

Experiment 2 Output

In this experiment, a web application is deployed on a cloud server using AWS EC2, focusing on cloud deployment and infrastructure.

Running AWS using Localstack

```
C:\Users\rawat>python "C:\Users\rawat\AppData\Local\Programs\Python\Python310\Scripts\localstack" start

LocalStack CLI 3.6.0
Profile: default

[12:23:00] starting LocalStack in Docker mode localstack.py:503
LocalStack Runtime Log (press CTRL-C to quit)

LocalStack version: 4.0.4.dev122
LocalStack build date: 2025-01-23
LocalStack build git hash: 81d9f0879

Ready.
2025-02-03T06:54:13.375 INFO --- [et.reactor-0] localstack.utils.bootstrap : Execution of "load_service_plugin" took 799.59ms
2025-02-03T06:54:13.375 INFO --- [et.reactor-0] localstack.utils.bootstrap : Execution of "require" took 799.59ms
2025-02-03T06:54:13.694 INFO --- [et.reactor-0] localstack.request.aws : AWS ec2.RunInstances => 400 (InvalidGroup
2025-02-03T06:54:57.862 INFO --- [et.reactor-0] localstack.request.aws : AWS ec2.CreateKeyPair => 200
2025-02-03T06:55:23.207 INFO --- [et.reactor-0] localstack.request.aws : AWS ec2.CreateSecurityGroup => 200
2025-02-03T06:56:47.344 INFO --- [et.reactor-0] localstack.request.aws : AWS ec2.RunInstances => 200
2025-02-03T06:58:33.435 INFO --- [et.reactor-0] localstack.request.aws : AWS apigateway.CreateRestApi => 201
2025-02-03T07:01:07.915 INFO --- [et.reactor-0] localstack.request.http : GET / => 200
2025-02-03T07:01:08.274 INFO --- [et.reactor-0] localstack.request.aws : AWS s3.ListObjects => 404 (NoSuchBucket)
```

Fig 1: Starting Localstack in the Console

Running Docker

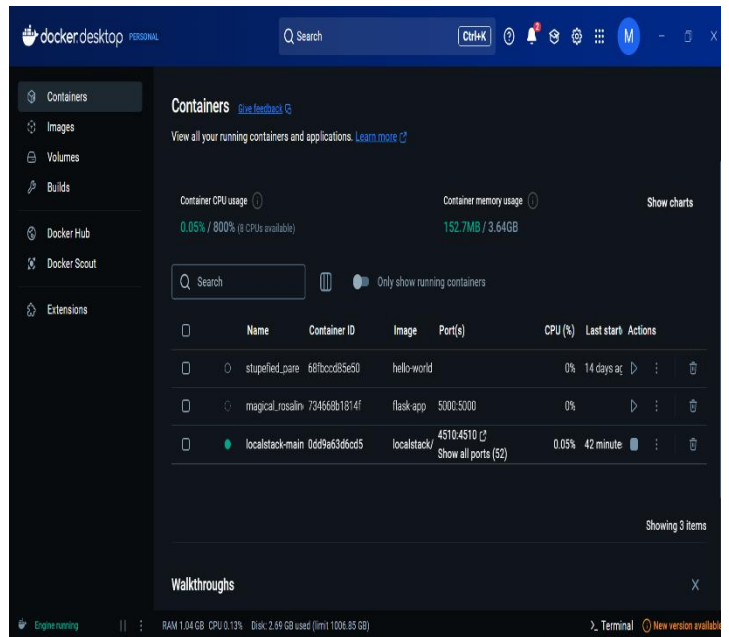


Fig 2: Docker for Desktop in windows

Deploying a Flask App

```
C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>aws --endpoint-url=http://localhost:4566 apigateway get-stage --path-part "flaskapp"

CreateResource
-----
| id | parentId | path | pathPart |
|---|---|---|---|
| bsw1umubix | regpu0mm3f | /flaskapp | flaskapp |

C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>aws --endpoint-url=http://localhost:4566 apigateway get-resource --resource-id bsw1umubix --http-method GET --authorization-type NONE

The system cannot find the file specified.

C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>aws --endpoint-url=http://localhost:4566 apigateway put-method --resource-id bsw1umubix --http-method GET --authorization-type NONE

PutMethod
-----
| apiKeyRequired | authorizationType | httpMethod |
|---|---|---|
| False | NONE | GET |

C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>aws --endpoint-url=http://localhost:4566 apigateway put-integration --resource-id bsw1umubix --http-method GET --integration-http-method GET

PutIntegration
-----
| cacheNamespace | bsw1umubix |
| connectionType | INTERNET |
| httpMethod | GET |
| passthroughBehavior | WHEN_NO_MATCH |
| timeoutInMillis | 29000 |
| type | HTTP_PROXY |
| uri | http://localhost:5000/ |
```

Fig 3: AWS New Instances and deployment of Flask App

Configuration and Resources

```
C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>aws --endpoint-url=http://localhost:4566 apigateway get-stage --path-part "flaskapp"

GetStage
-----
| cacheClusterEnabled | False |
| cacheClusterStatus | NOT_AVAILABLE |
| deploymentId | fpmrktu4lt |
| description |  |
| stageName | prod |
| tracingEnabled | False |

C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment 2\Codes>curl http://localhost:5000/instance-stats
{"Instance ID":"i-6c9d5e3fa4c23d261","Instance Type":"t2.micro","Public IP":"54.214.36.25","Region":"us-east-1","State":"running"}
```

Fig 4: Instance Id & Resources



Fig 5: Flask and Cloud Output