**CAPSTONE PROJECT- APPLICATION DEPLOYMENT**

Github URL: <https://github.com/Dhivnatra/Capstone-Project.git>

Deployed site URL: <http://34.236.148.232/>

Docker Images: dhivnatra/dev:latest

dhivnatra/prod:latest

**Project work description:**

**Installation:**

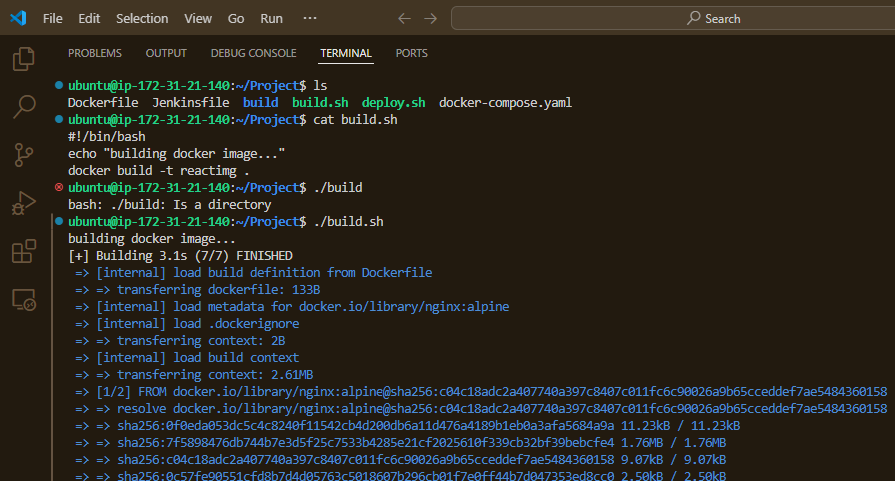
* Installed and configured the mentioned tools and plugins in AWS EC2 instance.
  + - Git
    - Docker
    - Docker Compose
    - Jenkins
    - Prometheus
    - Node-exporter
    - Grafana

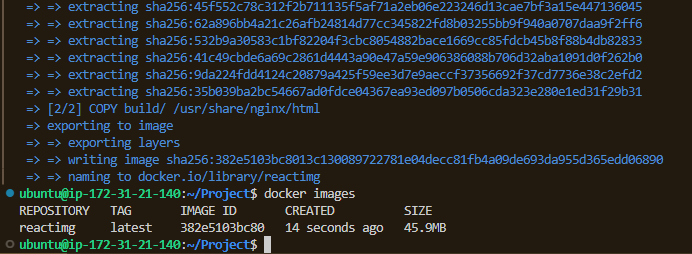
**Codes written:**

* Dockerfile
* Docker-compose.yml
* build.sh
* deploy.sh
* Jenkinsfile

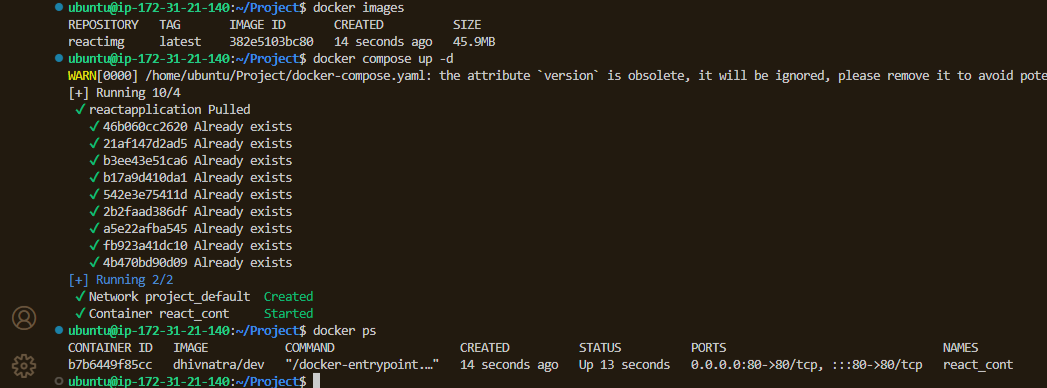
**Docker:**

* Dockerized the application using the Dockerfile.

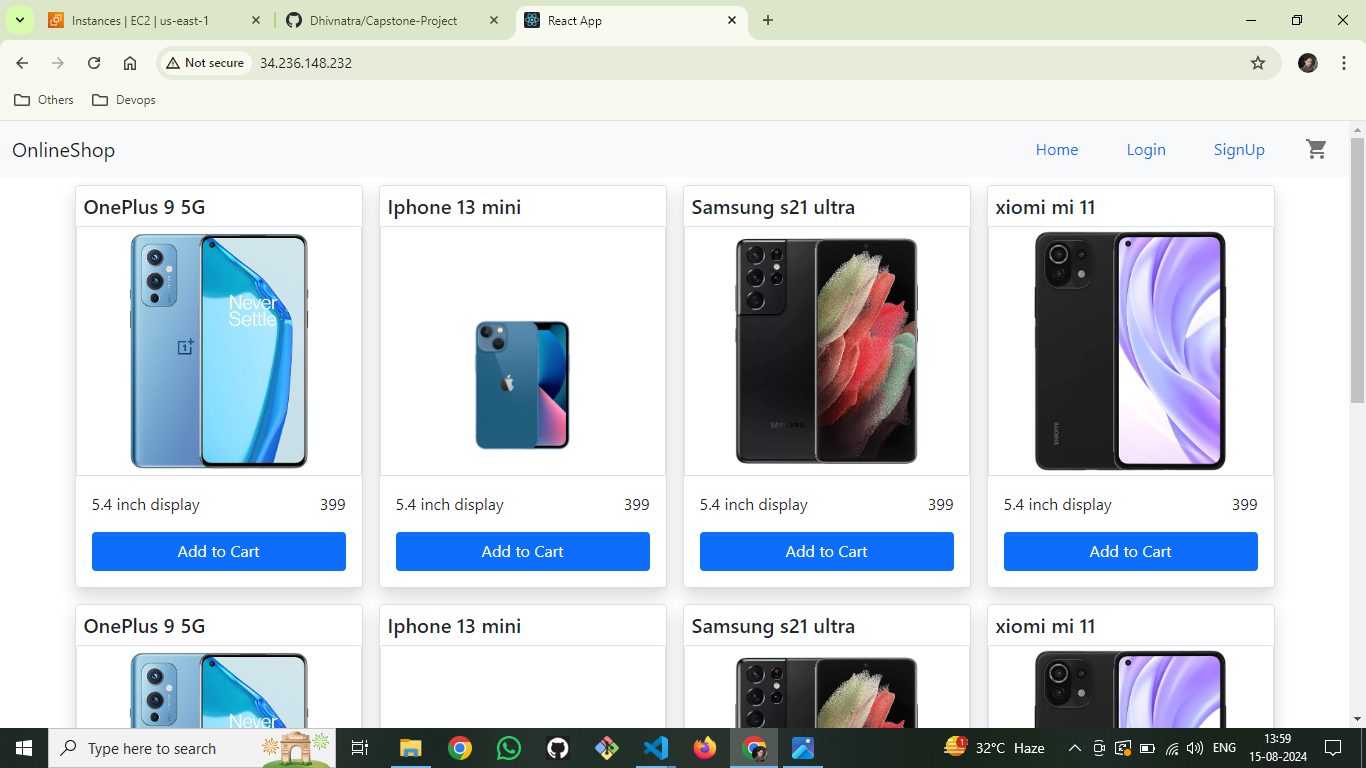




* Using the docker compose to use the dockerized application image.

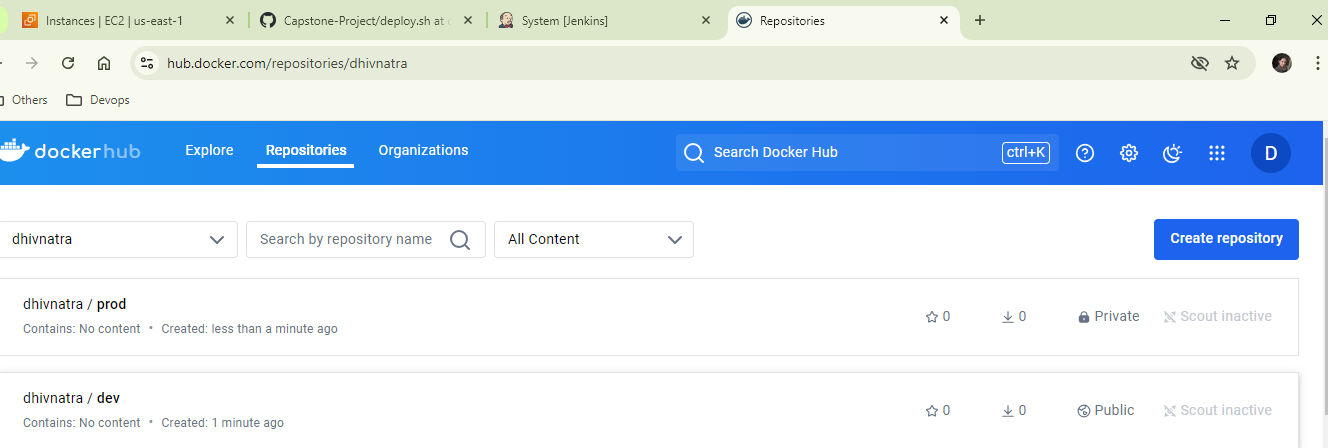


* Deployed application- site



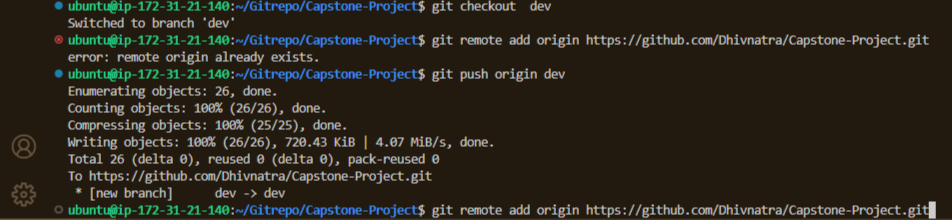
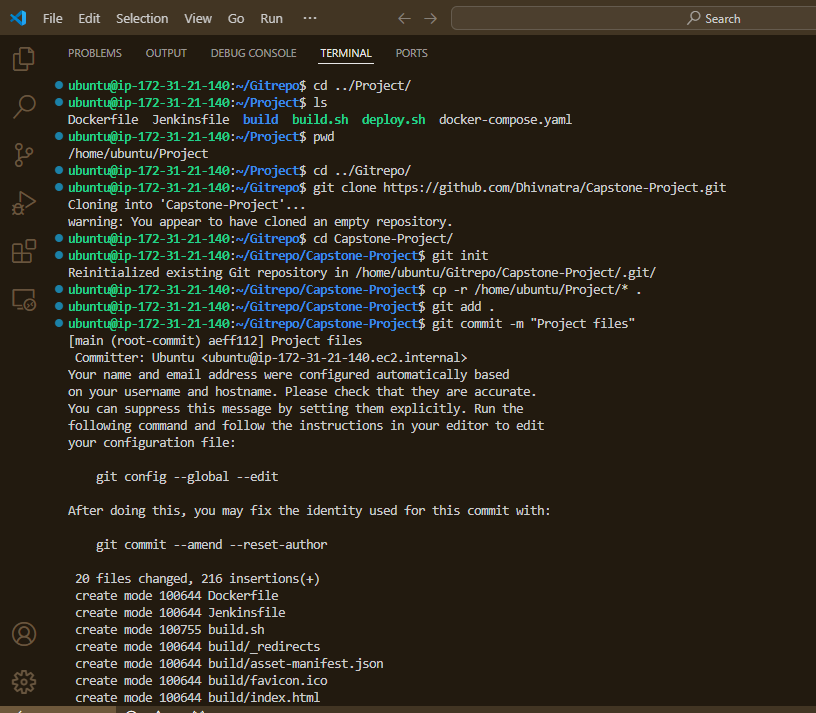
**DockerHub:**

* Created two Dockerhub repositories to facilitate docker image push and pull.
  + - Public Repo- dhivnatra/dev
    - Private Repo - dhivnatra/prod



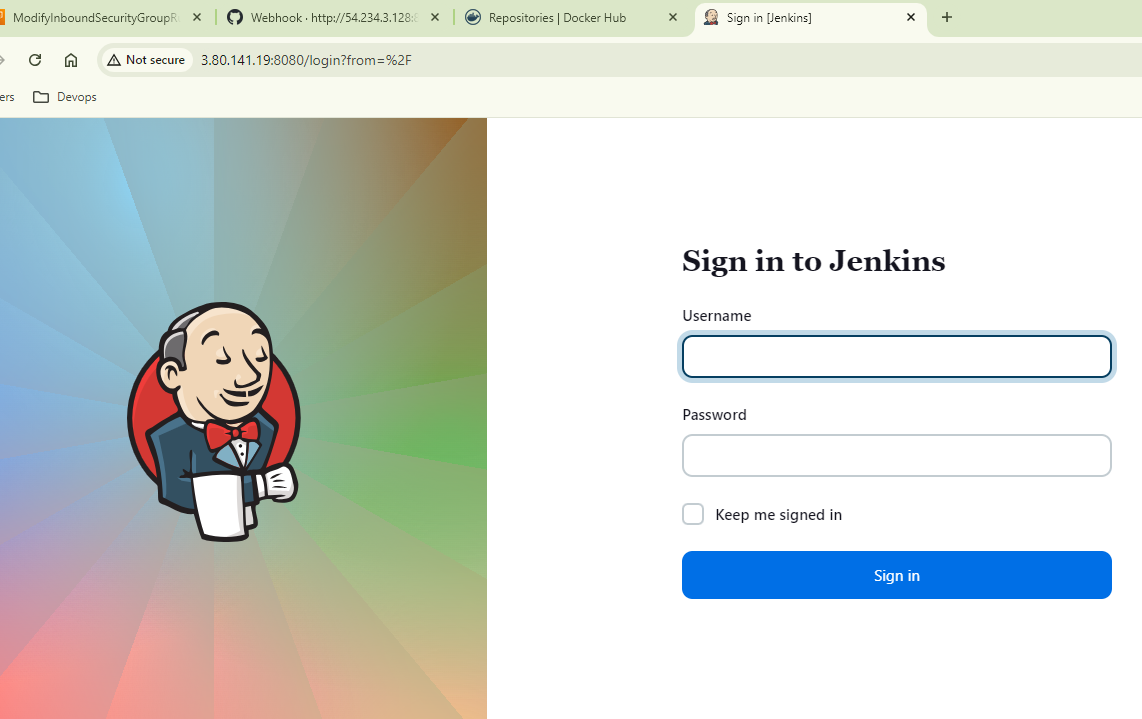
**VCS:**

* Initiated a new github repo , pushed the required codes to the dev branch via CLI.

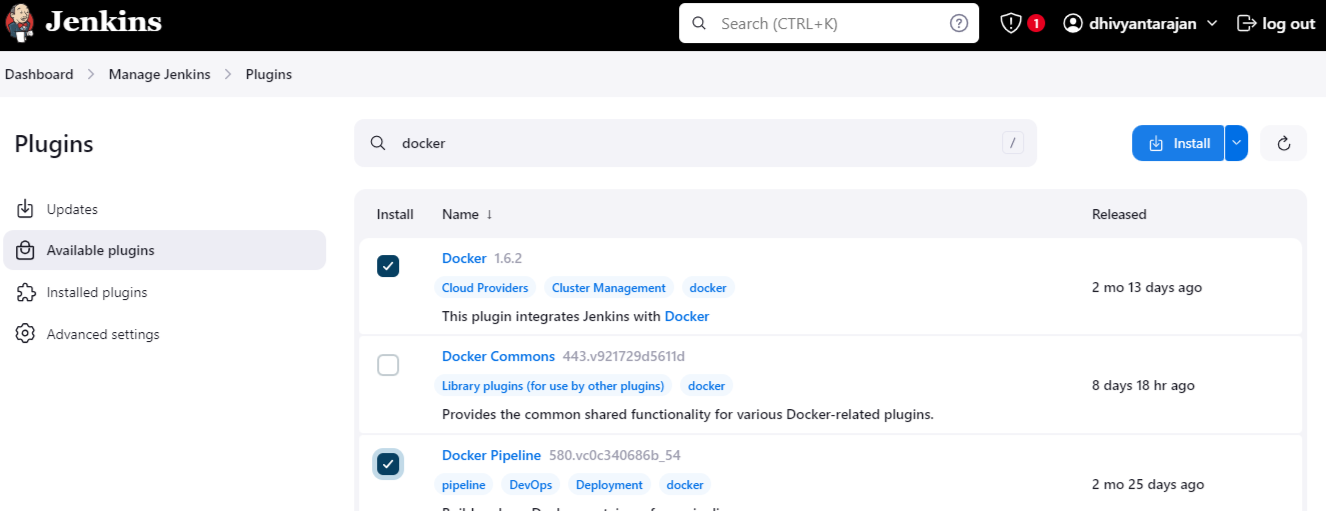


**Jenkins:**

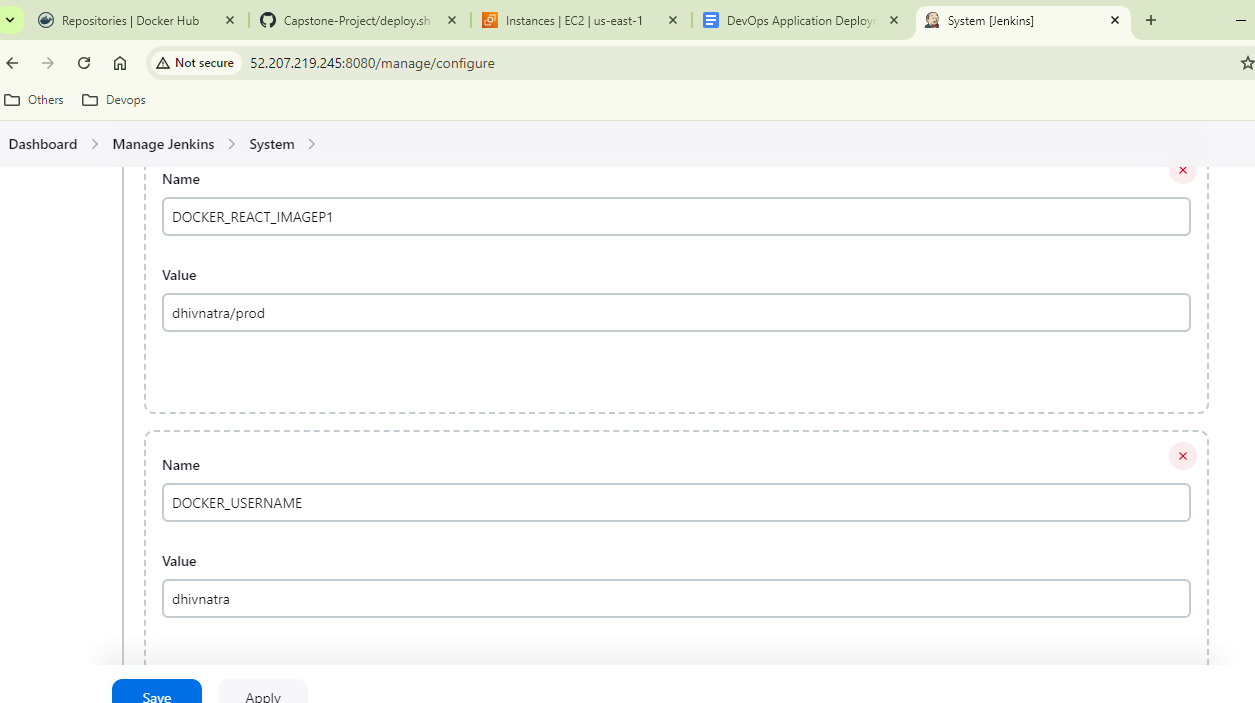
* Configured and logged into Jenkins.



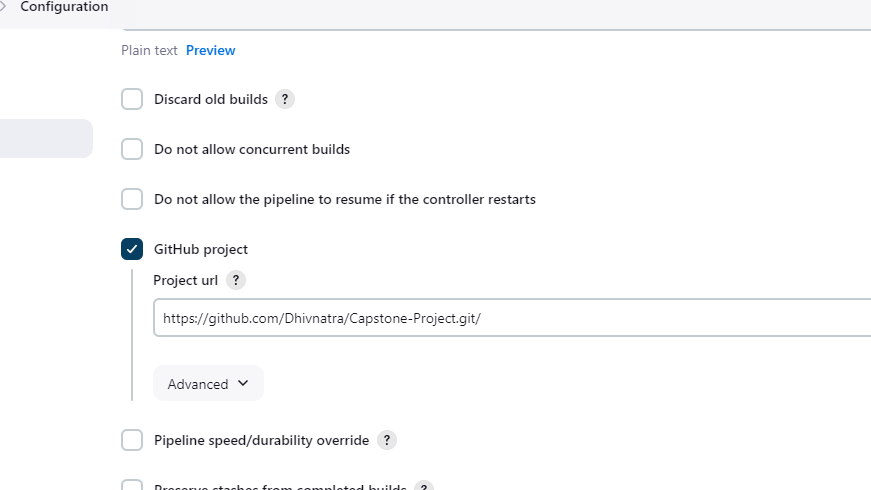
* Installed required plugins

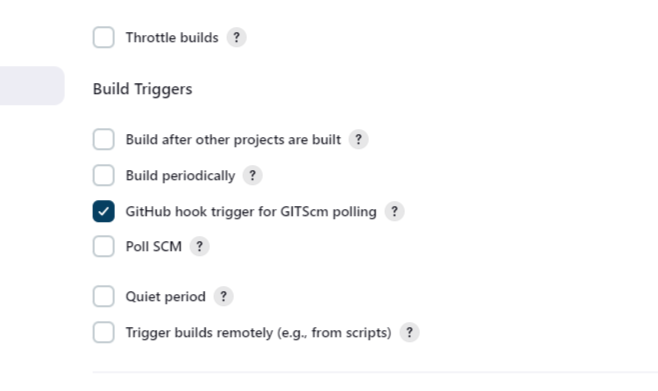


* Configured ,declared Environmental variables and values

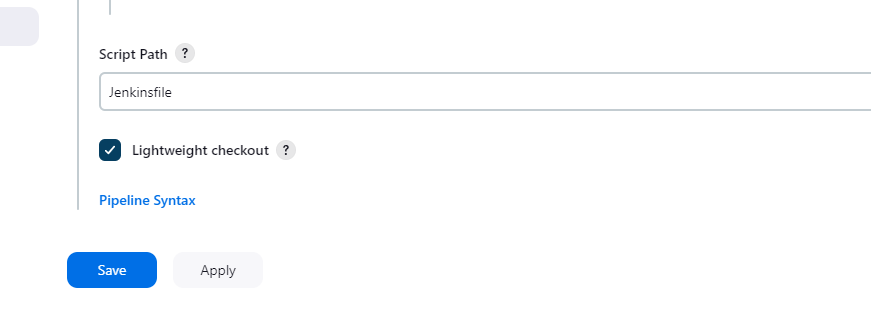


* Configured the Job Pipeline to facilitate build and push docker images.

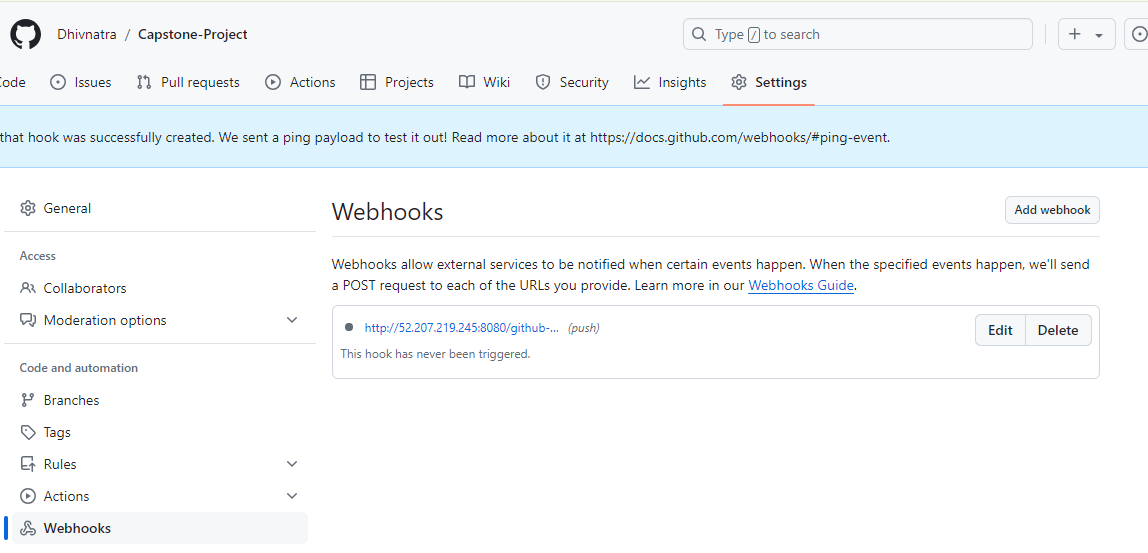




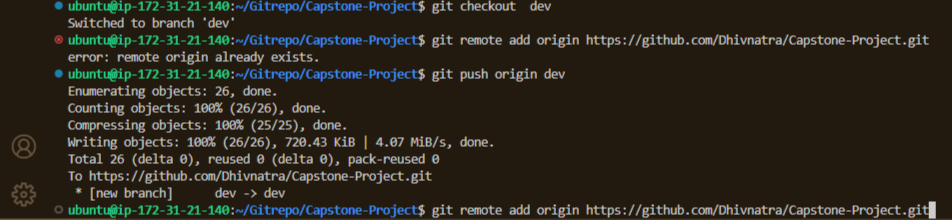


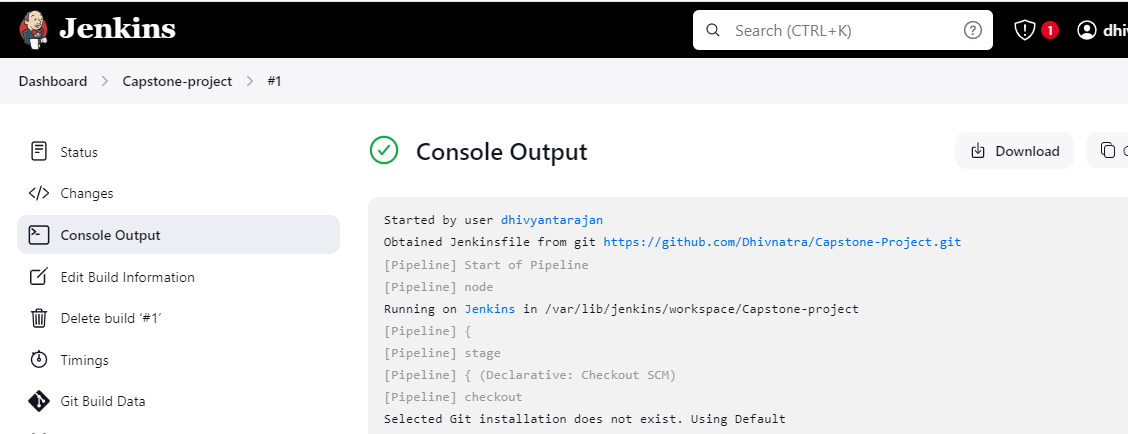


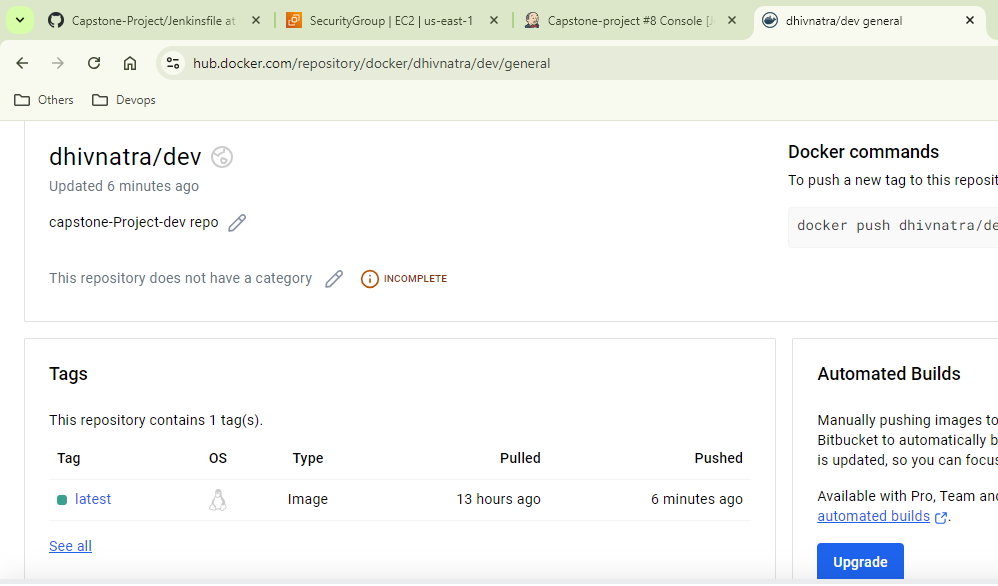
* Webhooks configuration in github to facilitate automated image build and push via Jenkins.



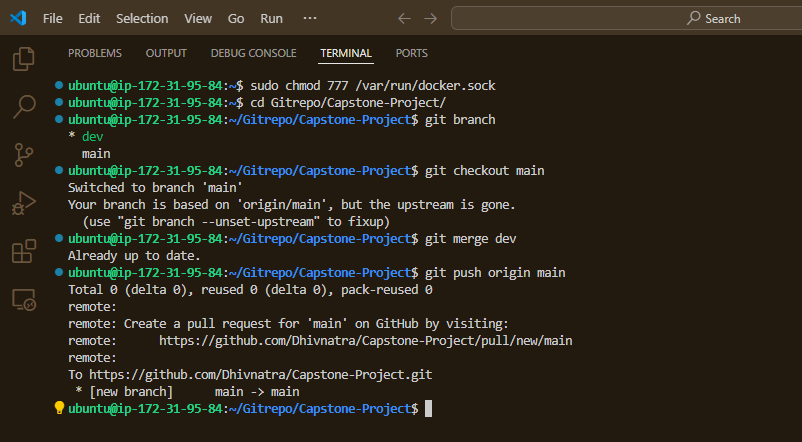
* Code pushed to github dev branch. Jenkins, automates the image build and pushes the image to dockerhub dev repo.

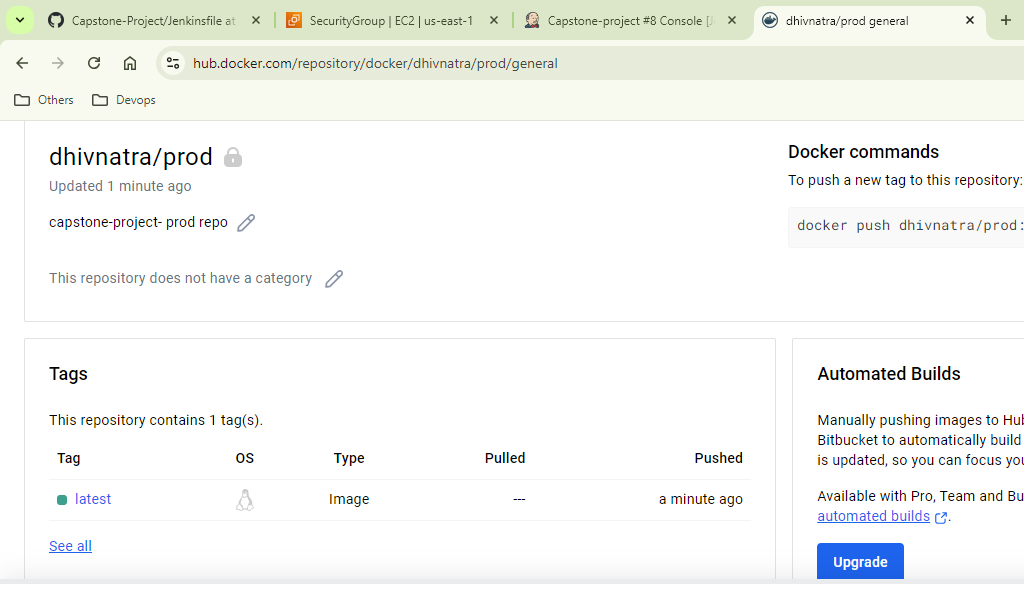






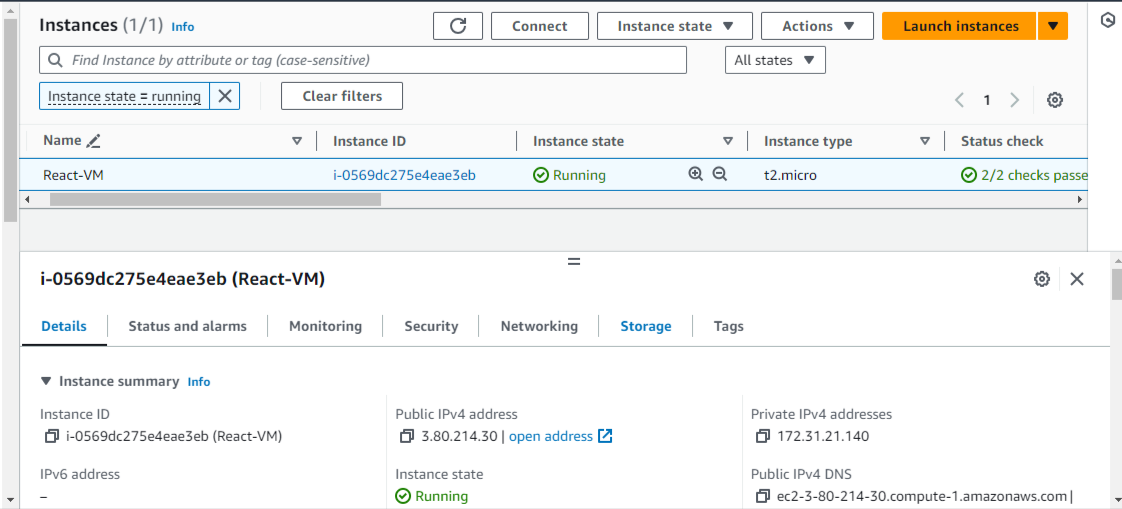
* Github dev branch merged to main branch. Jenkins ,automates the image build and pushes the image to dockerhub prod repo.



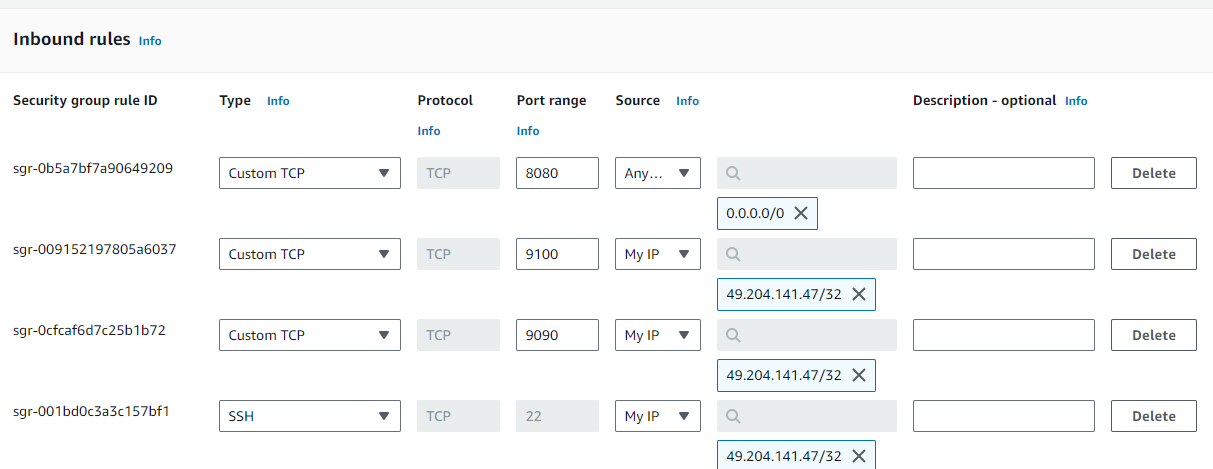


**AWS:**

* Launched a t2.micro instance and deployed the given application.



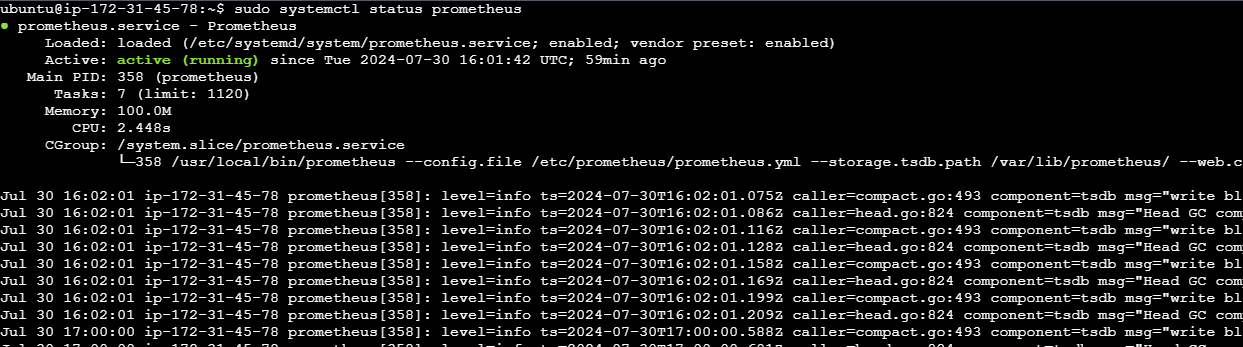
* SG is configured to facilitate login to the server only from my IP and anyone with the ip address can access the application.

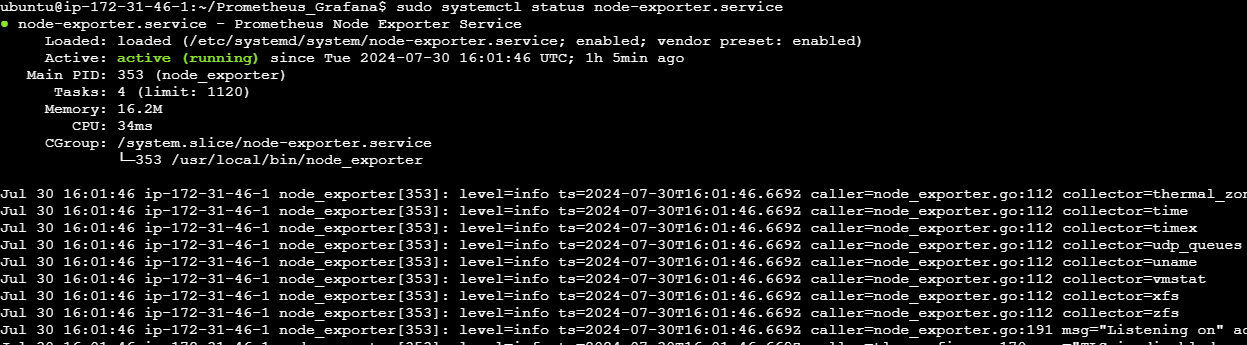


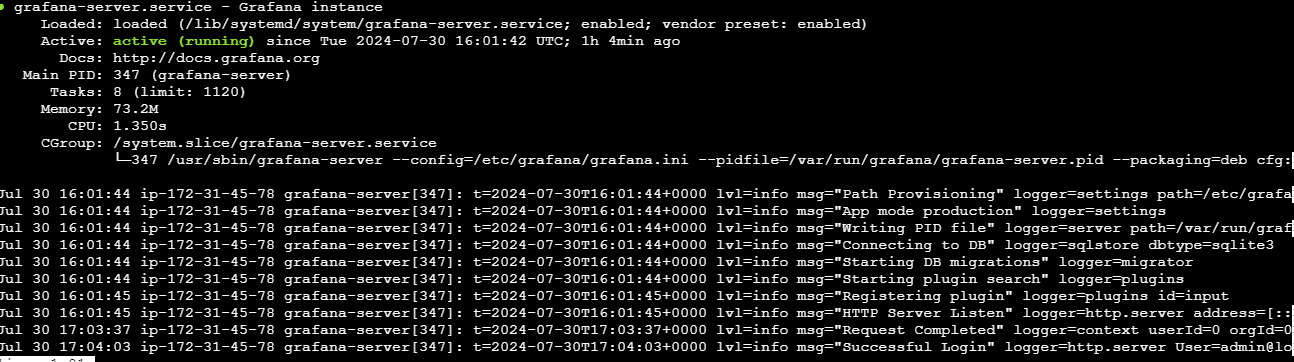


**Monitoring:**

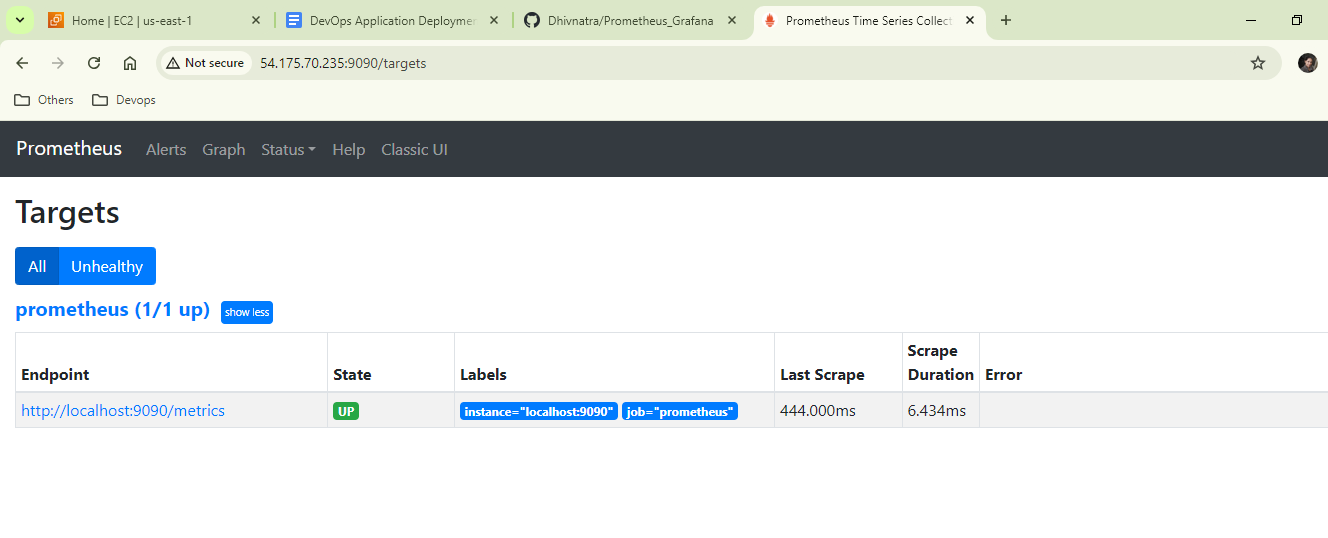
* Installed Prometheus, node exporter ,Grafana for monitoring and visualising the health metrics.

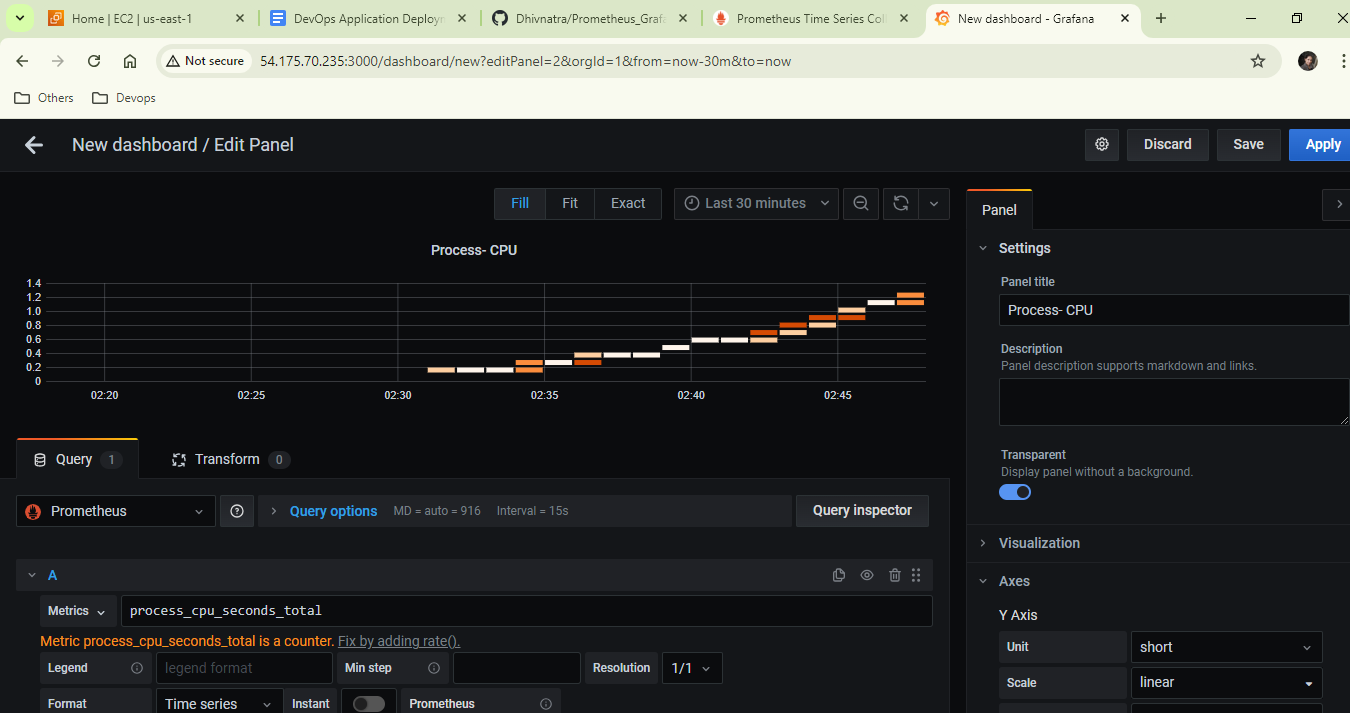






* Configured targets in Prometheus and visualising the health metrics via Grafana Dashboards.





***Submission:***

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dhivnatra/pro:latest