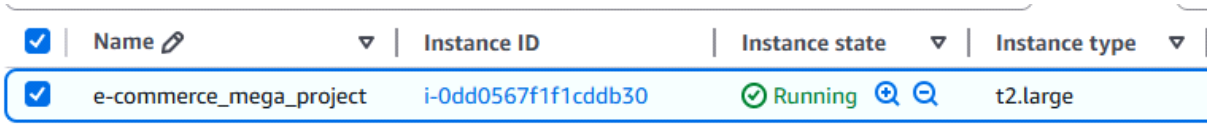
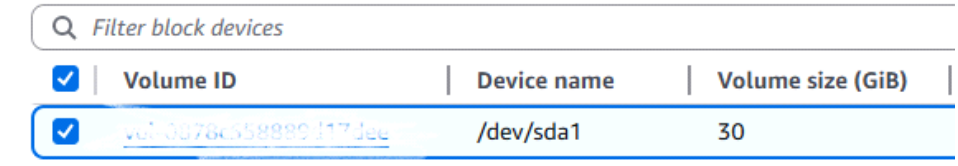
Running the Application in Local environment

23 February 2026 17:59

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



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



  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:

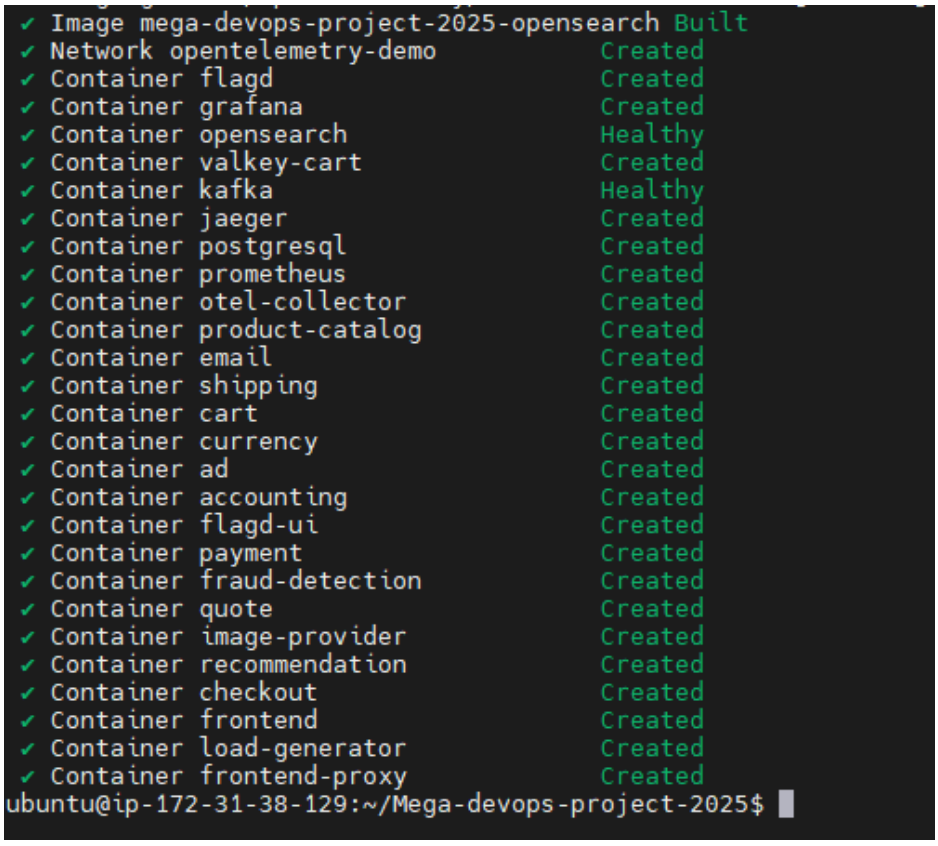
  Why docker compose?
  I'm deploying e-commerce application, which contains multiple micro-services. So we containerize and running as one model using docker compose is efficient.
  It runs multiple containers at once and establish the dependencies between the containers.

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

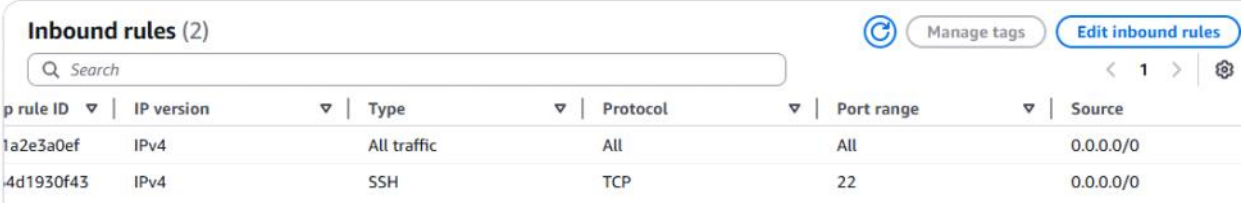
Link: https://github.com/Nandan3/End-to-End-DevOps-Projects/blob/main/docker-compose.yaml

Run the below command
$docker compose up -d

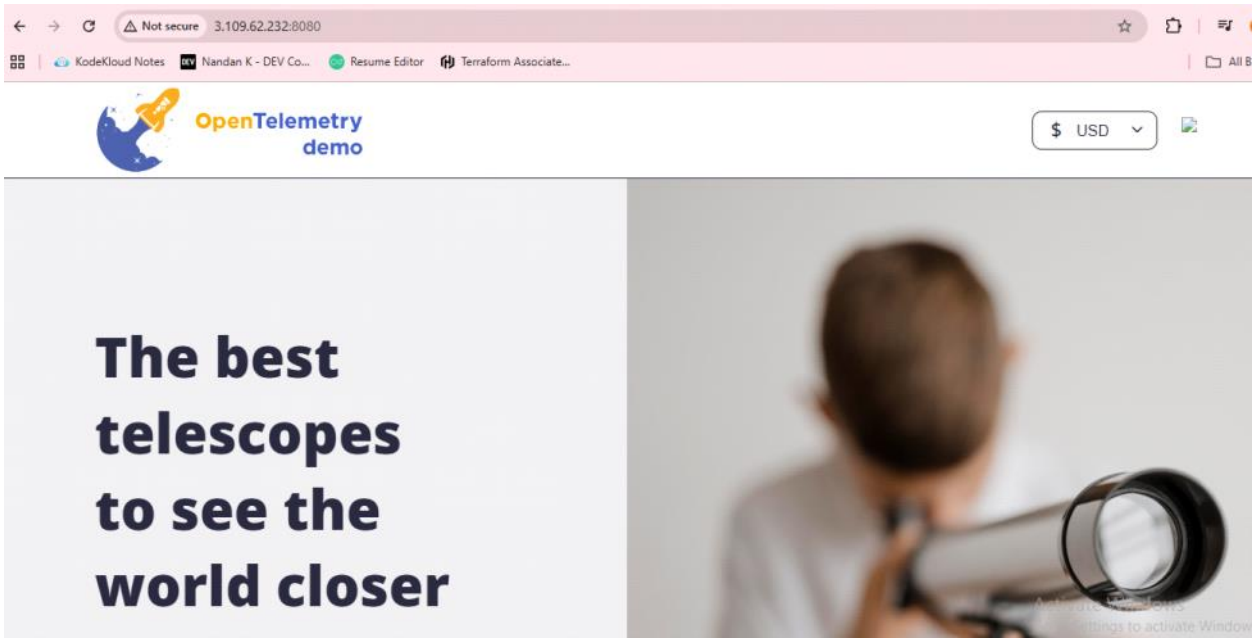
It will pull the images from docker registry and run the micro-services



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



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


Not secure 3.109.62.232:8080
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