

Running the Application in Local environment

23 February 2026 17:59

- Create EC2 Instance:
type: t2.large
storage: 30GB

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type
<input checked="" type="checkbox"/>	e-commerce_mega_project	i-0dd0567f1f1cddb30	Running	t2.large

- Resize File system: (if running out of space while creating the application)
 1. Increase the instance volume to 30GB

<input checked="" type="checkbox"/>	Volume ID	Device name	Volume size (GiB)
<input checked="" type="checkbox"/>	vol-0078c358890117dee	/dev/sda1	30

2. Change the file system in CLI

\$lsblk

```
ubuntu@ip-172-31-38-129:~/Mega-devops-project-2025$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0      0   27.6M 1 loop /snap/amazon-ssm-agent/11797
loop1        7:1      0   73.9M 1 loop /snap/core22/2133
loop2        7:2      0   50.8M 1 loop /snap/snapd/25202
xvda        202:0     0    30G  0 disk
├─xvda1      202:1     0     7G  0 part /
├─xvda14     202:14    0     4M  0 part
├─xvda15     202:15    0   106M  0 part /boot/efi
└─xvda16     259:0     0   913M  0 part /boot
ubuntu@ip-172-31-38-129:~/Mega-devops-project-2025$
```

\$sudo apt install cloud-guest-utils

\$sudo growpart /dev/xvda 1

\$sudo resize2fs /dev/xvda1

- If you face any issue related to "permission denied", while executing the docker commands. Add the user to docker group using:
\$sudo usermod -aG docker ubuntu
- Running the application local environment using docker compose:

Why docker compose?

I'm deploying e-commerce application, which contains multiple micro-services. So we containerize and running as one model using docker compose is efficient. It runs multiple containers at once and establish the dependencies between the containers.

You will find the docker-compose.yaml file in my github repository

Link: <https://github.com/Nandan3/End-to-End-DevOps-Projects/blob/main/docker-compose.yml>

Run the below command
\$docker compose up -d

It will pull the images from docker registry and run the micro-services

```
✓ Image mega-devops-project-2025-opensearch Built
✓ Network opentelemetry-demo Created
✓ Container flagd Created
✓ Container grafana Created
✓ Container opensearch Healthy
✓ Container valkey-cart Created
✓ Container kafka Healthy
✓ Container jaeger Created
✓ Container postgresql Created
✓ Container prometheus Created
✓ Container otel-collector Created
✓ Container product-catalog Created
✓ Container email Created
✓ Container shipping Created
✓ Container cart Created
✓ Container currency Created
✓ Container ad Created
✓ Container accounting Created
✓ Container flagd-ui Created
✓ Container payment Created
✓ Container fraud-detection Created
✓ Container quote Created
✓ Container image-provider Created
✓ Container recommendation Created
✓ Container checkout Created
✓ Container frontend Created
✓ Container load-generator Created
✓ Container frontend-proxy Created
ubuntu@ip-172-31-38-129:~/Mega-devops-project-2025$
```

Edit security groups inbound rules to access the application from web browser:

Inbound rules (2)							Manage tags	Edit inbound rules
<input type="text" value="Search"/>							< 1 > ⚙	
rule ID	IP version	Type	Protocol	Port range	Source			
1a2e3a0ef	IPv4	All traffic	All	All	0.0.0.0/0			
4d1930f43	IPv4	SSH	TCP	22	0.0.0.0/0			

Access the application using: <http://<public-ip>:8080>
Public-IP: EC2 Public IP



\$ USD ▾

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