Cloned the repository to WSL:

```
root@Aravind:~# 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 | 1.34 MiB/s, done.
root@Aravind:~# ls -lrt
total 214692
-rw-r--r-- 1 root       root   96254785 Nov 16  2023 prometheus-2.48.0.linux-amd64.tar.gz
drwxr-xr-x 3 root       root       4096 Dec  5 19:14 aws
-rw-r--r-- 1 root       root   62989783 Dec  7 14:06 awscliv2.zip
-rwxr-xr-x 1 root       root   60559544 Dec  7 14:07 kubectl
-rw-r--r-- 1 root       root         64 Dec  7 14:07 kubectl.sha256
drwxr-xr-x 8 root       root       4096 Dec 15 14:41 devops-capstone-app
drwxr-xr-x 2 root       root       4096 Dec 22 14:39 terraform-test
drwxr-xr-x 4 prometheus docker     4096 Jan 25 13:20 prometheus-2.48.0.linux-amd64
-rw-r--r-- 1 root       root         63 Feb 18 14:07 dockerfile
drwxr-xr-x 5 root       root       4096 Feb 21 09:56 Trend
drwxr-xr-x 4 root       root       4096 Feb 22 07:13 devops-build
root@Aravind:~#
```

Toggled into the directory:

```
root@Aravind:~# cd devops-build/
root@Aravind:~/devops-build# ls -rlt
total 4
drwxr-xr-x 3 root root 4096 Feb 22 07:13 build
root@Aravind:~/devops-build#
```

Created dockerfile:

```
root@Aravind:~/devops-build# cat dockerfile
FROM nginx:alpine

# Remove default nginx config
RUN rm /etc/nginx/conf.d/default.conf

# Copy custom nginx config
COPY nginx.conf /etc/nginx/conf.d/default.conf

# Copy React build files
COPY build /usr/share/nginx/html

# Expose port 80
EXPOSE 80

# Start nginx
CMD ["nginx", "-g", "daemon off;"]
root@Aravind:~/devops-build# cat nginx.conf
```

Created nginx file:

```
root@Aravind:~/devops-build# cat nginx.conf
server {
    listen 3000;
    server_name localhost;

    root /usr/share/nginx/html;
    index index.html;

    location / {
        try_files $uri /index.html;
    }
}
root@Aravind:~/devops-build#
```

Built docker images with dockerfile:

```
root@Aravind:~/devops-build# docker build -t devopsbuildapp .
failed to fetch metadata: fork/exec /usr/local/lib/docker/cli-plugins/docker-buildx: no such file or directory

DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

Sending build context to Docker daemon   3.42MB
Step 1/6 : FROM nginx:alpine
 ---> 004f022f4ef5
Step 2/6 : RUN rm /etc/nginx/conf.d/default.conf
 ---> Running in b0bc1621fc61
 ---> Removed intermediate container b0bc1621fc61
 ---> 7ee4901440da
Step 3/6 : COPY nginx.conf /etc/nginx/conf.d/default.conf
 ---> 53887f0fc021
Step 4/6 : COPY build /usr/share/nginx/html
 ---> b39100c6b868
Step 5/6 : EXPOSE 80
 ---> Running in 2218ed6645b6
 ---> Removed intermediate container 2218ed6645b6
 ---> ed4bbb426ce1
Step 6/6 : CMD ["nginx", "-g", "daemon off;"]
 ---> Running in c1b654e2d39e
 ---> Removed intermediate container c1b654e2d39e
 ---> 4986cb5be9bb
Successfully built 4986cb5be9bb
Successfully tagged devopsbuildapp:latest
root@Aravind:~/devops-build#
```

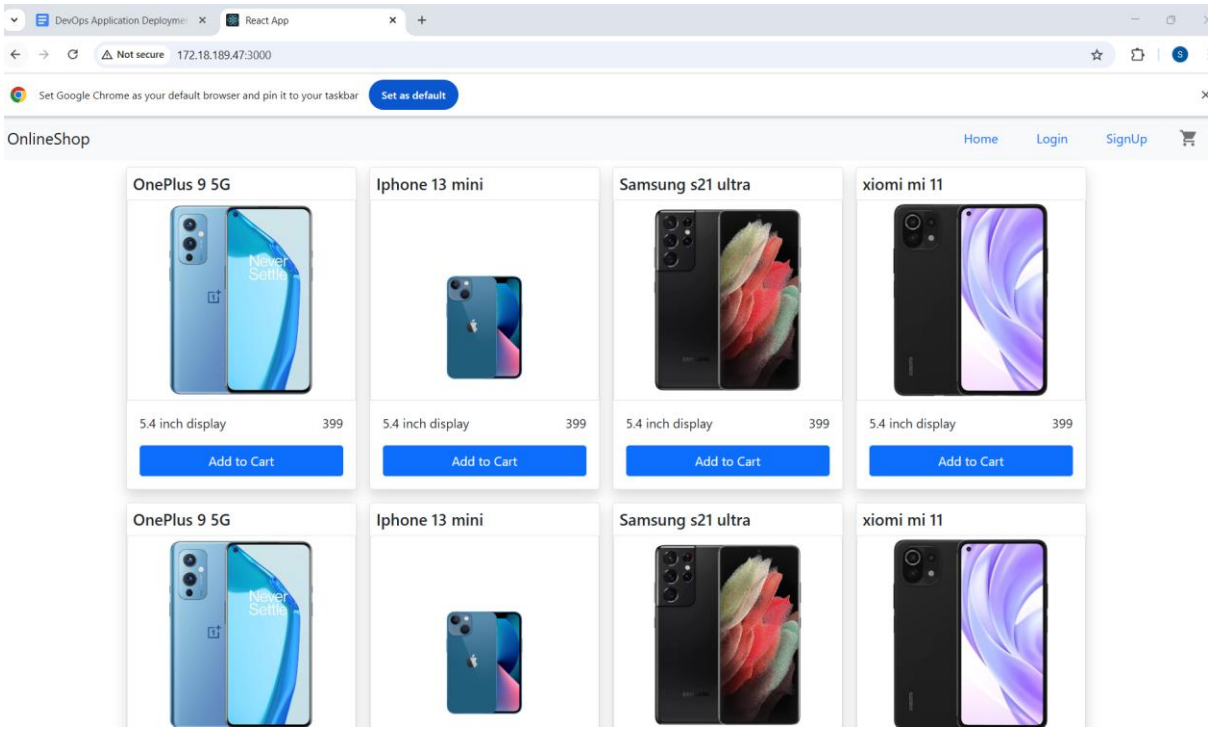
Verfied docker image:

```
root@Aravind:~/devops-build# docker images
REPOSITORY             TAG       IMAGE ID       CREATED          SIZE
devopsbuildapp         latest    4986cb5be9bb   23 seconds ago   64.5MB
trend-app              latest    ccbc234e646a   3 days ago       71.1MB
tamililan/trend-apps   latest    ccbc234e646a   3 days ago       71.1MB
<none>                 <none>    76fb947d3472   3 days ago       71.1MB
nginx                  alpine    004f022f4ef5   5 weeks ago      61.9MB
root@Aravind:~/devops-build#
```

Validated docker images ran the docker image in port 3000:80:

```
root@Aravind:~/devops-build# docker run -d -p 3000:80 devopsbuildapp
b58fa4be8928623d9e4d78817b72bcdd27a0ae8766e09b23daefe58aec062987
root@Aravind:~/devops-build# docker ps
CONTAINER ID   IMAGE            COMMAND                  CREATED         STATUS         PORTS
          NAMES
b58fa4be8928   devopsbuildapp   "/docker-entrypoint.…"   7 seconds ago   Up 7 seconds   0.0.0.0:3000->80/tcp, [::]:3000-
>80/tcp   serene_swirles
root@Aravind:~/devops-build#
```

Verified the application in browser with port number 3000:



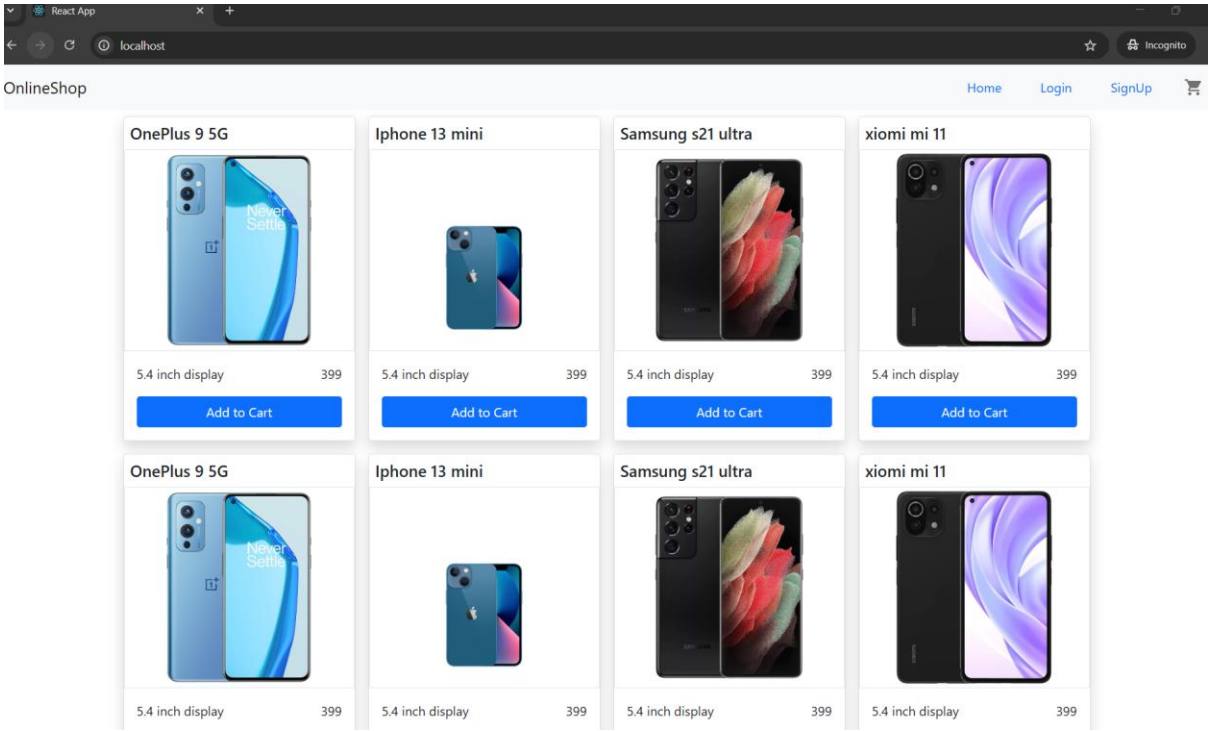
Created docker-compose.yaml file:

```
root@Aravind:~/devops-build# cat docker-compose.yaml
version: '3.8'

services:
  devops-app:
    image: devopsbuildapp
    container_name: app-container
    ports:
      - "80:80"
    restart: always
root@Aravind:~/devops-build#
```

Created container using docker-compose file:

```
root@Aravind:~/devops-build# docker-compose up -d
Creating network "devops-build_default" with the default driver
Creating app-container ... done
root@Aravind:~/devops-build#
```

Verified in browser if the application is launching and was successful:



Created build.sh and created docker image:

Build.sh:

!/bin/bash

IMAGE_NAME=$1

TAG=$2

docker build -t ${IMAGE_NAME}:${TAG} .

```
root@Aravind:~/devops-build# sh -x build.sh ecommerceapp latest
+ !/bin/bash
build.sh: 1: !/bin/bash: not found
+ IMAGE_NAME=ecommerceapp
+ TAG=latest
+ docker build -t ecommerceapp:latest .
failed to fetch metadata: fork/exec /usr/local/lib/docker/cli-plugins/docker-buildx: no such file or directory

DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  3.422MB
Step 1/6 : FROM nginx:alpine
 ---> 004f022f4ef5
Step 2/6 : RUN rm /etc/nginx/conf.d/default.conf
 ---> Using cache
 ---> 7b2b9ec5b49c
Step 3/6 : COPY nginx.conf /etc/nginx/conf.d/default.conf
 ---> Using cache
 ---> 62147377719f
Step 4/6 : COPY build/ /usr/share/nginx/html
 ---> Using cache
 ---> b774bdaa3e59
Step 5/6 : EXPOSE 80
 ---> Using cache
 ---> 0b973bc31ada
Step 6/6 : CMD ["nginx", "-g", "daemon off;"]
 ---> Using cache
 ---> 9a0a11920a18
Successfully built 9a0a11920a18
Successfully tagged ecommerceapp:latest
root@Aravind:~/devops-build#
```

Verified the docker image:

```
root@Aravind:~/devops-build# docker images
REPOSITORY              TAG       IMAGE ID       CREATED       SIZE
devopsbuildapp          latest    9a0a11920a18   7 hours ago   64.5MB
ecommerceapp            latest    9a0a11920a18   7 hours ago   64.5MB
trend-app               latest    ccbc234e646a   3 days ago    71.1MB
tamililan/trend-apps    latest    ccbc234e646a   3 days ago    71.1MB
<none>                  <none>    76fb947d3472   4 days ago    71.1MB
nginx                   alpine    004f022f4ef5   5 weeks ago   61.9MB
root@Aravind:~/devops-build#
```

```
root@Aravind:~/devops-build# cat build.sh
!/bin/bash
IMAGE_NAME=$1
TAG=$2

docker build -t ${IMAGE_NAME}:${TAG} .
root@Aravind:~/devops-build#
```

Created deploy.sh file and ran it :

```
root@Aravind:~/devops-build# cat deploy.sh
#!/bin/bash

IMAGE_NAME=$1
TAG=$2

echo "Stopping old container..."
docker stop app-container || true
docker rm app-container || true

echo "Running new container..."
docker run -d --name app-container -p 80:80 ${IMAGE_NAME}:${TAG}

echo "Deployment completed."
root@Aravind:~/devops-build#
```

Created gitignore file to ignore the file extensions mentioned in the gitignore file:

```
root@Aravind:~/devops-build# cat .gitignore
node_modules
build
.env
root@Aravind:~/devops-build#
```

Created dockerignore file to ignore the file extensions mentioned in the dockerignore file:

```
root@Aravind:~/devops-build# cat .dockerignore
node_modules
.git
.gitignore
script.sh
deploy.sh
root@Aravind:~/devops-build#
```

Exectuted deploy.sh and container created successfully.

```
root@Aravind:~/devops-build# sh -x deploy.sh ecommerceapp latest
+ IMAGE_NAME=ecommerceapp
+ TAG=latest
+ echo Stopping old container...
Stopping old container...
+ docker stop app-container
app-container
+ docker rm app-container
app-container
+ echo Running new container...
Running new container...
+ docker run -d --name app-container -p 80:80 ecommerceapp:latest
471e407d776e4ce74fca6c4244882fe92f23ec4ca0b945aec22657241649dcf3
+ echo Deployment completed.
Deployment completed.
root@Aravind:~/devops-build#
```

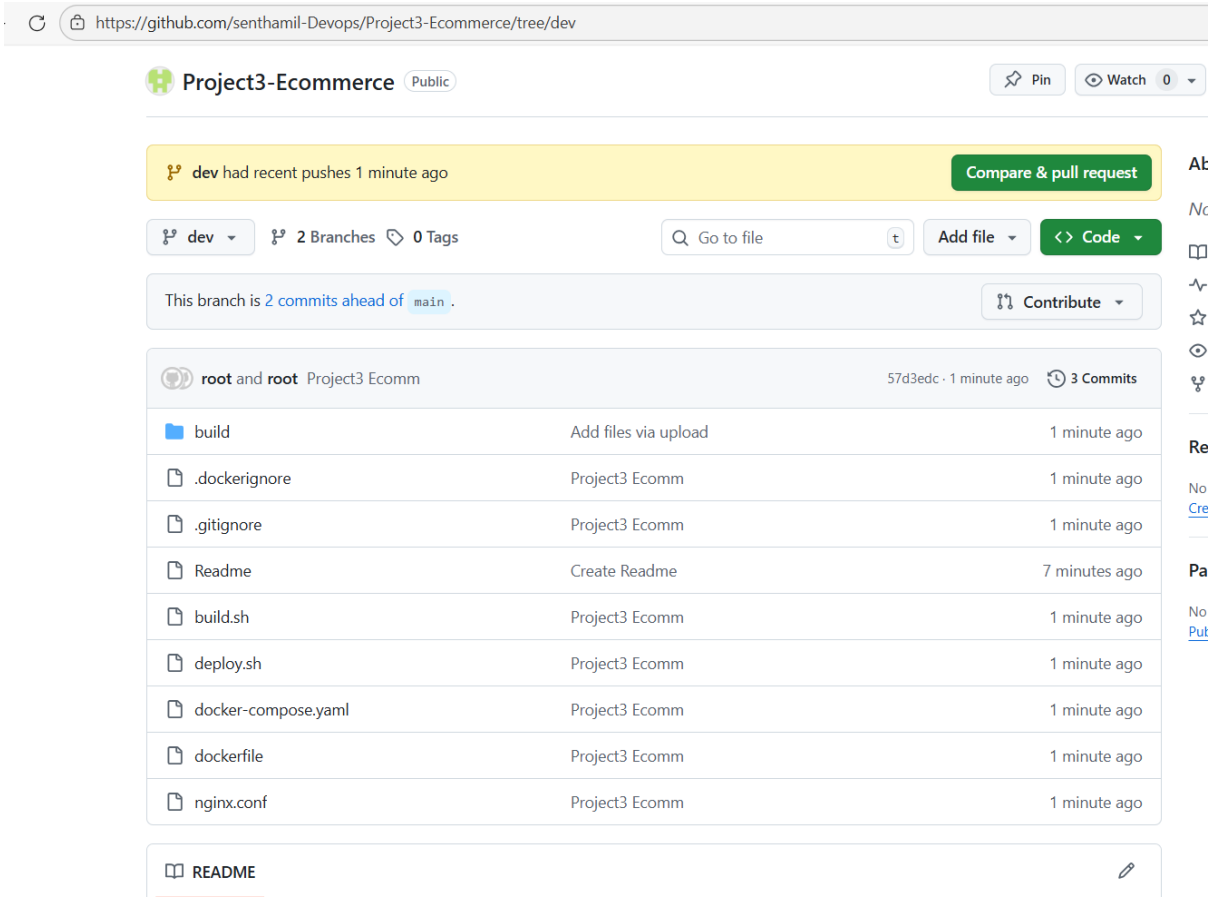
Verified the docker container is working :

```
root@Aravind:~/devops-build# docker ps
CONTAINER ID   IMAGE               COMMAND                  CREATED         STATUS         PORTS                                          NAMES
471e407d776e   ecommerceapp:latest   "/docker-entrypoint.…"   4 minutes ago   Up 4 minutes   0.0.0.0:80->80/tcp, [::]:80->80/tcp            app-container
535c905e388e   devopsbuildapp        "/docker-entrypoint.…"   7 hours ago     Up 7 hours     0.0.0.0:3000->80/tcp, [::]:3000->80/tcp        interesting_northcutt
root@Aravind:~/devops-build#
```

Pushed the code to dev branch:

```
root@Aravind:~/devops-build# git pull origin dev
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 847 bytes | 211.00 KiB/s, done.
From https://github.com/senthamil-Devops/Project3-Ecommerce
 * branch            dev        -> FETCH_HEAD
 * [new branch]      dev        -> origin/dev
hint: You have divergent branches and need to specify how to reconcile them.
hint: You can do so by running one of the following commands sometime before
hint: your next pull:
hint:
hint:   git config pull.rebase false  # merge
hint:   git config pull.rebase true   # rebase
hint:   git config pull.ff only       # fast-forward only
hint:
hint: You can replace "git config" with "git config --global" to set a default
hint: preference for all repositories. You can also pass --rebase, --no-rebase,
hint: or --ff-only on the command line to override the configured default per
hint: invocation.
fatal: Need to specify how to reconcile divergent branches.
root@Aravind:~/devops-build# git pull origin dev --rebase
From https://github.com/senthamil-Devops/Project3-Ecommerce
 * branch            dev        -> FETCH_HEAD
Successfully rebased and updated refs/heads/dev.
root@Aravind:~/devops-build# git push -u origin dev
Username for 'https://github.com': Senthamil-Devops
Password for 'https://Senthamil-Devops@github.com':
Enumerating objects: 31, done.
Counting objects: 100% (31/31), done.
Delta compression using up to 12 threads
Compressing objects: 100% (27/27), done.
Writing objects: 100% (30/30), 721.03 KiB | 60.08 MiB/s, done.
Total 30 (delta 0), reused 19 (delta 0), pack-reused 0
To https://github.com/senthamil-Devops/Project3-Ecommerce.git
   65a8a92..57d3edc  dev -> dev
branch 'dev' set up to track 'origin/dev'.
root@Aravind:~/devops-build#
```

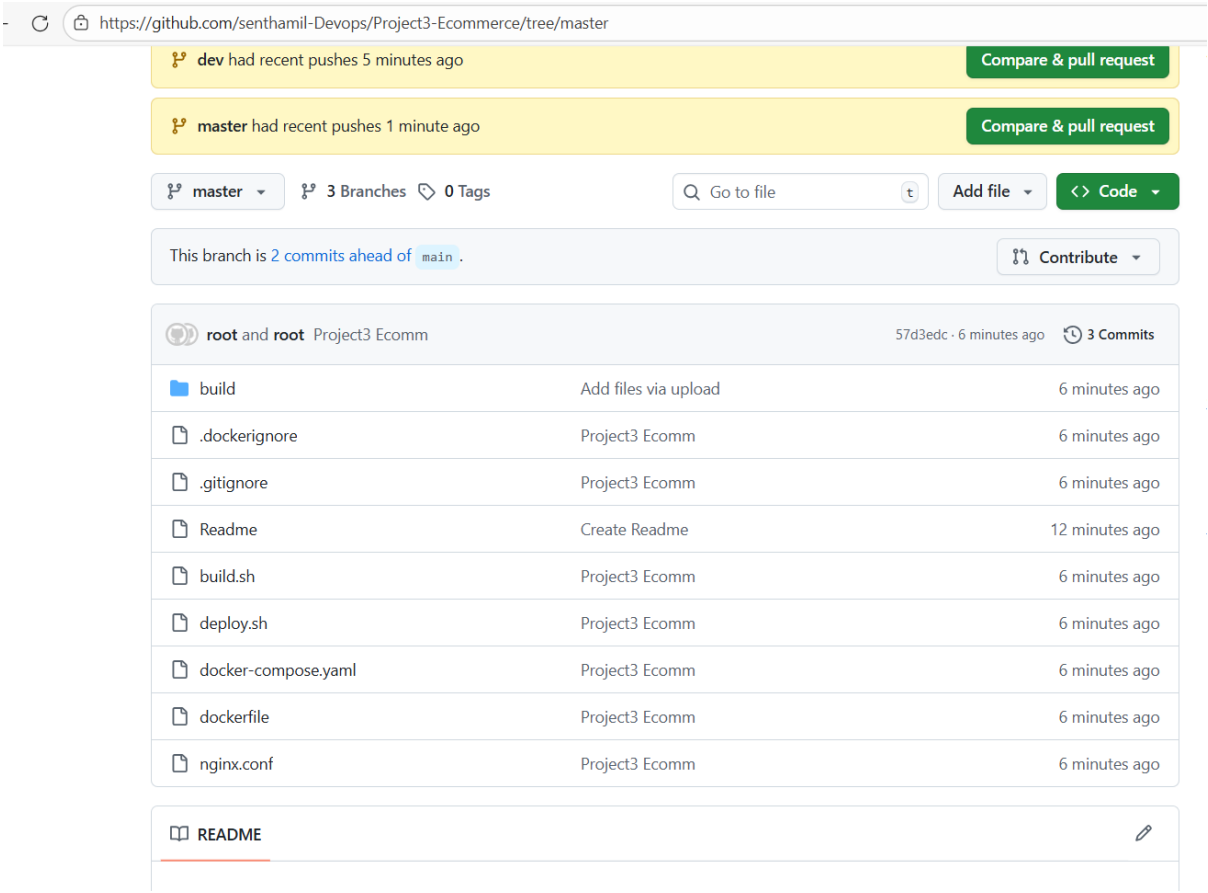
Validated if the codes are pushed to the repo under dev branch:



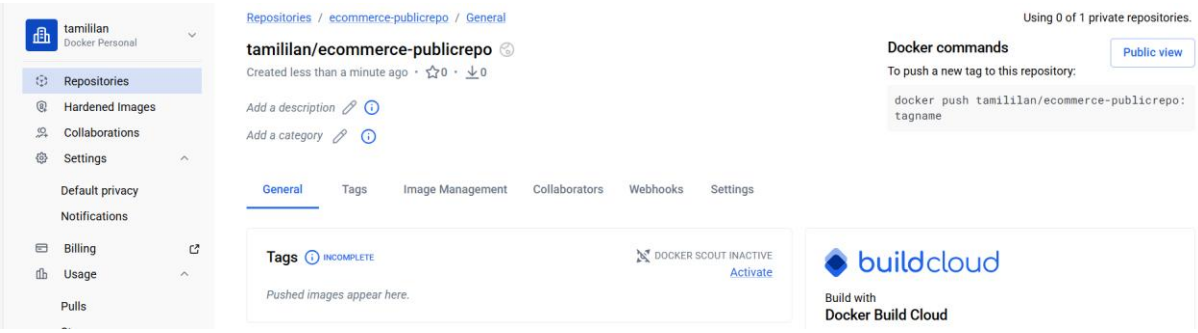
Created branch master and pushed code to master branch:

```
root@Aravind:~/devops-build# git checkout -b master
Switched to a new branch 'master'
root@Aravind:~/devops-build# git push -u origin master
Username for 'https://github.com': Senthamil-Devops
Password for 'https://Senthamil-Devops@github.com':
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/senthamil-Devops/Project3-Ecommerce.git
   65a8a92..57d3edc  master -> master
branch 'master' set up to track 'origin/master'.
root@Aravind:~/devops-build#
```

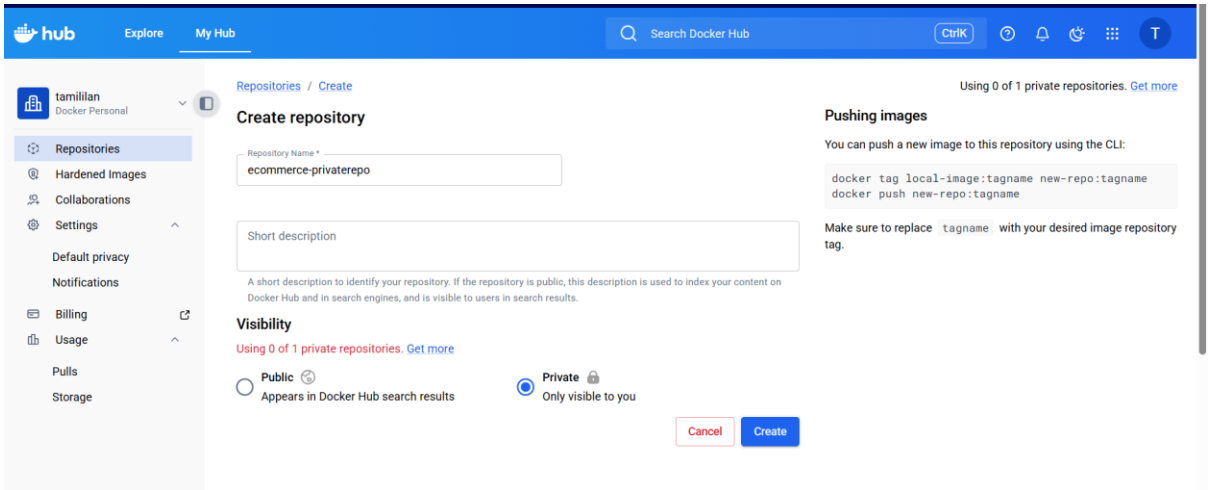
Valided if the codes are pushed to master branch:



Created a public Repo:



Created a Private Repo:



Tagged docker image and pushed docker image to public repo:

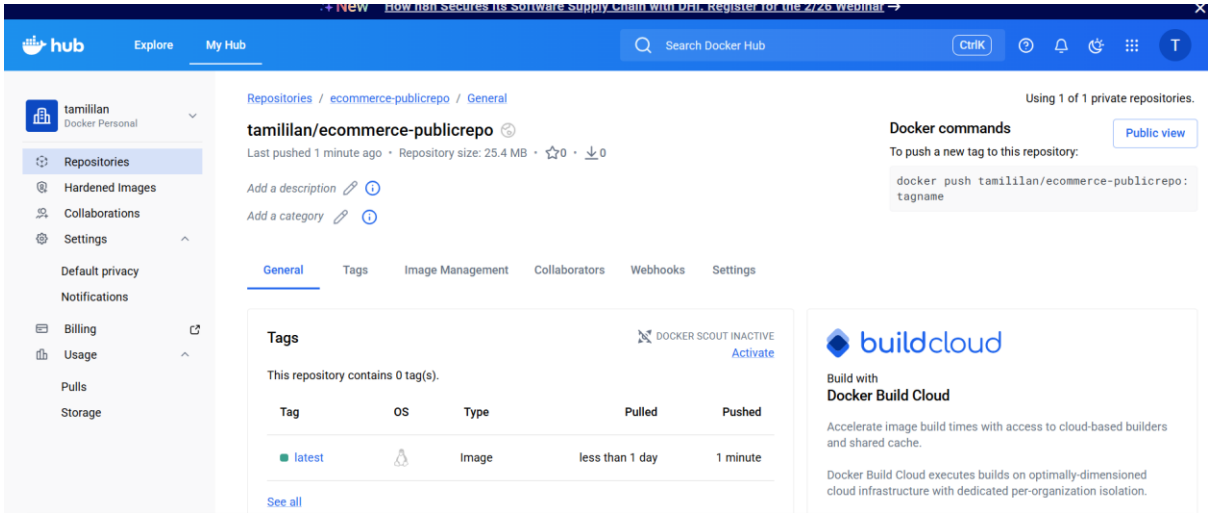
docker tag ecommerceapp:latest tamililan/ecommerce-publicrepo

docker push tamililan/ecommerce-publicrepo:latest

```
root@Aravind:~/devops-build# docker tag ecommerceapp:latest tamililan/ecommerce-publicrepo
root@Aravind:~/devops-build# docker images
REPOSITORY                    TAG       IMAGE ID       CREATED       SIZE
devopsbuildapp                latest    9a0a11920a18   8 hours ago   64.5MB
ecommerceapp                  latest    9a0a11920a18   8 hours ago   64.5MB
tamililan/ecommerce-publicrepo latest   9a0a11920a18   8 hours ago   64.5MB
trend-app                     latest    ccbc234e646a   3 days ago    71.1MB
tamililan/trend-apps          latest    ccbc234e646a   3 days ago    71.1MB
<none>                        <none>    76fb947d3472   4 days ago    71.1MB
nginx                         alpine    004f022f4ef5   5 weeks ago   61.9MB
root@Aravind:~/devops-build#
```

```
root@Aravind:~/devops-build# docker push tamililan/ecommerce-publicrepo:latest
The push refers to repository [docker.io/tamililan/ecommerce-publicrepo]
743512a28e72: Pushed
4986d4fbf996: Pushed
74541c781b3d: Pushed
4b6d03d0cebb: Mounted from tamililan/staticweb
67ea0b046e7d: Mounted from tamililan/staticweb
ed5fa8595c7a: Mounted from tamililan/staticweb
8ae63eb1f31f: Mounted from tamililan/staticweb
b3e3d1bbb64d: Mounted from tamililan/staticweb
48078b7e3000: Mounted from tamililan/staticweb
fd1e40d7f74b: Mounted from tamililan/staticweb
7bb20cf5ef67: Mounted from tamililan/staticweb
latest: digest: sha256:3c279ab9c335356882f7e6150c892a681692874970e1eaeee57d81cd3f682917 size: 2613
root@Aravind:~/devops-build#
```

Verified in public Repo:



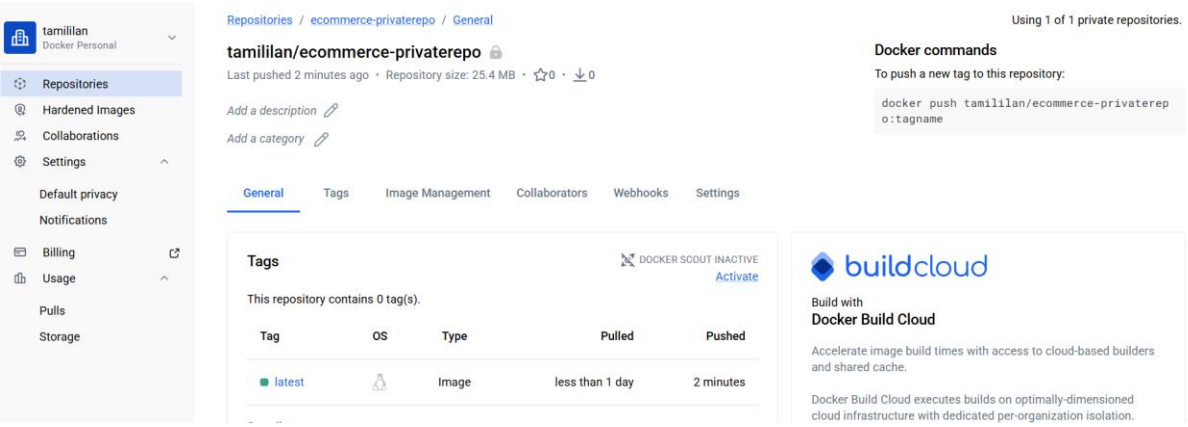
Tagged docker image and pushed docker image to private repo:

docker tag ecommerceapp:latest tamililan/ecommerce-privaterepo

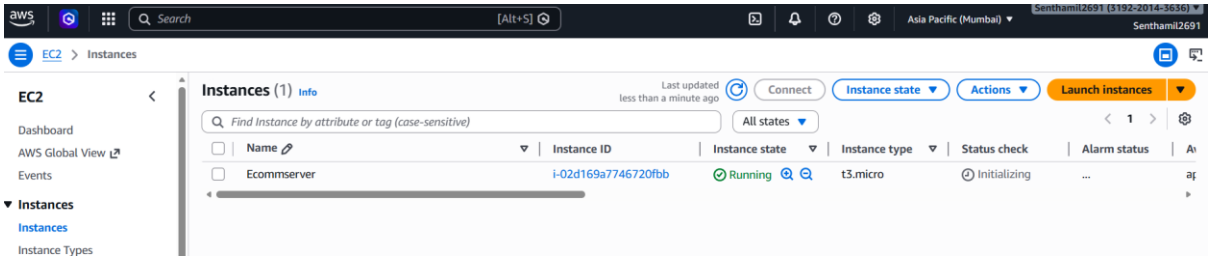
docker push tamililan/ecommerce-privaterepo

```
root@Aravind:~/devops-build# docker tag ecommerceapp:latest tamililan/ecommerce-privaterepo
root@Aravind:~/devops-build# docker push tamililan/ecommerce-privaterepo
Using default tag: latest
The push refers to repository [docker.io/tamililan/ecommerce-privaterepo]
743512a28e72: Mounted from tamililan/ecommerce-publicrepo
4986d4fbf996: Mounted from tamililan/ecommerce-publicrepo
74541c781b3d: Mounted from tamililan/ecommerce-publicrepo
4b6d03d0cebb: Mounted from tamililan/ecommerce-publicrepo
67ea0b046e7d: Mounted from tamililan/ecommerce-publicrepo
ed5fa8595c7a: Mounted from tamililan/ecommerce-publicrepo
8ae63eb1f31f: Mounted from tamililan/ecommerce-publicrepo
b3e3d1bbb64d: Mounted from tamililan/ecommerce-publicrepo
48078b7e3000: Mounted from tamililan/ecommerce-publicrepo
fd1e40d7f74b: Mounted from tamililan/ecommerce-publicrepo
7bb20cf5ef67: Mounted from tamililan/ecommerce-publicrepo
latest: digest: sha256:3c279ab9c335356882f7e6150c892a681692874970e1eaeee57d81cd3f682917 size: 2613
root@Aravind:~/devops-build#
```

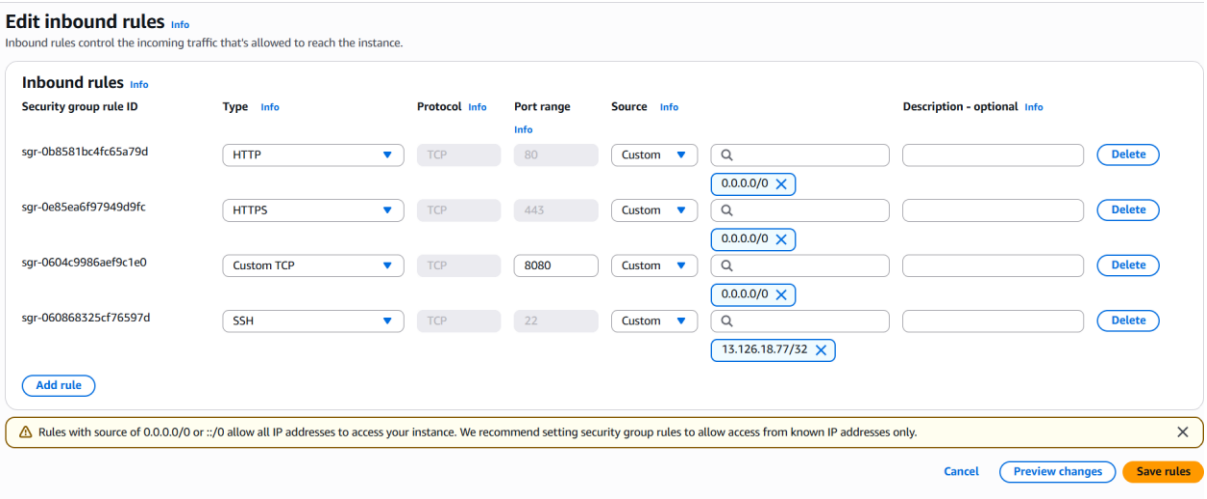
Verified docker image in private Repo:



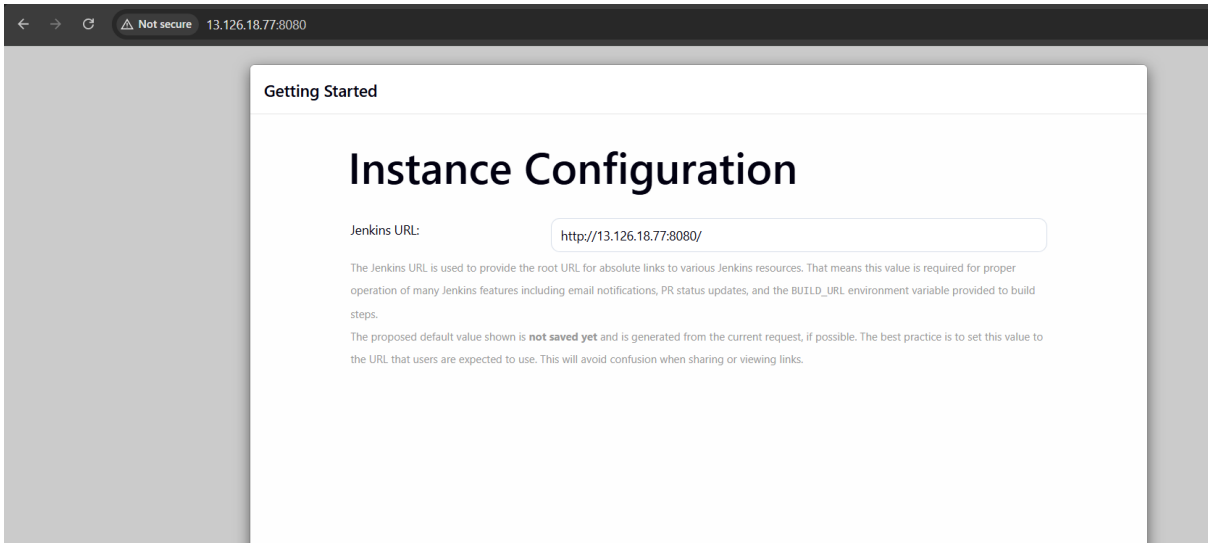
Created Ec2 in t3.micro :



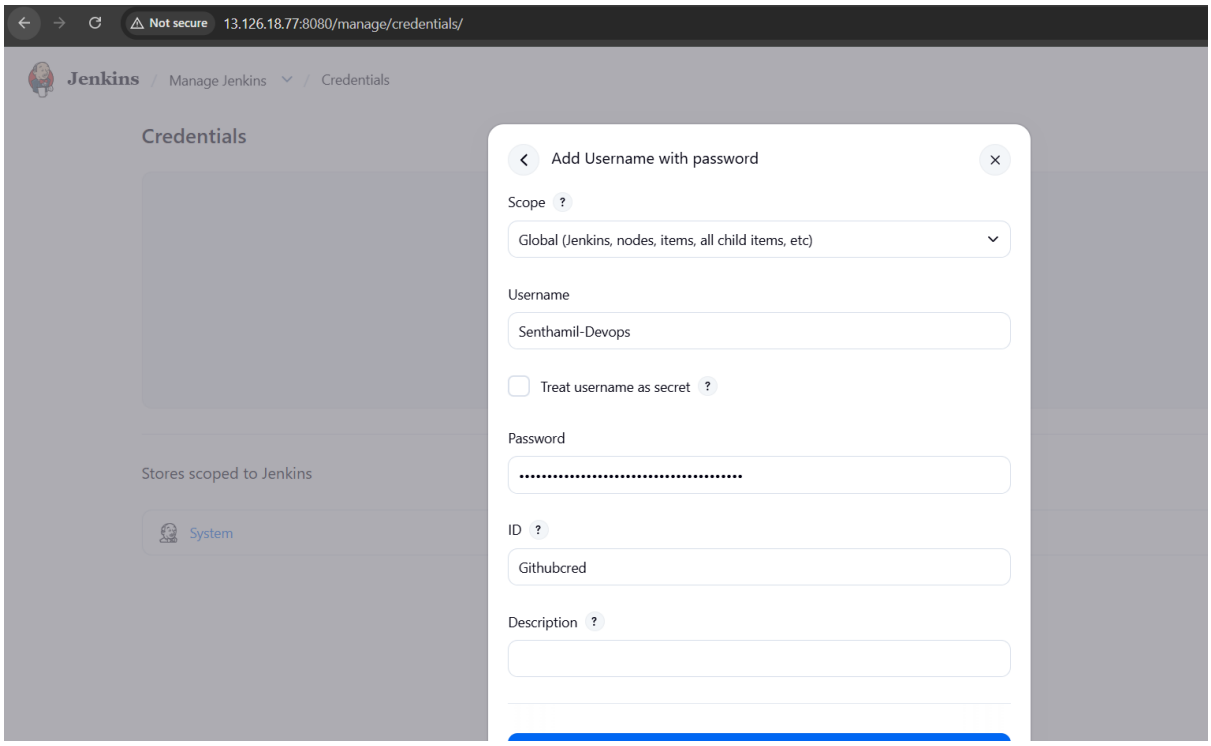
Enabled ssh only for my machine:

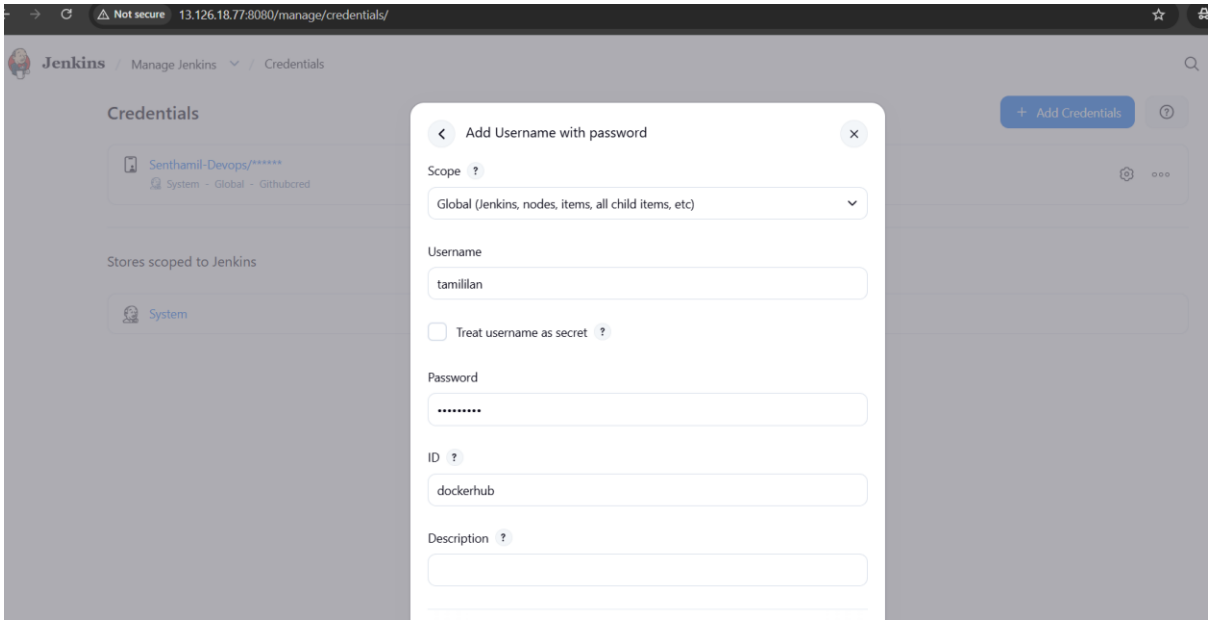


Launched Jenkins and started Jenkins:

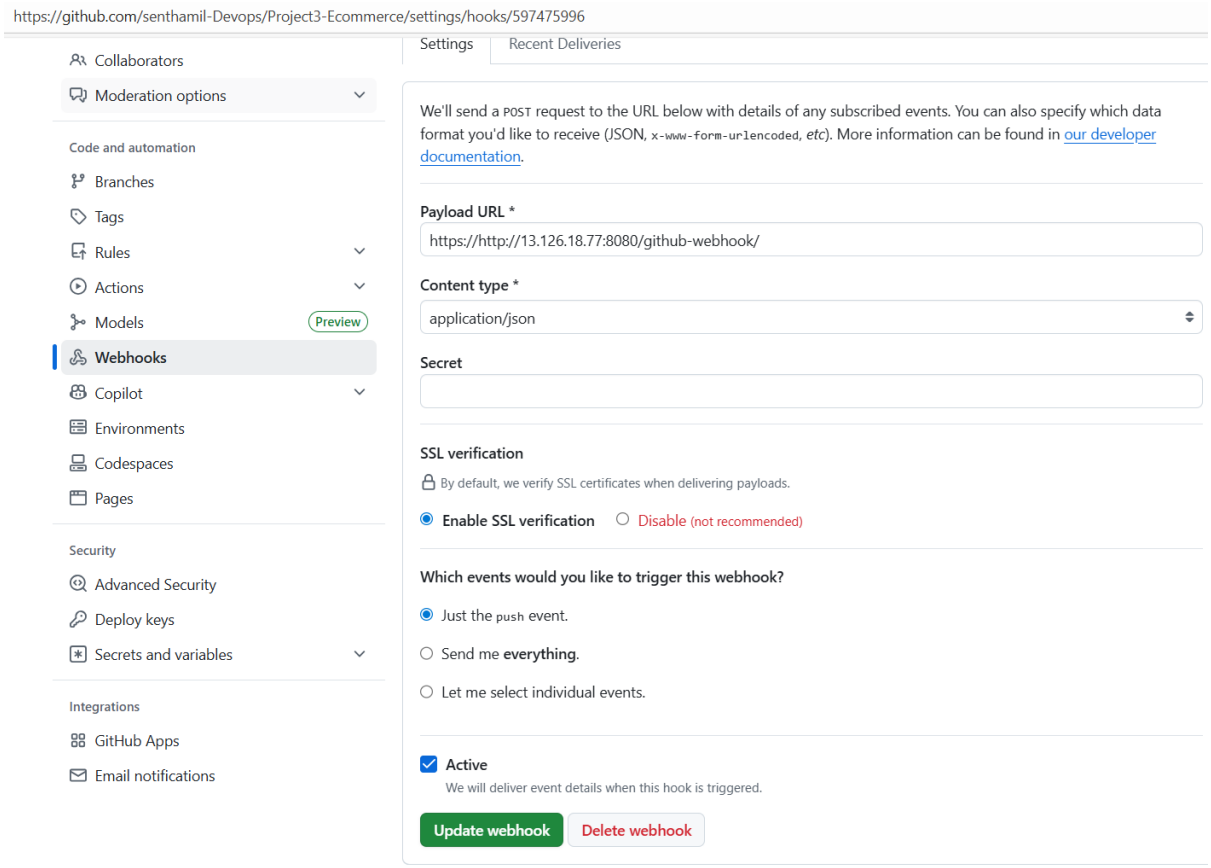


Created usercred for dockerhub and GIT:





Configured webhook for monitoring:



Commit and push code to dev branch.

Jenkins dev pipeline runs and pushes image to tamililan/ecommerce-publicrepo

After validation, dev branch is merged into master.

Jenkins master pipeline runs and pushes image to tamililan/ecommerce-private repo.

```
root@Aravind:~/devops-build# git checkout dev
Switched to branch 'dev'
Your branch is up to date with 'origin/dev'.
root@Aravind:~/devops-build# git pull origin dev
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 9 (delta 5), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (9/9), 3.26 KiB | 371.00 KiB/s, done.
From https://github.com/senthamil-Devops/Project3-Ecommerce
 * branch            dev        -> FETCH_HEAD
   57d3edc..68e4a7b  dev        -> origin/dev
Updating 57d3edc..68e4a7b
error: The following untracked working tree files would be overwritten by merge:
        Jenkinsfile
Please move or remove them before you merge.
Aborting
root@Aravind:~/devops-build# git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
root@Aravind:~/devops-build# git pull origin master
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 9 (delta 5), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (9/9), 3.27 KiB | 1.09 MiB/s, done.
```

```
root@Aravind:~/devops-build# git merge dev
Already up to date.
root@Aravind:~/devops-build# git push origin master
```

Created multibranch pipeline:

Jenkinsfile:

```
pipeline {
  agent any


  environment {
```

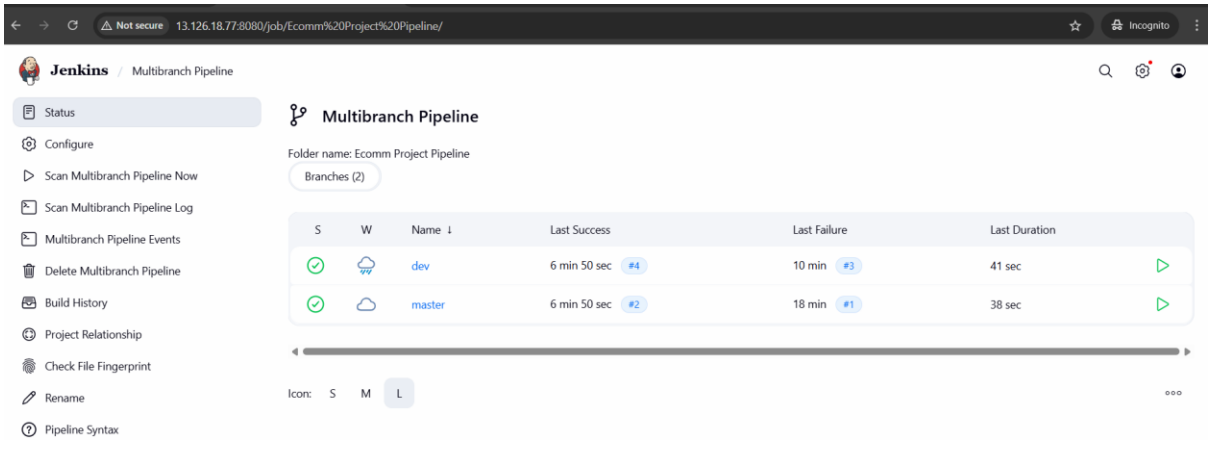
```
  IMAGE_NAME = "ecommerceapp"
  DEV_REPO   = "tamililan/ecommerce-publicrepo"
  PROD_REPO  = "tamililan/ecommerce-privaterepo"
}

stages {

  stage('Checkout') {
    steps {
      checkout scm
    }
  }

  stage('Build Docker Image') {
    steps {
      script {
        echo "Building Docker image for branch: ${env.BRANCH_NAME}"

        if (env.BRANCH_NAME == 'dev') {
          sh "docker build -t ${IMAGE_NAME}:dev ."
```

```
      }

      if (env.BRANCH_NAME == 'master') {
        sh "docker build -t ${IMAGE_NAME}:prod ."
      }
    }
  }
}

stage('Docker Login & Push Image') {
  steps {
    script {
      withCredentials([
        usernamePassword(
          credentialsId: 'dockerhub',
          usernameVariable: 'DOCKER_USER',
          passwordVariable: 'DOCKER_PASS'
        )
      ]) {

        sh '''
```

```
        echo "$DOCKER_PASS" | docker login -u
"$DOCKER_USER" --password-stdin
      '''


      if (env.BRANCH_NAME == 'dev') {
        sh """
          docker tag ${IMAGE_NAME}:dev
${DEV_REPO}:dev
          docker push ${DEV_REPO}:dev
        """
      }


      if (env.BRANCH_NAME == 'master') {
        sh """
          docker tag ${IMAGE_NAME}:prod
${PROD_REPO}:latest
          docker push ${PROD_REPO}:latest
        """
      }
    }
  }
```

```
    }
  }

  stage('Deploy to Server') {
    when {
      branch 'master'
    }
    steps {
      sh """
        ./deploy.sh ${PROD_REPO} latest
      """
    }
  }
}

post {
  success {
    echo "✅ Pipeline SUCCESS for branch: ${env.BRANCH_NAME}"
  }
  failure {
```

```
    echo "❌ Pipeline FAILED for branch: ${env.BRANCH_NAME}"
  }
  }
}
```



Pipeline successful for master branch :

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/master/2/console

Jenkins / Multibranch Pipeline / master / #2

- Status
- Changes
- Console Output
- Edit Build Information
- Timings
- Git Build Data
- Pipeline Overview
- Thread Dump
- Pause/resume
- Replay
- Pipeline Steps
- Workspaces
- Previous Build

Console

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```
Branch indexing
 > git rev-parse --resolve-git-dir /var/lib/jenkins/caches/git-be5f434d8e236cb6a9b490afe2a955c4/.git # timeout=10
Setting origin to https://github.com/senthamil-Devops/Project3-Ecommerce.git
 > git config remote.origin.url https://github.com/senthamil-Devops/Project3-Ecommerce.git # timeout=10
Fetching origin...
Fetching upstream changes from origin
 > git --version # timeout=10
 > git --version # 'git version 2.50.1'
 > git config --get remote.origin.url # timeout=10
using GIT_ASKPASS to set credentials
 > git fetch --no-tags --force --progress -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Seen branch in repository origin/dev
Seen branch in repository origin/main
Seen branch in repository origin/master
Seen 3 remote branches
Obtained Jenkinsfile from a73da95aaa2ba15e835e9ce36c1b58a777084c1f
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/Ecomm_Project_Pipeline_master
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential Githubcred
 > git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Ecomm_Project_Pipeline_master/.git # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/senthamil-Devops/Project3-Ecommerce.git # timeout=10
```

```
 > git config core.sparsecheckout # timeout=10
 > git checkout -f a73da95aaa2ba15e835e9ce36c1b58a777084c1f # timeout=10
Commit message: "Update Jenkinsfile"
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Docker Image)
[Pipeline] script
[Pipeline] {
[Pipeline] echo
Building Docker image for branch: master
[Pipeline] sh
+ docker build -t ecommerceapp:prod .
#0 building with "default" instance using docker driver

#1 [internal] load build definition from dockerfile
#1 transferring dockerfile:
#1 transferring dockerfile: 392B done
#1 DONE 0.1s

#2 [internal] load metadata for docker.io/library/nginx:alpine
#2 DONE 2.5s

#3 [internal] load .dockerignore
#3 transferring context: 141B done
#3 DONE 0.0s

#4 [1/4] FROM docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba
#4 resolve docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba 0.0s done
#4 ...

#5 [internal] load build context
```

Jenkins / Multibranch Pipeline / master / #2

```
#4 [1/4] FROM docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba
#4 sha256:3e2c181db1b0985ce357c7aaf48ac615f30f392cd15d5c5ba34c4faa1f4f39a2 0B / 626B 0.2s
#4 sha256:c032460d1fd73978317479ba23c37bcb57d93156cab122eb3c54b8e4bdc292fa 2.50kB / 2.50kB done
#4 sha256:b76de378d57272a1dd9091a05dd548a3639dfb792ebdbf95d06704d2950afdea 11.65kB / 11.65kB done
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 0B / 1.86MB 0.2s
#4 sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba 10.33kB / 10.33kB done
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 0B / 3.86MB 0.2s
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 2.10MB / 3.86MB 0.7s
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 3.86MB / 3.86MB 0.8s done
#4 extracting sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153
#4 sha256:6b7b6c7061b76cdb8601e18722d12ae3232f0ddcfa1d2983754abcc6ce0a8a83 0B / 954B 0.8s
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 1.86MB / 1.86MB 0.9s
#4 sha256:3e2c181db1b0985ce357c7aaf48ac615f30f392cd15d5c5ba34c4faa1f4f39a2 626B / 626B 1.0s done
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 1.86MB / 1.86MB 0.9s done
#4 extracting sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 0.2s done
#4 sha256:399d0898a94e0084f81499a3e3c29824357118c7ce551648ea1dbab813884661 0B / 404B 1.0s
#4 sha256:955a8478f9aceb66cbf2f579fa3c24e1af278d1fa3ffd3043d6260e21d2f7416 0B / 1.21kB 1.0s
#4 extracting sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000
#4 extracting sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 0.1s done
#4 extracting sha256:3e2c181db1b0985ce357c7aaf48ac615f30f392cd15d5c5ba34c4faa1f4f39a2 done
#4 sha256:6b7b6c7061b76cdb8601e18722d12ae3232f0ddcfa1d2983754abcc6ce0a8a83 954B / 954B 1.3s done
#4 extracting sha256:6b7b6c7061b76cdb8601e18722d12ae3232f0ddcfa1d2983754abcc6ce0a8a83 done
#4 sha256:6d397a54a185dd0b6638d1a3934b81daef7a140741e12697377d6279066f7ca7 0B / 1.40kB 1.4s
#4 extracting sha256:399d0898a94e0084f81499a3e3c29824357118c7ce551648ea1dbab813884661 done
#4 sha256:399d0898a94e0084f81499a3e3c29824357118c7ce551648ea1dbab813884661 404B / 404B 1.5s done
#4 sha256:955a8478f9aceb66cbf2f579fa3c24e1af278d1fa3ffd3043d6260e21d2f7416 1.21kB / 1.21kB 1.5s done
#4 sha256:5e7756927bef33a266e1221356d5da8553139cb80bc5b1b3827010811d9ea268 0B / 20.24MB 1.6s
#4 extracting sha256:955a8478f9aceb66cbf2f579fa3c24e1af278d1fa3ffd3043d6260e21d2f7416 done
#4 sha256:6d397a54a185dd0b6638d1a3934b81daef7a140741e12697377d6279066f7ca7 1.40kB / 1.40kB 1.9s done
#4 sha256:5e7756927bef33a266e1221356d5da8553139cb80bc5b1b3827010811d9ea268 1.05MB / 20.24MB 2.1s
#4 extracting sha256:6d397a54a185dd0b6638d1a3934b81daef7a140741e12697377d6279066f7ca7 done
#4 sha256:5e7756927bef33a266e1221356d5da8553139cb80bc5b1b3827010811d9ea268 6.29MB / 20.24MB 2.3s
```

Jenkins / Multibranch Pipeline / master / #2

```
#6 DONE 0.9s

#7 exporting to image
#7 exporting layers
#7 exporting layers 0.1s done
#7 writing image sha256:79627c4b059d3967396e5186a5dd13ad8d4456b6eb99d588a2c9337a0280ffff done
#7 naming to docker.io/library/ecommerceapp:prod done
#7 DONE 0.1s
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Docker Login & Push Image)
[Pipeline] script
[Pipeline] {
[Pipeline] withCredentials
Masking supported pattern matches of $DOCKER_PASS
[Pipeline] {
[Pipeline] sh
+ docker login -u tamililan --password-stdin
+ echo ****
WARNING! Your password will be stored unencrypted in /var/lib/jenkins/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
[Pipeline] sh
+ docker tag ecommerceapp:prod tamililan/ecommerce-privaterepo:latest
+ docker push tamililan/ecommerce-privaterepo:latest
The push refers to repository [docker.io/tamililan/ecommerce-privaterepo]
6d0c5b1e8a77: Preparing
45f2f5591104: Preparing
```

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/master/2/console

Jenkins / Multibranch Pipeline / master / #2

```
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy to Server)
[Pipeline] sh
+ ./deploy.sh tamililan/ecommerce-privaterepo latest
Stopping old container...
Error response from daemon: No such container: app-container
Error response from daemon: No such container: app-container
Running new container...
200e6a534ec4bcb053e7dcee9970f660bf6592f65e2aaefdad766d3c5951ee5d
Deployment completed.
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
✅ Pipeline SUCCESS for branch: master
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Pipeline successful for dev branch:

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/dev/4/console Incognito

Jenkins / Multibranch Pipeline / dev / #4

- Status
- Changes
- Console Output
- Edit Build Information
- Delete build '#4'
- Timings
- Git Build Data
- Pipeline Overview
- Restart from Stage
- Replay
- Pipeline Steps
- Workspaces
- Previous Build

Console

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```
Branch indexing
 > git rev-parse --resolve-git-dir /var/lib/jenkins/caches/git-be5f434d8e236cb6a9b490afe2a955c4/.git # timeout=10
Setting origin to https://github.com/senthamil-Devops/Project3-Ecommerce.git
 > git config remote.origin.url https://github.com/senthamil-Devops/Project3-Ecommerce.git # timeout=10
Fetching origin...
Fetching upstream changes from origin
 > git --version # timeout=10
 > git --version # 'git version 2.50.1'
 > git config --get remote.origin.url # timeout=10
using GIT_ASKPASS to set credentials
 > git fetch --no-tags --force --progress -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Seen branch in repository origin/dev
Seen branch in repository origin/main
Seen branch in repository origin/master
Seen 3 remote branches
Obtained Jenkinsfile from 68e4a7bc97b8172878267473 6cfaed3f45cc6c4e
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/Ecomm_Project_Pipeline_dev
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential Githubcred
 > git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Ecomm_Project_Pipeline_dev/.git # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/senthamil-Devops/Project3-Ecommerce.git # timeout=10
```

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/dev/4/console

Jenkins / Multibranch Pipeline / dev / #4

```
 > git --version # timeout=10
 > git --version # 'git version 2.50.1'
using GIT_ASKPASS to set credentials
 > git fetch --no-tags --force --progress -- https://github.com/senthamil-Devops/Project3-Ecommerce.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
Checking out Revision 68e4a7bc97b81728782674736cfaed3f45cc6c4e (dev)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 68e4a7bc97b81728782674736cfaed3f45cc6c4e # timeout=10
Commit message: "Update Jenkinsfile"
 > git rev-list --no-walk 68e4a7bc97b81728782674736cfaed3f45cc6c4e # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential Githubcred
 > git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Ecomm_Project_Pipeline_dev/.git # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/senthamil-Devops/Project3-Ecommerce.git # timeout=10
Fetching without tags
Fetching upstream changes from https://github.com/senthamil-Devops/Project3-Ecommerce.git
 > git --version # timeout=10
 > git --version # 'git version 2.50.1'
using GIT_ASKPASS to set credentials
 > git fetch --no-tags --force --progress -- https://github.com/senthamil-Devops/Project3-Ecommerce.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
Checking out Revision 68e4a7bc97b81728782674736cfaed3f45cc6c4e (dev)
```

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/dev/4/console

Jenkins / Multibranch Pipeline / dev / #4

```
Fetching upstream changes from https://github.com/senthamil-Devops/Project3-Ecommerce.git
 > git --version # timeout=10
 > git --version # 'git version 2.50.1'
using GIT_ASKPASS to set credentials
 > git fetch --no-tags --force --progress -- https://github.com/senthamil-Devops/Project3-Ecommerce.git +refs/heads/*:refs/r
timeout=10
Checking out Revision 68e4a7bc97b81728782674736cfaed3f45cc6c4e (dev)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 68e4a7bc97b81728782674736cfaed3f45cc6c4e # timeout=10
Commit message: "Update Jenkinsfile"
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Docker Image)
[Pipeline] script
[Pipeline] {
[Pipeline] echo
Building Docker image for branch: dev
[Pipeline] sh
+ docker build -t ecommerceapp:dev .
#0 building with "default" instance using docker driver

#1 [internal] load build definition from dockerfile
#1 transferring dockerfile: 392B 0.0s done
#1 DONE 0.1s

#2 [internal] load metadata for docker.io/library/nginx:alpine
#2 DONE 2.5s

#3 [internal] load .dockerignore
#3 transferring context: 141B done
#3 DONE 0.0s
```

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/dev/4/console

Jenkins / Multibranch Pipeline / dev / #4

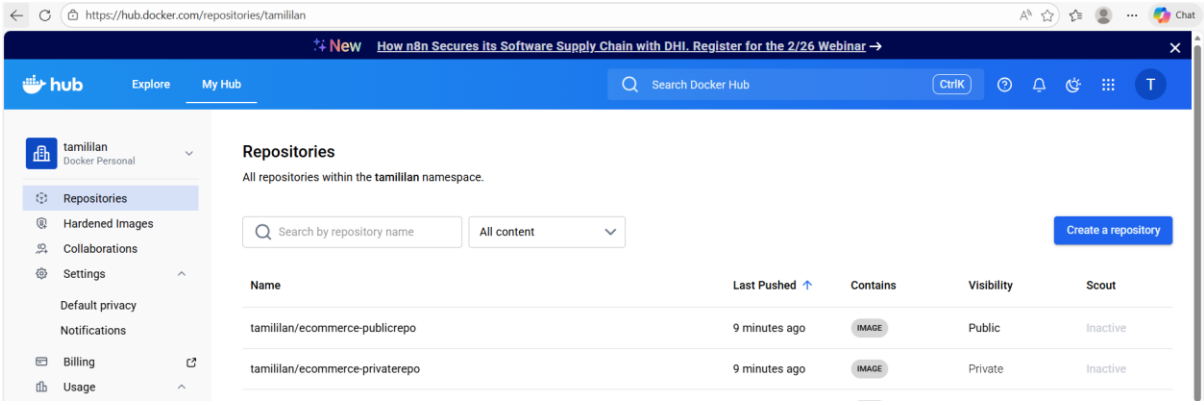
```
#2 [internal] load metadata for docker.io/library/nginx:alpine
#2 DONE 2.5s

#3 [internal] load .dockerignore
#3 transferring context: 141B done
#3 DONE 0.0s

#4 [1/4] FROM docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba
#4 resolve docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba 0.0s done
#4 ...

#5 [internal] load build context
#5 transferring context: 2.61MB 0.1s done
#5 DONE 0.1s

#4 [1/4] FROM docker.io/library/nginx:alpine@sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba
#4 sha256:3e2c181db1b0985ce357c7aaf48ac615f30f392cd15d5c5ba34c4faa1f4f39a2 0B / 626B 0.2s
#4 sha256:c032460d1fd73978317479ba23c37bcb57d93156cab122eb3c54b8e4bdc292fa 2.50kB / 2.50kB done
#4 sha256:b76de378d57272a1dd9091a05dd548a3639dfb792ebdbf95d06704d2950afdea 11.65kB / 11.65kB done
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 0B / 1.86MB 0.2s
#4 sha256:1d13701a5f9f3fb01aaa88cef2344d65b6b5bf6b7d9fa4cf0dca557a8d7702ba 10.33kB / 10.33kB done
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 0B / 3.86MB 0.1s
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 2.10MB / 3.86MB 0.7s
#4 sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 3.86MB / 3.86MB 0.8s done
#4 extracting sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153
#4 sha256:6b7b6c7061b76cdb8601e18722d12ae3232f0ddcfa1d2983754abcc6ce0a8a83 0B / 954B 0.8s
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 1.86MB / 1.86MB 0.9s
#4 sha256:3e2c181db1b0985ce357c7aaf48ac615f30f392cd15d5c5ba34c4faa1f4f39a2 626B / 626B 1.0s done
#4 sha256:bca5d04786e112d958f100a66f8257b2aeefc14b64d81e405c3c44acff2fb000 1.86MB / 1.86MB 0.9s done
#4 extracting sha256:589002ba0eaed121a1dbf42f6648f29e5be55d5c8a6ee0f8eaa0285cc21ac153 0.2s done
#4 sha256:399d0898a94e0084f81499a3e3c29824357118c7ce551648ea1dbab813884661 0B / 404B 1.0s
#4 sha256:955a8478f9aceb66cbf2f579fa3c24e1af278d1fa3ffd3043d6260e21d2f7416 0B / 1.21kB 1.0s
```

Not secure 13.126.18.77:8080/job/Ecomm%20Project%20Pipeline/job/dev/4/console

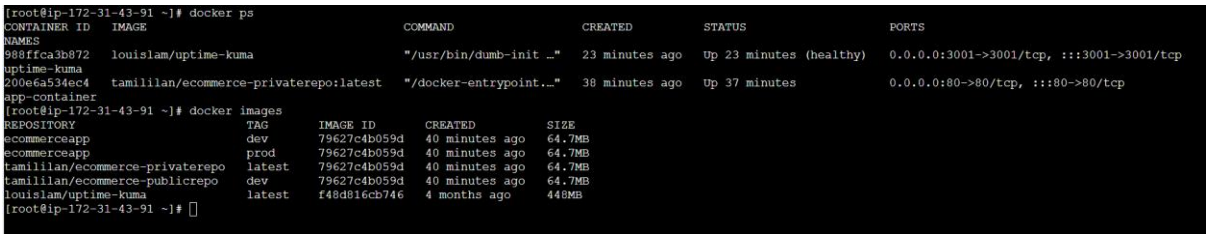
Jenkins / Multibranch Pipeline / dev / #4

```
aa0fc249df10: Mounted from tamililan/ecommerce-privaterepo
f35bcec50d8c: Mounted from tamililan/ecommerce-privaterepo
660f9a93104f: Mounted from tamililan/ecommerce-privaterepo
53998a5033c3: Mounted from tamililan/ecommerce-privaterepo
989e799e6349: Mounted from tamililan/ecommerce-privaterepo
dev: digest: sha256:878a11c8319eae55d38bb9aa3ed22fd4eb4b38f22b690acf9b9296b12df75264 size: 2613
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy to Server)
Stage "Deploy to Server" skipped due to when conditional
[Pipeline] getContext
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
✅ Pipeline SUCCESS for branch: dev
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Image pushed to dockerhub:

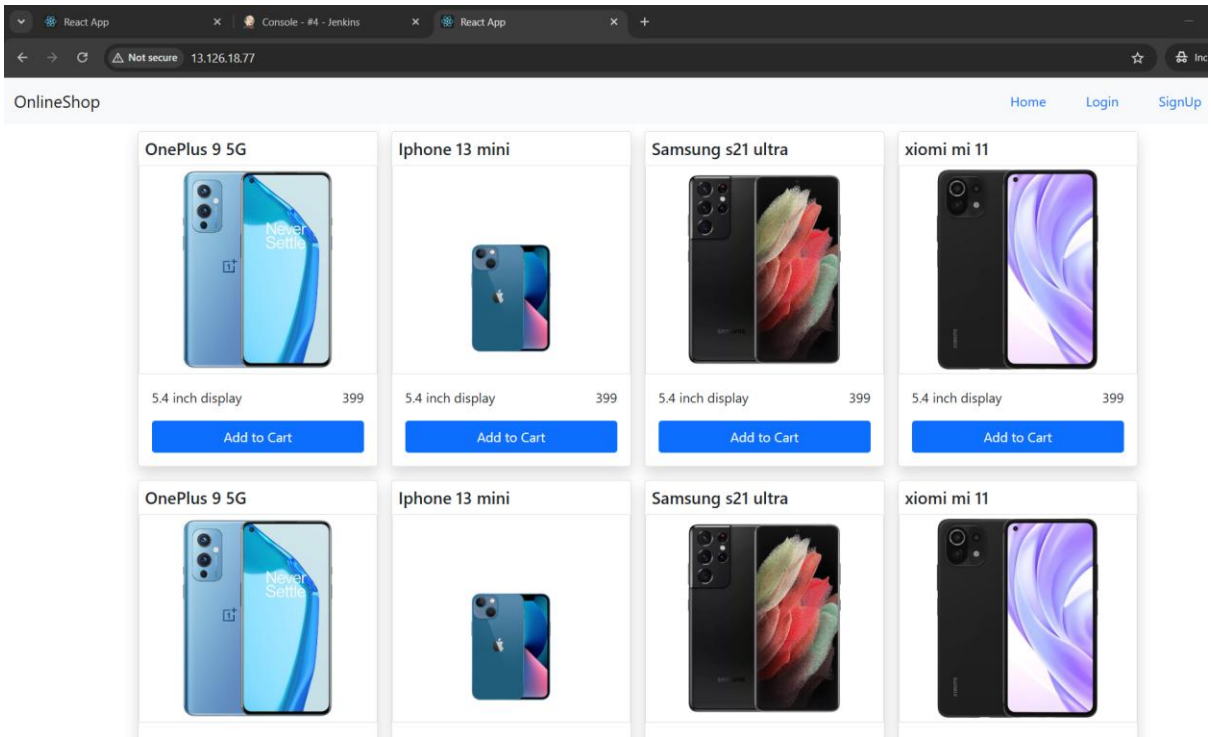


Application launched via EC2:



```
[root@ip-172-31-43-91 ~]# docker ps
CONTAINER ID   IMAGE                                  COMMAND                  CREATED          STATUS                    PORTS
NAMES
988ffca3b872   louislam/uptime-kuma                   "/usr/bin/dumb-init …"   23 minutes ago   Up 23 minutes (healthy)   0.0.0.0:3001->3001/tcp, :::3001->3001/tcp
uptime-kuma
200e6a534ec4   tamililan/ecommerce-privaterepo:latest   "/docker-entrypoint.…"   38 minutes ago   Up 37 minutes             0.0.0.0:80->80/tcp, :::80->80/tcp
app-container
[root@ip-172-31-43-91 ~]# docker images
REPOSITORY                        TAG       IMAGE ID       CREATED          SIZE
ecommerceapp                      dev       79627c4b059d   40 minutes ago   64.7MB
ecommerceapp                      prod      79627c4b059d   40 minutes ago   64.7MB
tamililan/ecommerce-privaterepo   latest    79627c4b059d   40 minutes ago   64.7MB
tamililan/ecommerce-publicrepo    dev       79627c4b059d   40 minutes ago   64.7MB
louislam/uptime-kuma              latest    f48d816cb746   4 months ago     448MB
[root@ip-172-31-43-91 ~]#
```

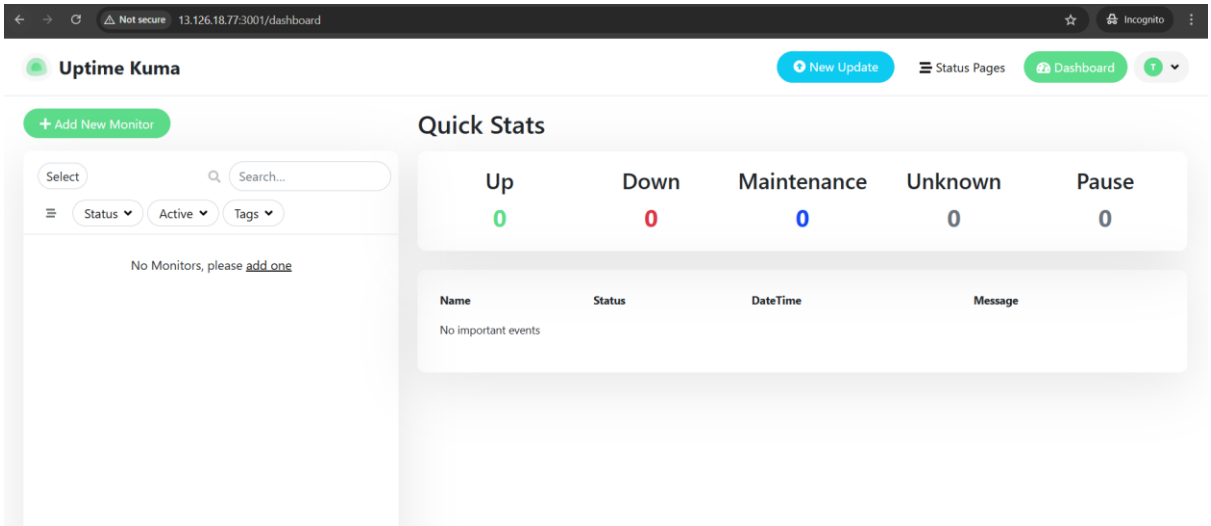
Verified application in browser with EC2 IP:



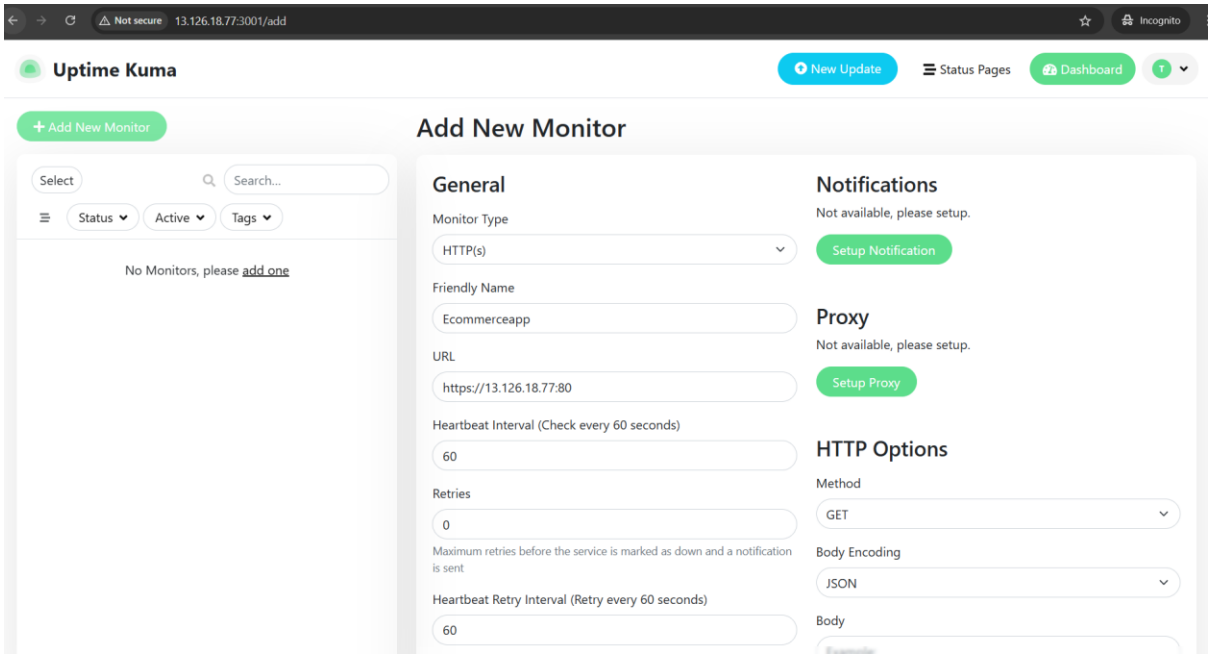
Installed kuma in EC2 :

```
[root@ip-172-31-43-91 ~]# docker run -d -p 3001:3001 --name uptime-kuma louislam/uptime-kuma
Unable to find image 'louislam/uptime-kuma:latest' locally
latest: Pulling from louislam/uptime-kuma
b338562f40a7: Pull complete
874bf4d93720: Pull complete
b16337721583: Pull complete
7d955db85b85: Pull complete
2c706596bd17: Pull complete
ab019b589bd1: Pull complete
05489cad7e07: Pull complete
2da5495de763: Pull complete
0009b3591d8d: Pull complete
b5cfa7561d78: Pull complete
7607ceb74d22: Pull complete
4f4fb700ef54: Pull complete
ad1253342b11: Pull complete
Digest: sha256:3d632903e6af34139a37f18055c4f1bfd9b7205ae1138f1e5e8940ddc1d176f9
Status: Downloaded newer image for louislam/uptime-kuma:latest
988ffca3b8726fc31f8edd7dd13f4ad6f221320e5ecd3cf0c079fb4fd1d36013
[root@ip-172-31-43-91 ~]#
```

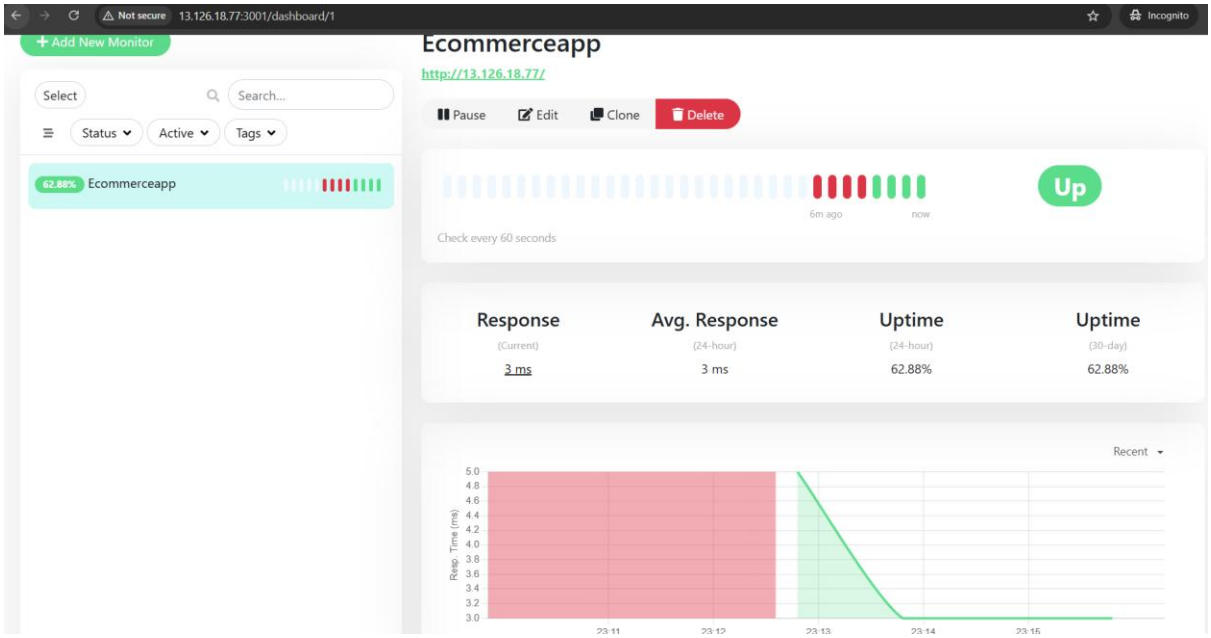
Launched Dashboard in browser:

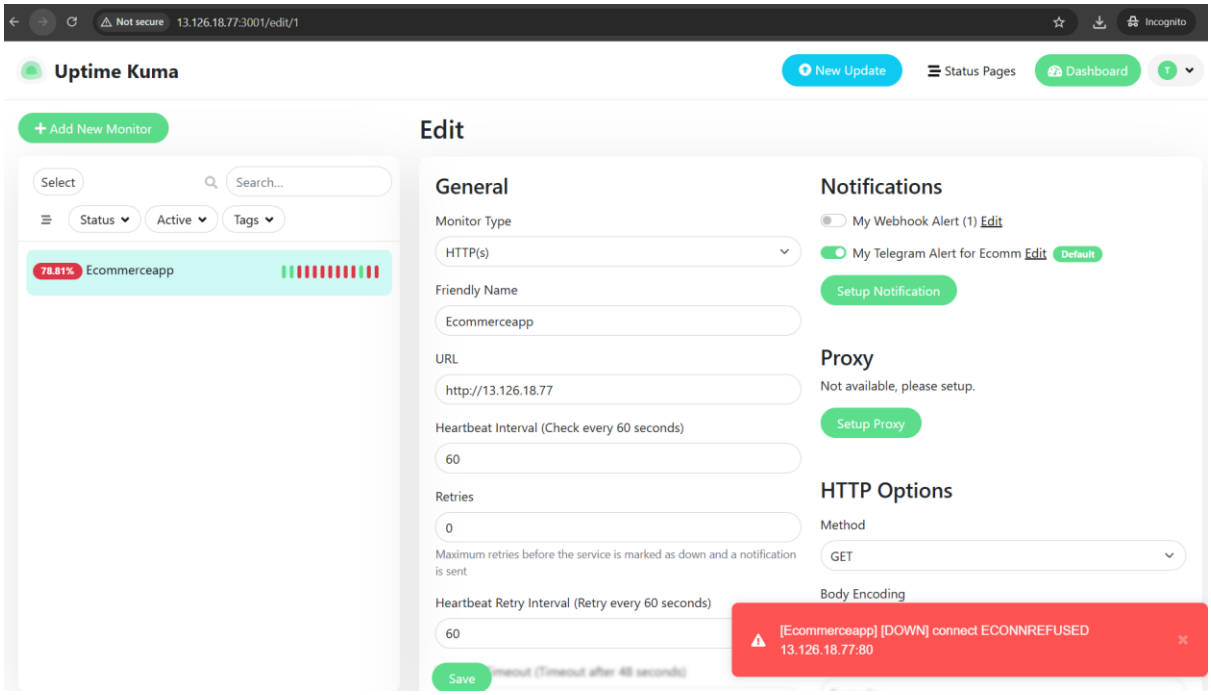


Configured Monitoring for EC2 hosted app:

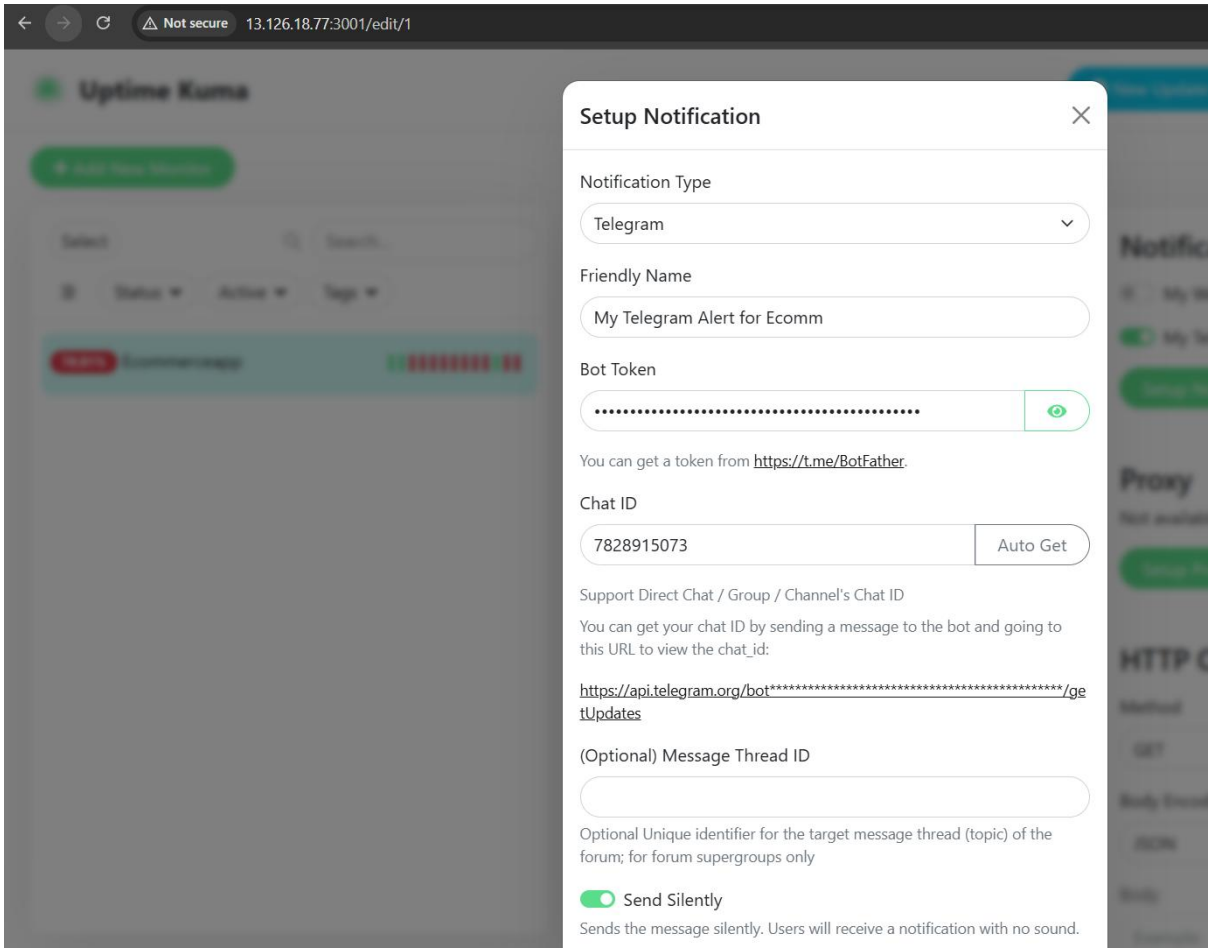


Configured alert in kuma:





Created Notification alert in kumma:



Chat ID

7828915073 | Auto Get

Support Direct Chat / Group / Channel's Chat ID

You can get your chat ID by sending a message to the bot and going to this URL to view the chat_id:

https://api.telegram.org/bot**********/getUpdates

(Optional) Message Thread ID

Optional Unique identifier for the target message thread (topic) of the forum; for forum supergroups only

Send Silently

Sends the message silently. Users will receive a notification with no sound.

Protect Forwarding/Saving

If enabled, the bot messages in Telegram will be protected from forwarding and saving.

Default enabled

This notification will be enabled by default for new monitors. You can still disable the notification separately for each monitor.

Apply on all existing monitors

Delete | Test | Save

```
[root@ip-172-31-43-91 ~]# docker stop 200e6a534ec4
200e6a534ec4
[root@ip-172-31-43-91 ~]# docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED          STATUS                    PORTS                                          NAMES
988ffca3b872   louislam/uptime-kuma   "/usr/bin/dumb-init …"   49 minutes ago   Up 49 minutes (healthy)   0.0.0.0:3001->3001/tcp, :::3001->3001/tcp      uptime-kuma
[root@ip-172-31-43-91 ~]#
```

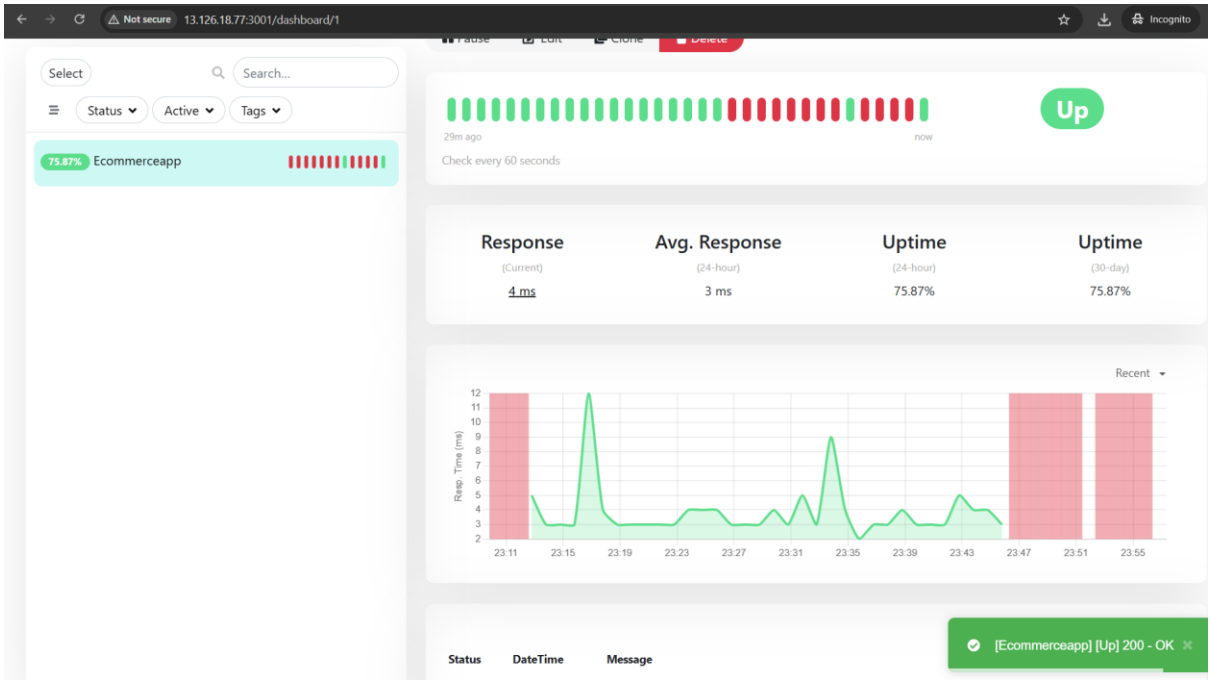
i-02d169a7746720fbb (Ecommserver)

PublicIPs: 13.126.18.77 PrivateIPs: 172.31.43.91

```
[root@ip-172-31-43-91 ~]# docker start 200e6a534ec4
200e6a534ec4
[root@ip-172-31-43-91 ~]# docker ps
CONTAINER ID   IMAGE                                  COMMAND                  CREATED          STATUS                    PORTS
   NAMES
988ffca3b872   louislam/uptime-kuma                   "/usr/bin/dumb-init …"   50 minutes ago   Up 50 minutes (healthy)   0.0.0.0:3001->3001/tcp, :::3001->3001/tc
   uptime-kuma
200e6a534ec4   tamililan/ecommerce-privaterepo:latest "/docker-entrypoint.…"  About an hour ago Up 2 seconds              0.0.0.0:80->80/tcp, :::80->80/tcp
   app-container
[root@ip-172-31-43-91 ~]#
```

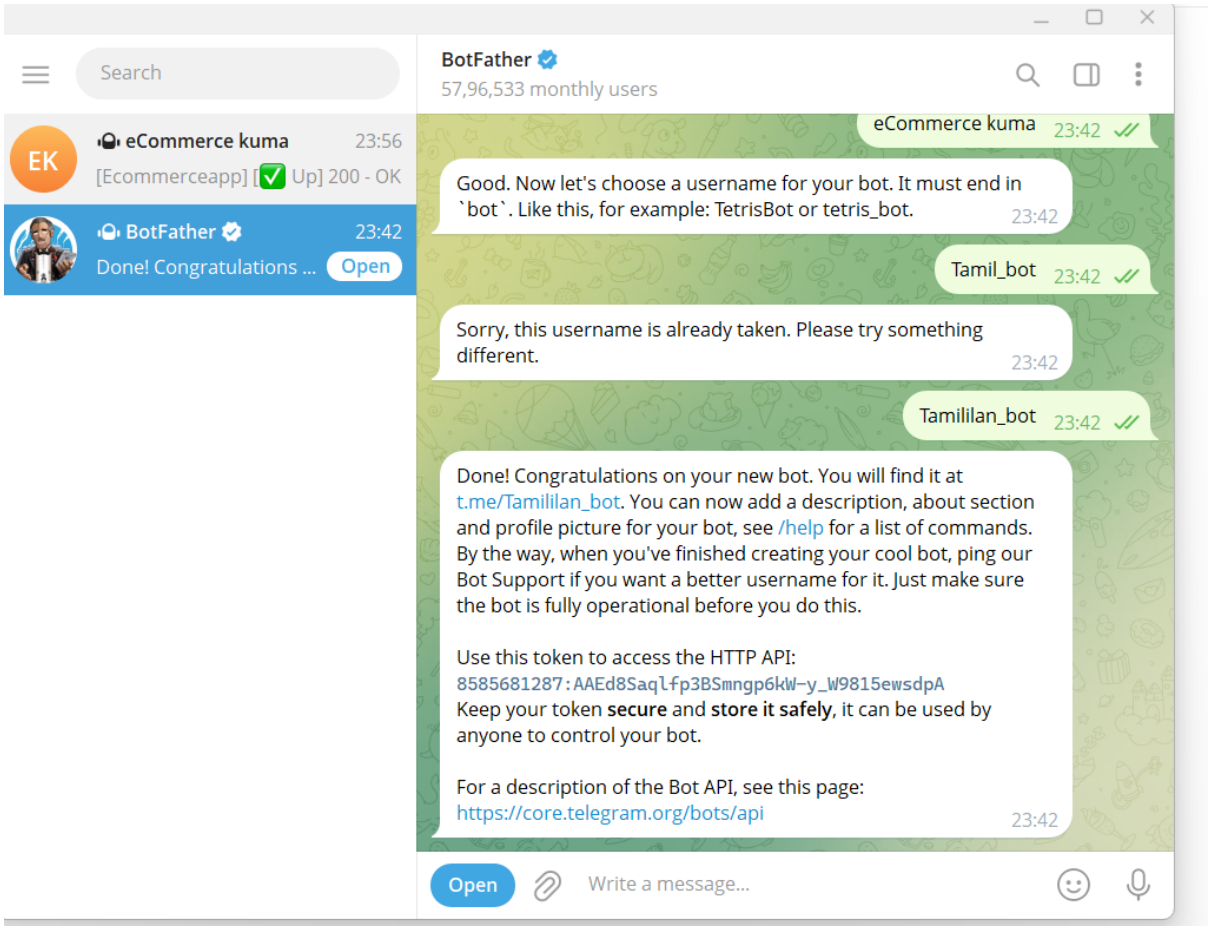
i-02d169a7746720fbb (Ecommserver)

PublicIPs: 13.126.18.77 PrivateIPs: 172.31.43.91

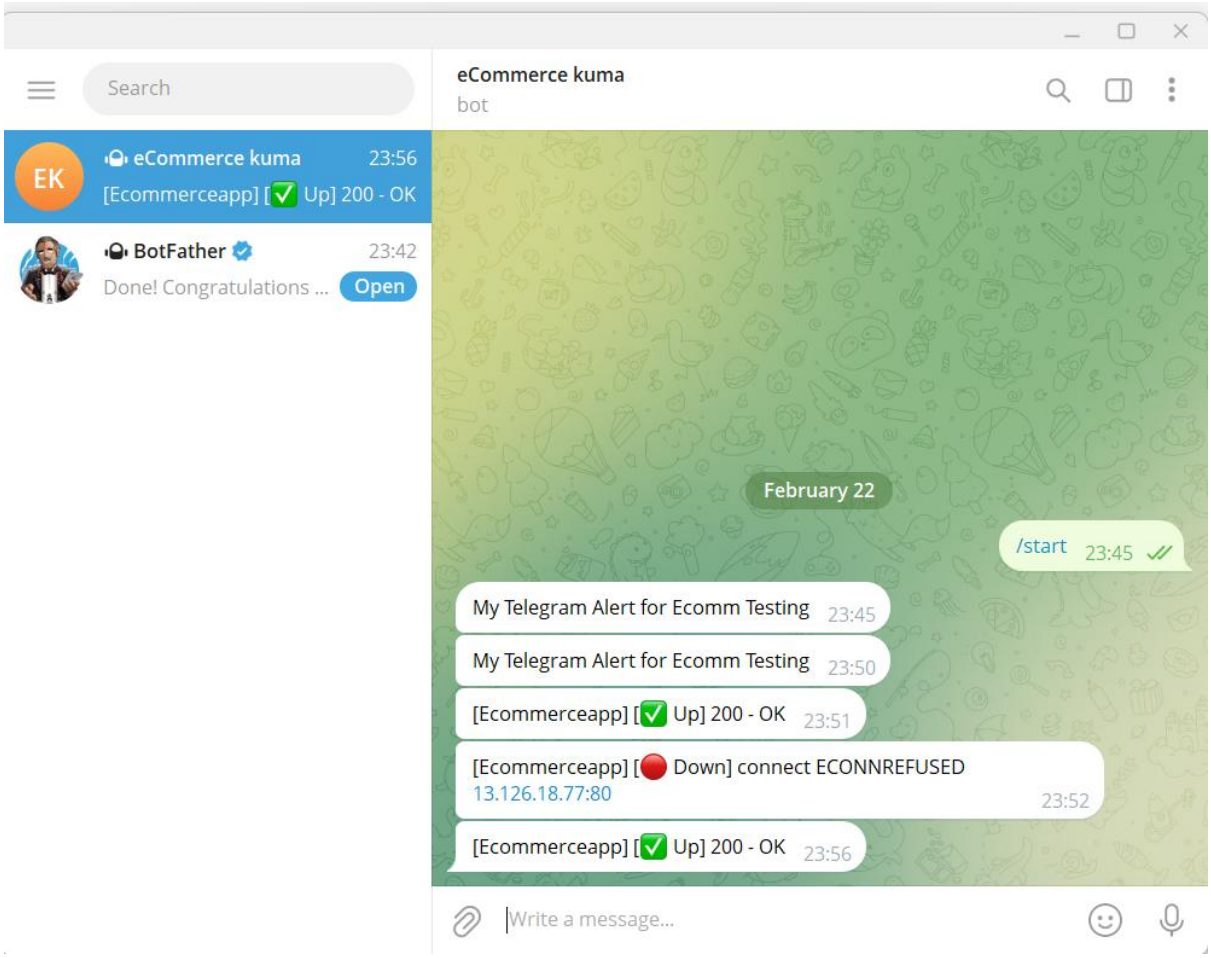


Alert Notification:

Configured alert in Telegram app:



Application alert triggered and validated in Telegram:


Search
eCommerce kuma
bot
EK
eCommerce kuma 23:56
[Ecommerceapp] [✅ Up] 200 - OK
BotFather 23:42
Done! Congratulations ... Open
February 22
/start 23:45
My Telegram Alert for Ecomm Testing 23:45
My Telegram Alert for Ecomm Testing 23:50
[Ecommerceapp] [✅ Up] 200 - OK 23:51
[Ecommerceapp] [🔴 Down] connect ECONNREFUSED 13.126.18.77:80 23:52
[Ecommerceapp] [✅ Up] 200 - OK 23:56
Write a message...