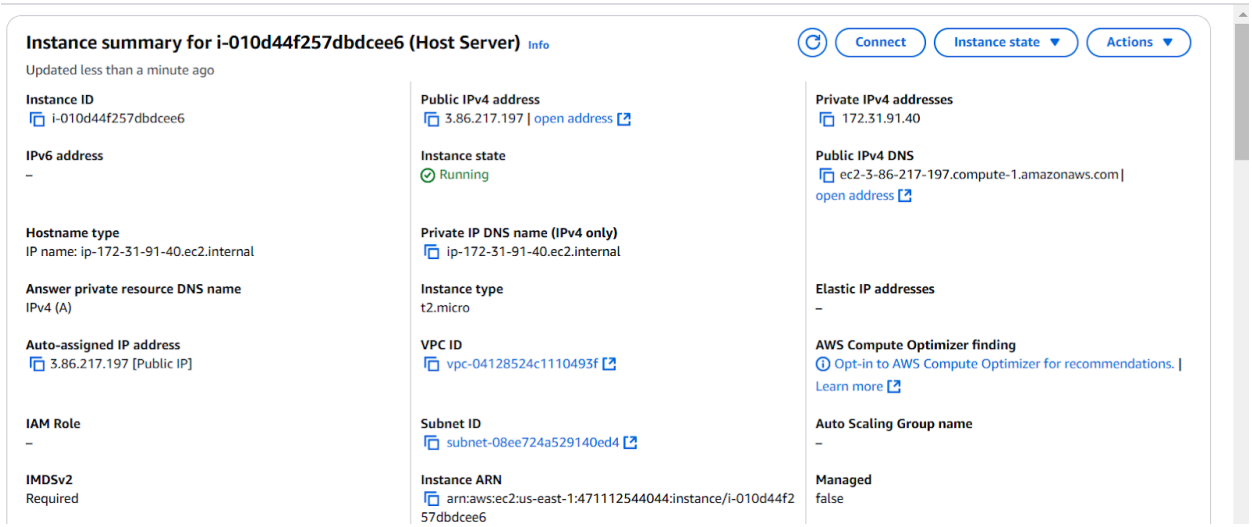
Project
React Application Deployment

Created an EC2 Instance:



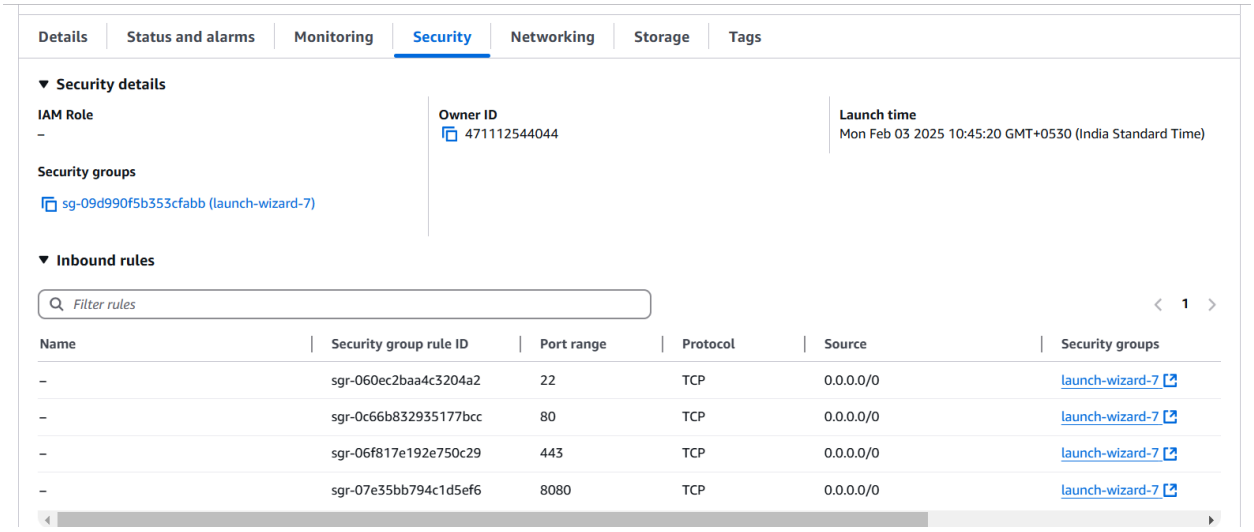
Instance summary for i-010d44f257dbdcee6 (Host Server) Info

Connect | Instance state | Actions

Updated less than a minute ago

Instance ID i-010d44f257dbdcee6	**Public IPv4 address** 3.86.217.197 | open address	**Private IPv4 addresses** 172.31.91.40
IPv6 address –	**Instance state** Running	**Public IPv4 DNS** ec2-3-86-217-197.compute-1.amazonaws.com | open address
Hostname type IP name: ip-172-31-91-40.ec2.internal	**Private IP DNS name (IPv4 only)** ip-172-31-91-40.ec2.internal	
Answer private resource DNS name IPv4 (A)	**Instance type** t2.micro	**Elastic IP addresses** –
Auto-assigned IP address 3.86.217.197 [Public IP]	**VPC ID** vpc-04128524c1110493f	**AWS Compute Optimizer finding** Opt-in to AWS Compute Optimizer for recommendations. | Learn more
IAM Role –	**Subnet ID** subnet-08ee724a529140ed4	**Auto Scaling Group name** –
IMDSv2 Required	**Instance ARN** arn:aws:ec2:us-east-1:471112544044:instance/i-010d44f257dbdcee6	**Managed** false

SG Group:



Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags

▼ Security details

IAM Role –	**Owner ID** 471112544044	**Launch time** Mon Feb 03 2025 10:45:20 GMT+0530 (India Standard Time)
Security groups sg-09d990f5b353cfabb (launch-wizard-7)		

▼ Inbound rules

Filter rules

1

Name	Security group rule ID	Port range	Protocol	Source	Security groups
–	sgr-060ec2baa4c3204a2	22	TCP	0.0.0.0/0	launch-wizard-7
–	sgr-0c66b832935177bcc	80	TCP	0.0.0.0/0	launch-wizard-7
–	sgr-06f817e192e750c29	443	TCP	0.0.0.0/0	launch-wizard-7
–	sgr-07e35bb794c1d5ef6	8080	TCP	0.0.0.0/0	launch-wizard-7

Installing Docker:

```
[root@ip-172-31-91-30 ec2-user]# sudo yum update -y
Last metadata expiration check: 0:08:39 ago on Wed Dec  4 14:47:11 2024.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-91-30 ec2-user]# sudo yum install -y docker
Last metadata expiration check: 0:09:15 ago on Wed Dec  4 14:47:11 2024.
Dependencies resolved.
```

Package	Architecture	Version	Repository
Installing:			
docker	x86_64	25.0.6-1.amzn2023.0.2	amazonlinux
Installing dependencies:			
containerd	x86_64	1.7.23-1.amzn2023.0.1	amazonlinux
iptables-libs	x86_64	1.8.8-3.amzn2023.0.2	amazonlinux
iptables-nft	x86_64	1.8.8-3.amzn2023.0.2	amazonlinux
libcgroup	x86_64	3.0-1.amzn2023.0.1	amazonlinux
libnetfilter_conntrack	x86_64	1.0.8-2.amzn2023.0.2	amazonlinux
libnfnetlink	x86_64	1.0.1-19.amzn2023.0.2	amazonlinux
libnftnl	x86_64	1.2.2-2.amzn2023.0.2	amazonlinux
pigz	x86_64	2.5-1.amzn2023.0.3	amazonlinux
runc	x86_64	1.1.14-1.amzn2023.0.1	amazonlinux

Transaction Summary

Installed GIT and cloned:

```
[ec2-user@ip-172-31-91-30 ~]$ git --version
git version 2.40.1
[ec2-user@ip-172-31-91-30 ~]$ git clone https://github.com/sriram-R-krishnan/devops-build
Cloning into 'devops-build'...
remote: Enumerating objects: 21, done.
remote: Total 21 (delta 0), reused 0 (delta 0), pack-reused 21 (from 1)
Receiving objects: 100% (21/21), 720.09 KiB | 19.46 MiB/s, done.
[ec2-user@ip-172-31-91-30 ~]$
```

Created a Dockerfile and entered the command:

```
[ec2-user@ip-172-31-91-30 ~]$ cd devops-build
[ec2-user@ip-172-31-91-30 devops-build]$ touch Dockerfile
[ec2-user@ip-172-31-91-30 devops-build]$ ls
Dockerfile  build
[ec2-user@ip-172-31-91-30 devops-build]$ vim Dockerfile
[ec2-user@ip-172-31-91-30 devops-build]$ cat dockerfile
cat: dockerfile: No such file or directory
[ec2-user@ip-172-31-91-30 devops-build]$ cat Dockerfile
From node:16
WORKDIR /app
COPY PACKAGE*.json ./
RUN npm install
COPY..
RUN npm run build
EXPOSE 80
CMD ["npx", "serve", "build"]
```

Created a Docker-compose.yml file:

```
CMD ["npx", "serve", "build"]
[ec2-user@ip-172-31-91-30 devops-build]$ touch docker-compose.yml
[ec2-user@ip-172-31-91-30 devops-build]$ vim docker-compose.yml
[ec2-user@ip-172-31-91-30 devops-build]$ cat docker-compose.yml
version: '3'

services:
  app:
    build: .
    ports:
      - "80:80"
    networks:
      - app-network

networks:
  app-network:
    driver: bridge
```

Docker Build and pushed to Docker:

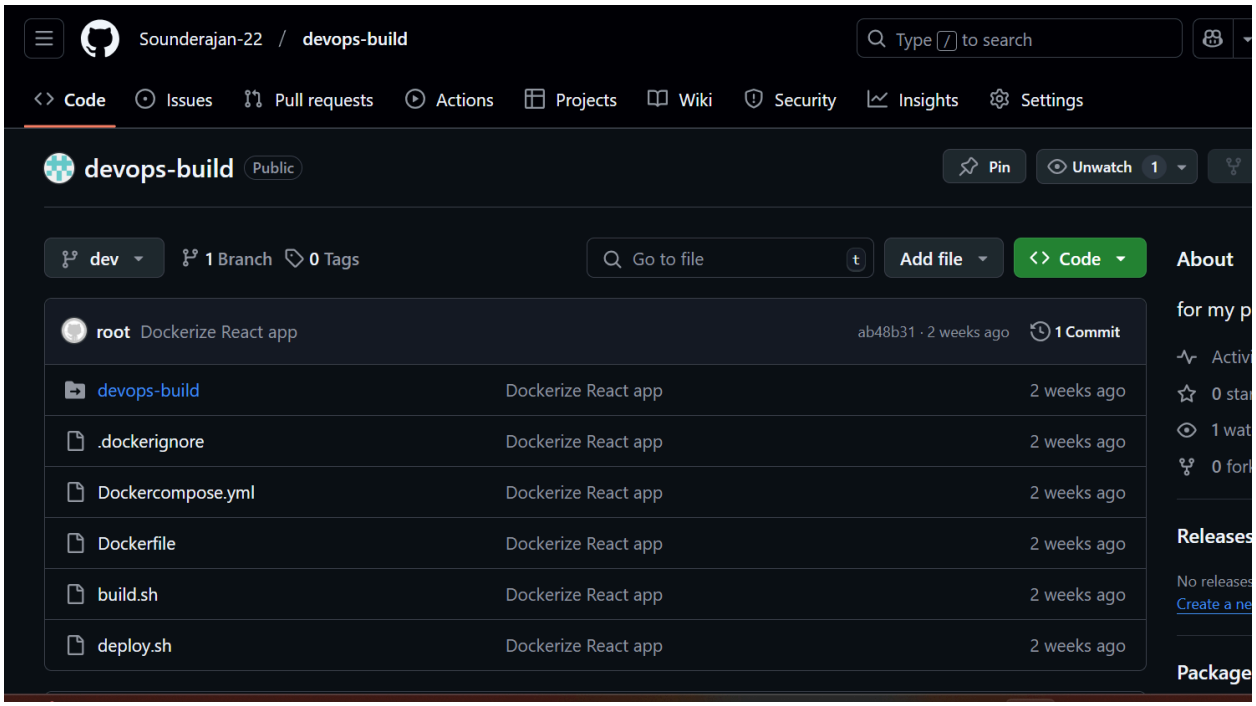
```
[root@ip-172-31-94-6 devops-build]# docker build -t react-app .
[+] Building 139.2s (16/16) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 657B
 => [internal] load metadata for docker.io/library/nginx:alpine
 => [internal] load metadata for docker.io/library/node:latest
 => [auth] library/nginx:pull token for registry-1.docker.io
 => [auth] library/node:pull token for registry-1.docker.io
 => [internal] load .dockerignore
 => => transferring context: 126B
 => [build 1/6] FROM docker.io/library/node:latest@sha256:ac6abe7d72fe2a535b331d862bf01e064abfd65c7b085c3ca6a51869014474a0
 => => resolve docker.io/library/node:latest@sha256:ac6abe7d72fe2a535b331d862bf01e064abfd65c7b085c3ca6a51869014474a0
 => => sha256:cdae67a89bbcf4f184f0a037f16058f3183a0c00f276c4ead3876cc2e5bcc893 2.49kB / 2.49kB
 => => sha256:f394fba5cbb762bb8e7b8fa106532e9e8183170c78e05abe1ff17b931918cd3e 6.39kB / 6.39kB
 => => sha256:fdf894e782a221820acf469d425b802be26aedb5e5d26ea80a650ff6a974d488 48.50MB / 48.50MB
 => => sha256:551df7f94f9c131f2fec0e8063142411365f0a1c88b935b9fac22be91af227e0 64.39MB / 64.39MB
 => => sha256:ac6abe7d72fe2a535b331d862bf01e064abfd65c7b085c3ca6a51869014474a0 6.41kB / 6.41kB
 => => sha256:5bd71677db44bb63b94de61b6f1f95d5540b4ba2d6a8a6bc4d19f422b25e0c2b 23.87MB / 23.87MB
 => => sha256:ce82e98d553dd62ca6a12bebfe83992ae9f9ae2748275e74b66a68cc094f868b 211.31MB / 211.31MB
 => => sha256:a0f7a4e95027865cc2c2e45eb617f321f3704ef1fdfc39b7fba49c78eeadcac4 3.32kB / 3.32kB
 => => sha256:17dfd6debf57e62b15a3d5240fb2ea7280046660ff037ff956de52ea204ca3c8 56.83MB / 56.83MB
 => => sha256:42af6f6639ea4c5720e7b5e16681d904efa1d83973b4b7a64ee445449957f91b 1.25MB / 1.25MB
 => => extracting sha256:fdf894e782a221820acf469d425b802be26aedb5e5d26ea80a650ff6a974d488
 => => sha256:db635c9772792Of877565150eb32c5bcaf7177484083c6cd7a6b169d76b19ef4 447B / 447B
 => => naming to docker.io/dev/react-app
[root@ip-172-31-94-6 devops-build]# docker tag dev/react-app sounderajan/dev:latest
[root@ip-172-31-94-6 devops-build]# docker push sounderajan/dev:latest
The push refers to repository [docker.io/sounderajan/dev]
7418847b3d2c: Pushed
2430c01bea64: Mounted from library/nginx
b11b58162504: Mounted from library/nginx
8b5ce426f73d: Mounted from library/nginx
884b72c14f15: Mounted from library/nginx
4a37d1b49911: Mounted from library/nginx
4e8a0009474a: Mounted from library/nginx
287563f25f8b: Mounted from library/nginx
75654b8eeebd: Mounted from library/nginx
latest: digest: sha256:7d852defee460f92e0f48b353e8a0931b0e10fe5ab6928a8c545b6f8204a606a size: 2199
```

Deploy.sh

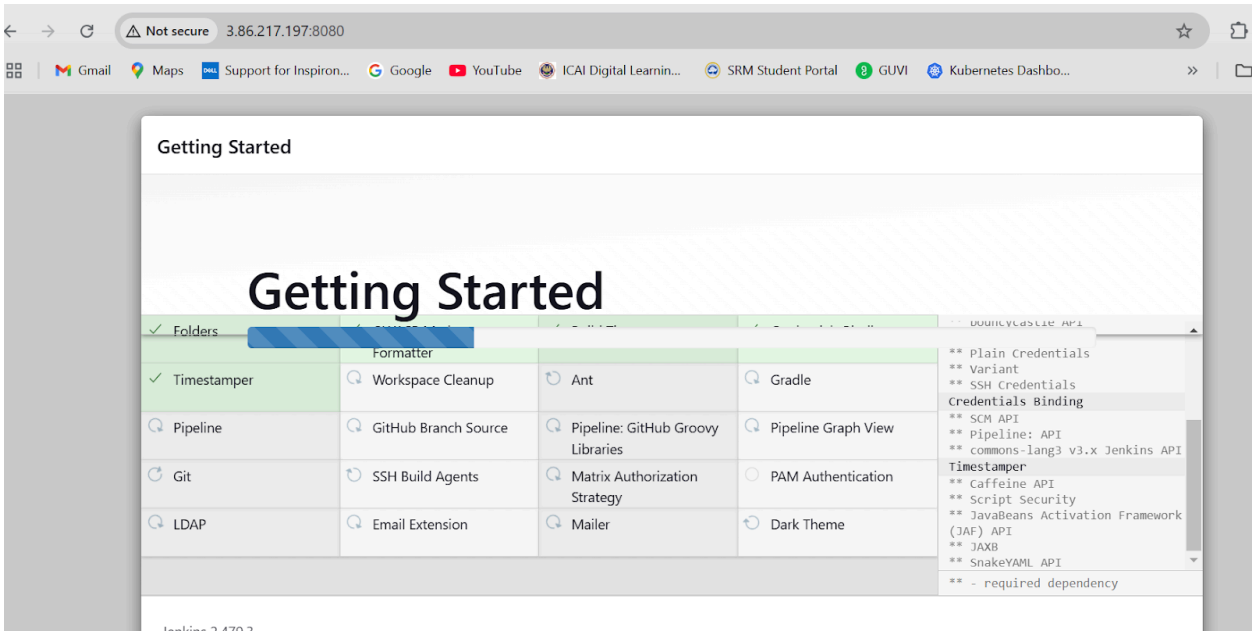
```
Login Succeeded
[root@ip-172-31-94-6 devops-build]# touch deploy.sh
[root@ip-172-31-94-6 devops-build]# docker run -d -p 8080:80 react-app
92937f8441d0cf32da2fa8c3918fcf89a2f6dd9a8d05f75ad5770234ad64736c
```

Created a GIT HUB and pushed:

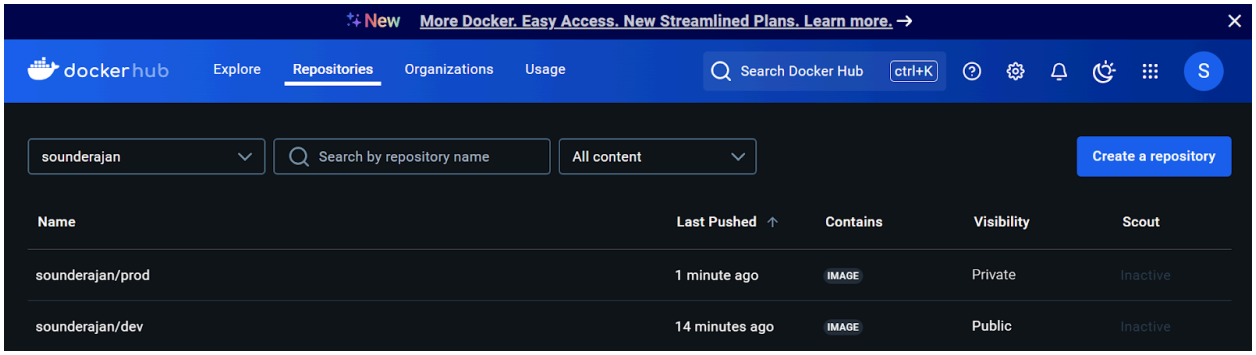
```
The most similar command is
        column
[root@ip-172-31-94-6 devops-build]# git remote set-url origin https://github.com/sounderajan-22/devops-build.git
[root@ip-172-31-94-6 devops-build]# git remote -v
origin  https://github.com/sounderajan-22/devops-build.git (fetch)
origin  https://github.com/sounderajan-22/devops-build.git (push)
[root@ip-172-31-94-6 devops-build]# git push -u origin dev
Username for 'https://github.com': sounderajan-22
Password for 'https://sounderajan-22@github.com':
Enumerating objects: 35, done.
Counting objects: 100% (35/35), done.
Compressing objects: 100% (30/30), done.
Writing objects: 100% (35/35), 721.97 KiB | 80.22 MiB/s, done.
Total 35 (delta 0), reused 21 (delta 0), pack-reused 0
remote: This repository moved. Please use the new location:
remote:   https://github.com/Sounderajan-22/devops-build.git
To https://github.com/sounderajan-22/devops-build.git
 * [new branch]      dev -> dev
branch 'dev' set up to track 'origin/dev'.
```



Deployment to Jenkins

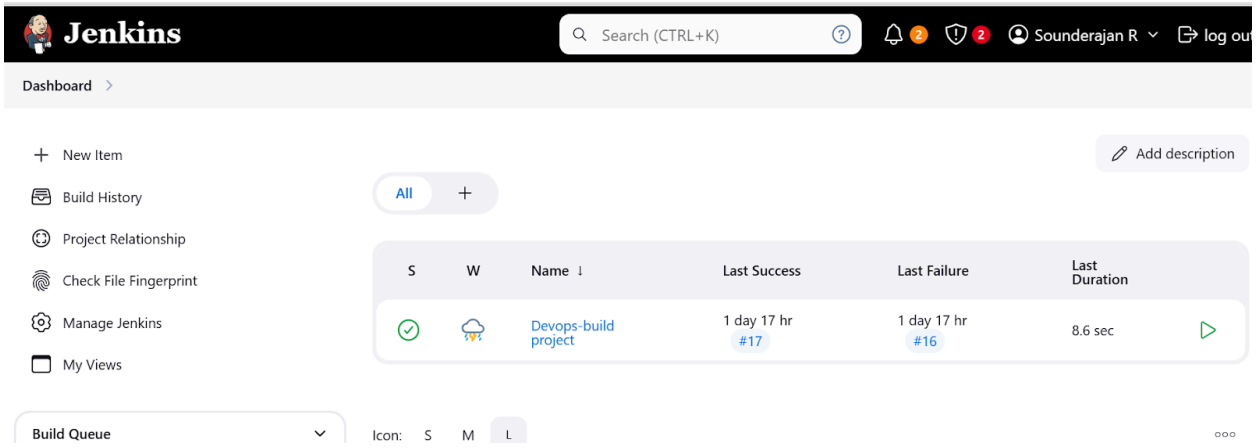


Created 2 Repositories in DockerHUB:

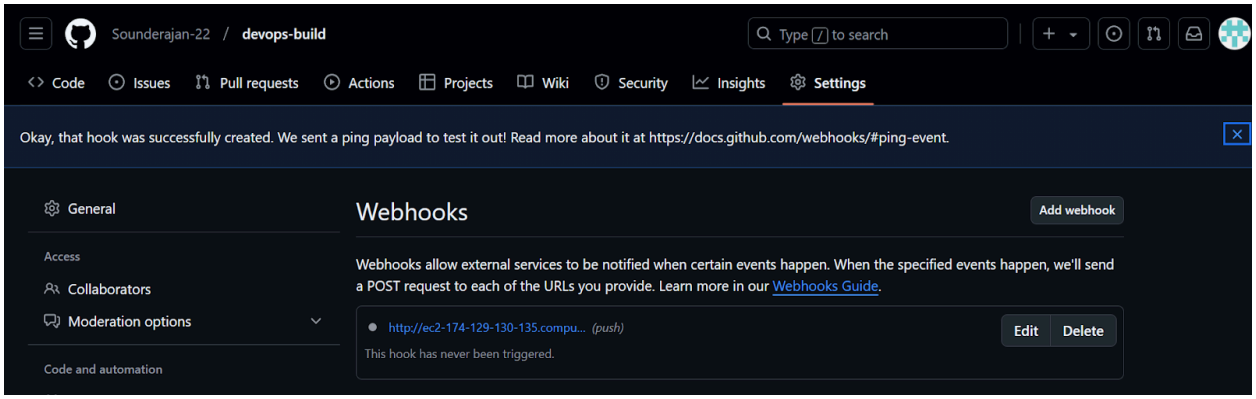


Start Jenkins:

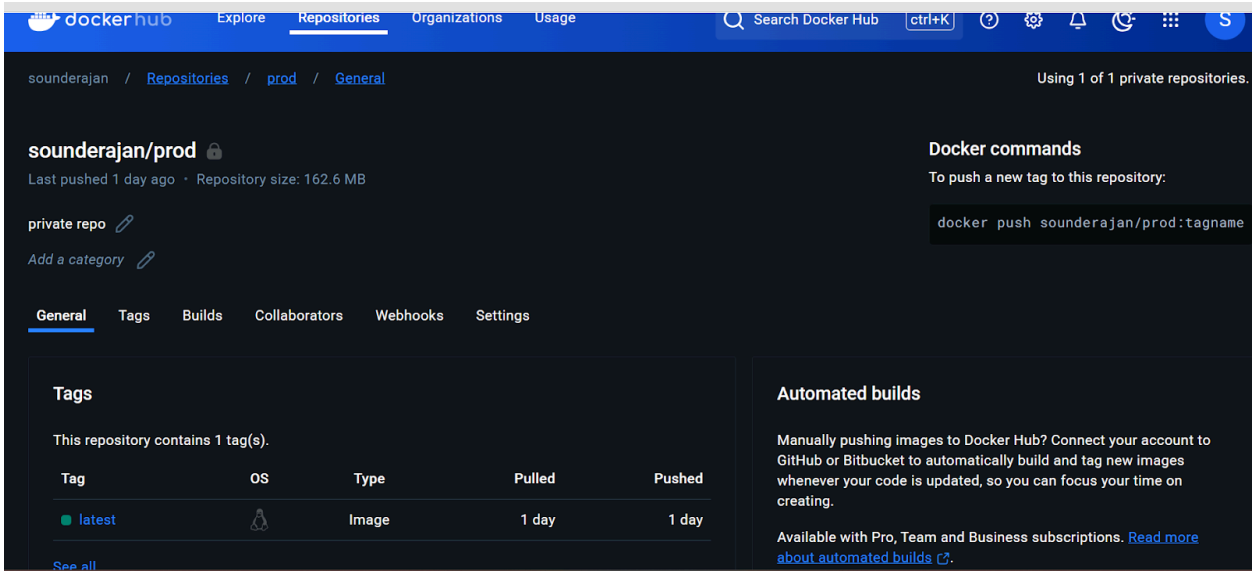
```
[root@ip-172-31-94-6 devops-build]# sudo vim /etc/systemd/system/jenkins.service
[root@ip-172-31-94-6 devops-build]# sudo systemctl daemon-reload
[root@ip-172-31-94-6 devops-build]# sudo systemctl start jenkins
[root@ip-172-31-94-6 devops-build]# sudo systemctl enable jenkins
[root@ip-172-31-94-6 devops-build]#
```



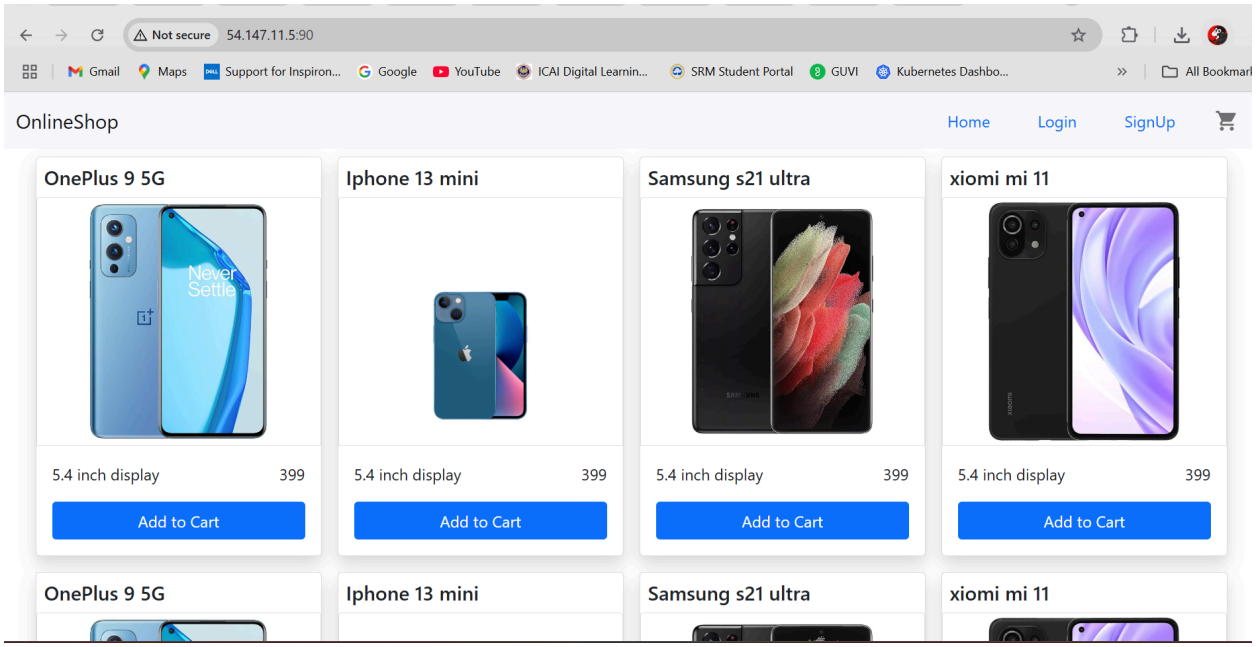
Created the webhook:



Pushed to Docker Hub:



Final Output:



Cloud watch: Monitoring health check status