tp37.ap-southeast-1.elasticbeanstalk.com

Application name: my_appln

Platform

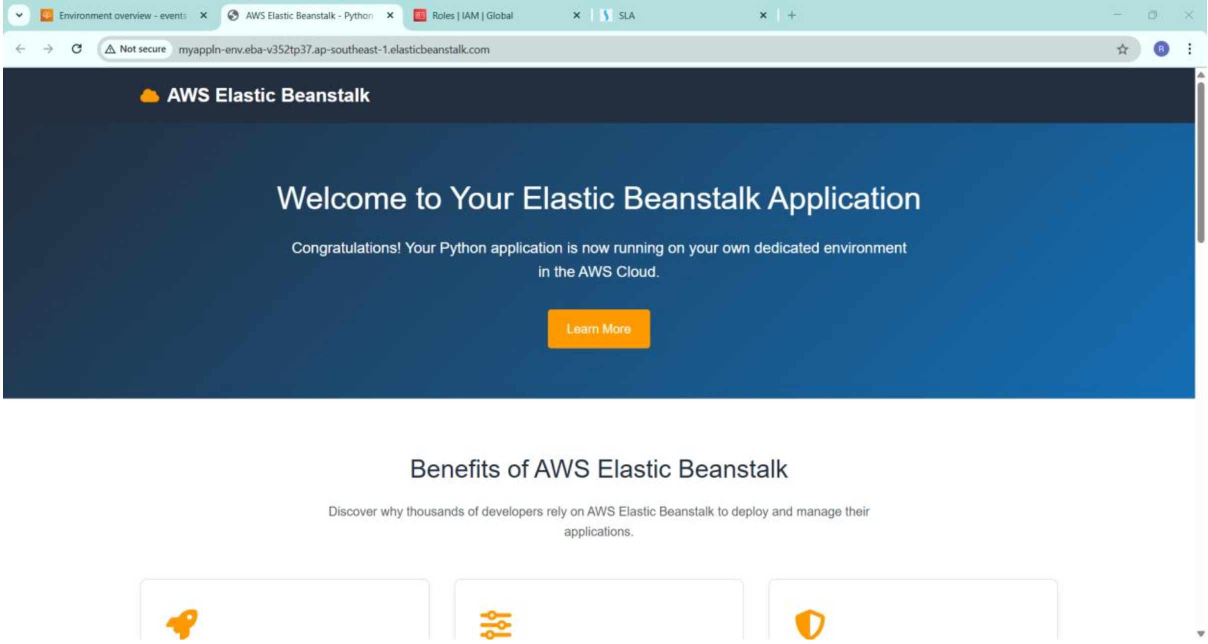
Platform: Python 3.13 running on 64bit Amazon Linux 2023/4.7.3

Running version: –

Platform state: Supported

Events (12)

October 19, 2025 21:12:32 (UTC+5:30) | INFO | Environment health has transitioned from Pending to Ok. Initialization completed 41 seconds



myappln-env.eba-v352tp37.ap-southeast-1.elasticbeanstalk.com

AWS Elastic Beanstalk

Welcome to Your Elastic Beanstalk Application

Congratulations! Your Python application is now running on your own dedicated environment in the AWS Cloud.

Benefits of AWS Elastic Beanstalk

Discover why thousands of developers rely on AWS Elastic Beanstalk to deploy and manage their applications.