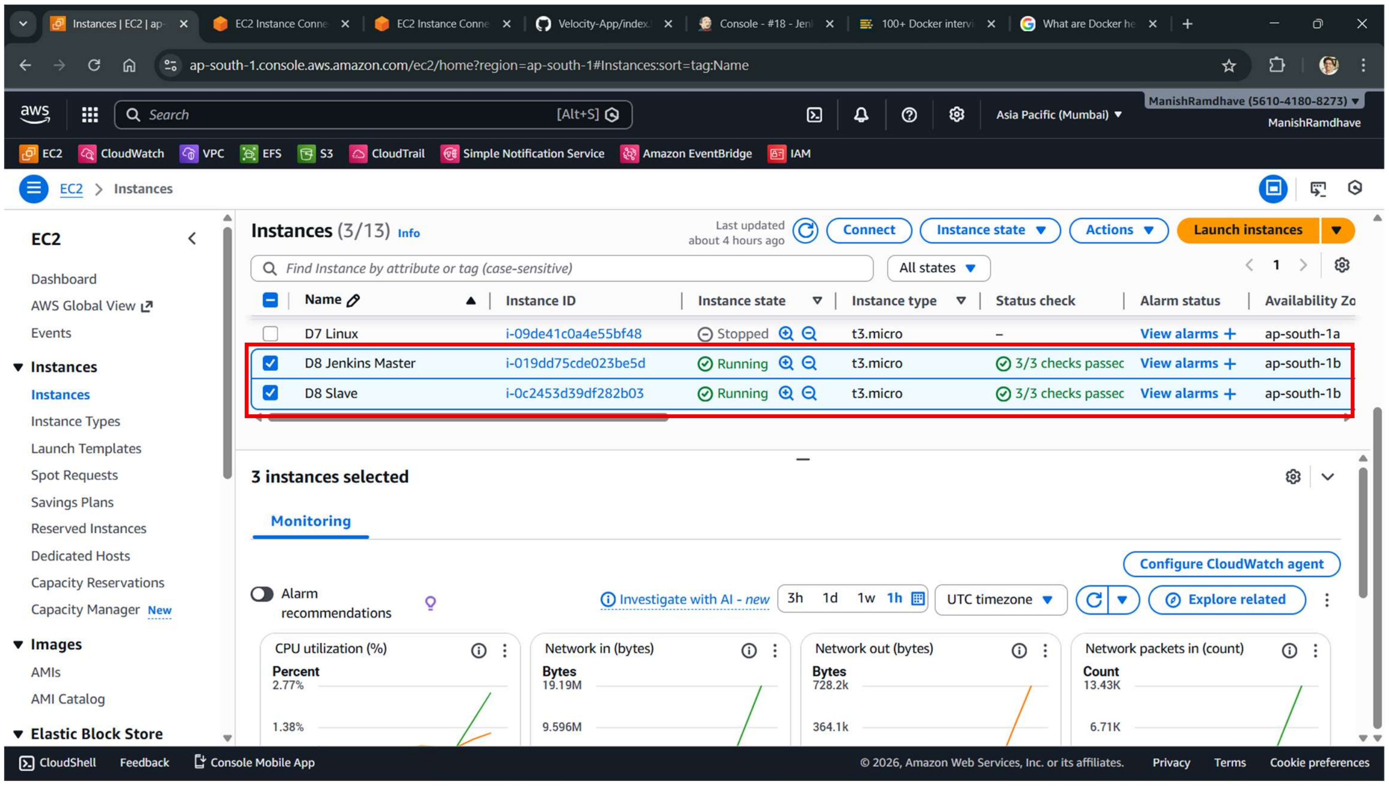
Docker Assignment 8 (Task 2)

Step 1: Launched instances for our **Jenkins Master and Slave:**

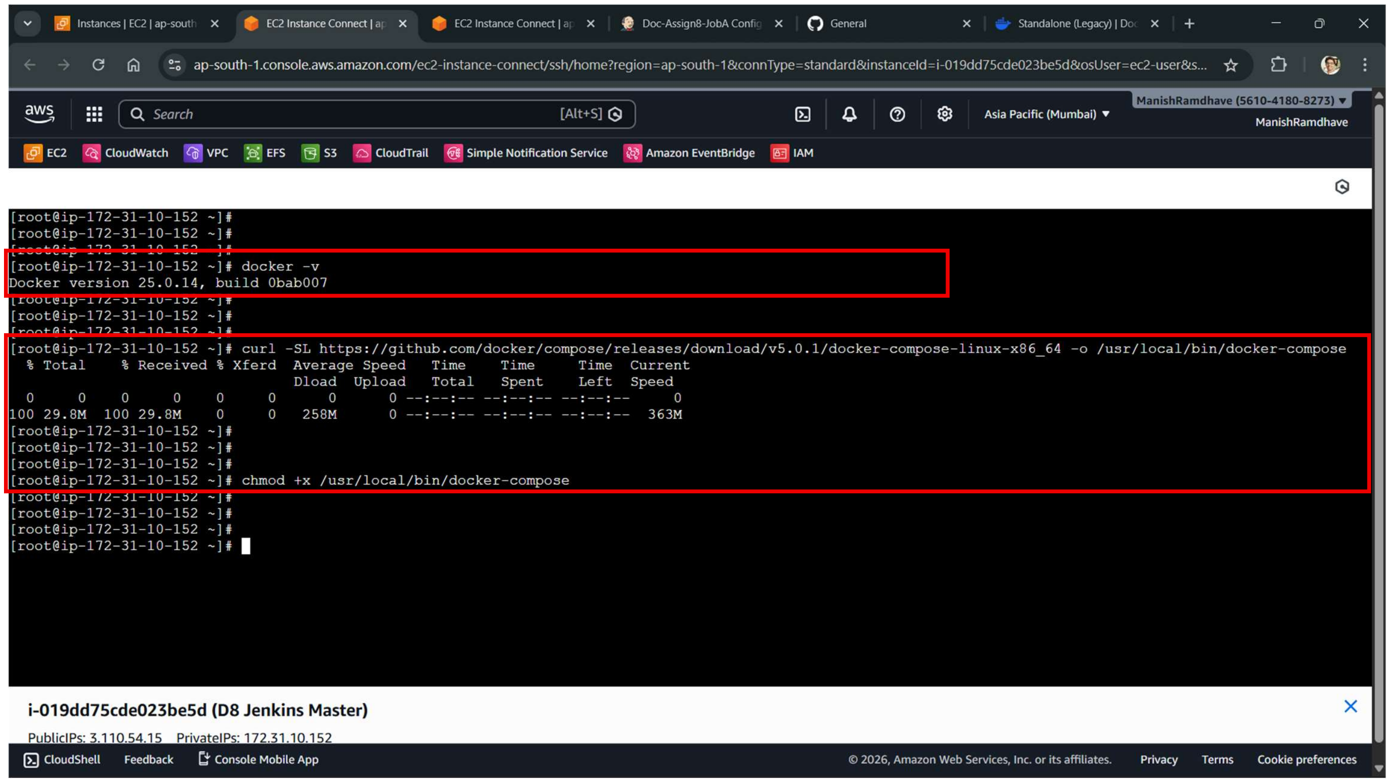


Instances (3/13) Info

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zo
☐	D7 Linux	i-09de41c0a4e55bf48	Stopped	t3.micro	–	View alarms +	ap-south-1a
☑	D8 Jenkins Master	i-019dd75cde023be5d	Running	t3.micro	3/3 checks passec	View alarms +	ap-south-1b
☑	D8 Slave	i-0c2453d39df282b03	Running	t3.micro	3/3 checks passec	View alarms +	ap-south-1b

3 instances selected

Step 2: Installed **Java-17** and **Docker** and **Docker Compose on the Jenkins Master Instance** and **Slave** also:

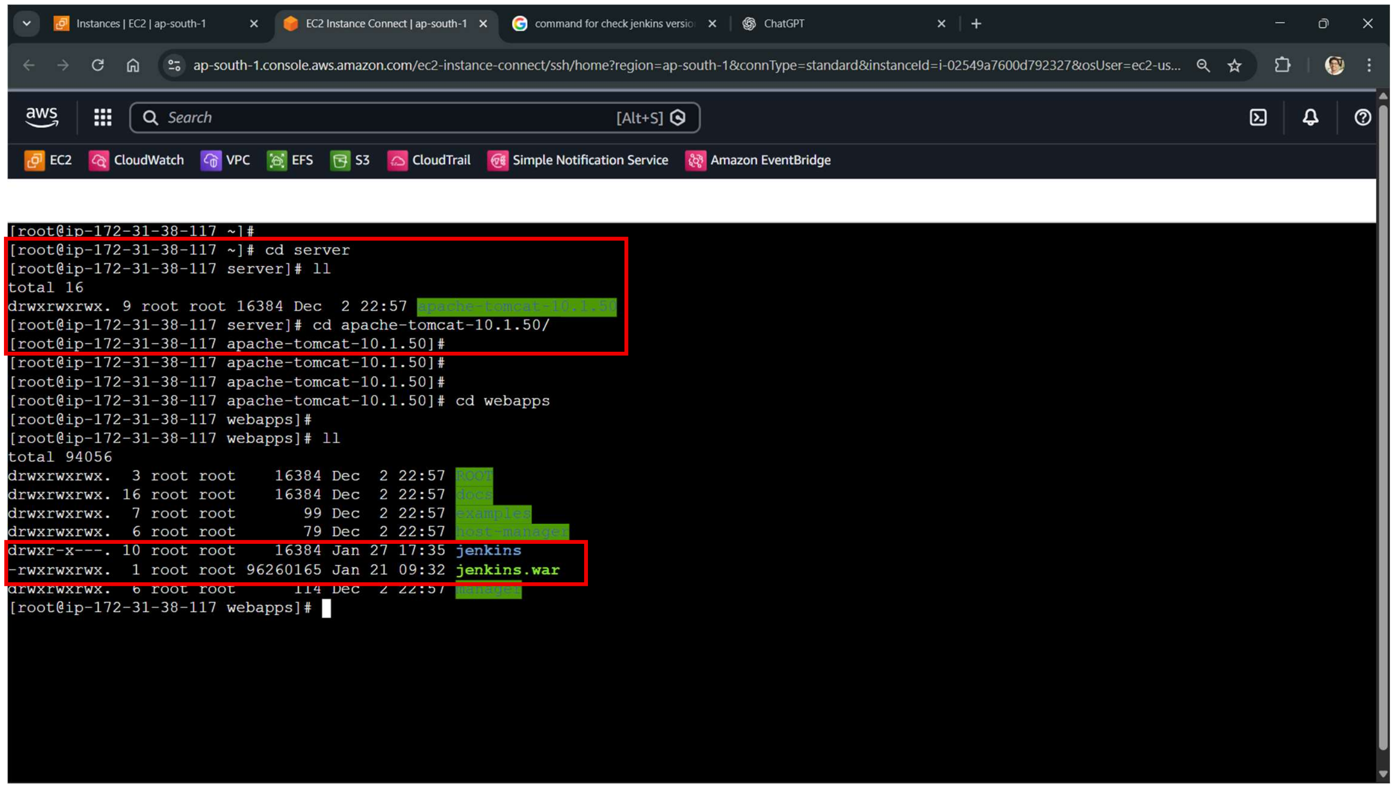


```
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]# docker -v
Docker version 25.0.14, build 0bab007
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]# curl -SL https://github.com/docker/compose/releases/download/v5.0.1/docker-compose-linux-x86_64 -o /usr/local/bin/docker-compose
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0
100 29.8M  100 29.8M    0     0   258M      0 --:--:-- --:--:-- --:--:--  363M
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]# chmod +x /usr/local/bin/docker-compose
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]#
[root@ip-172-31-10-152 ~]# 
```

i-019dd75cde023be5d (D8 Jenkins Master)

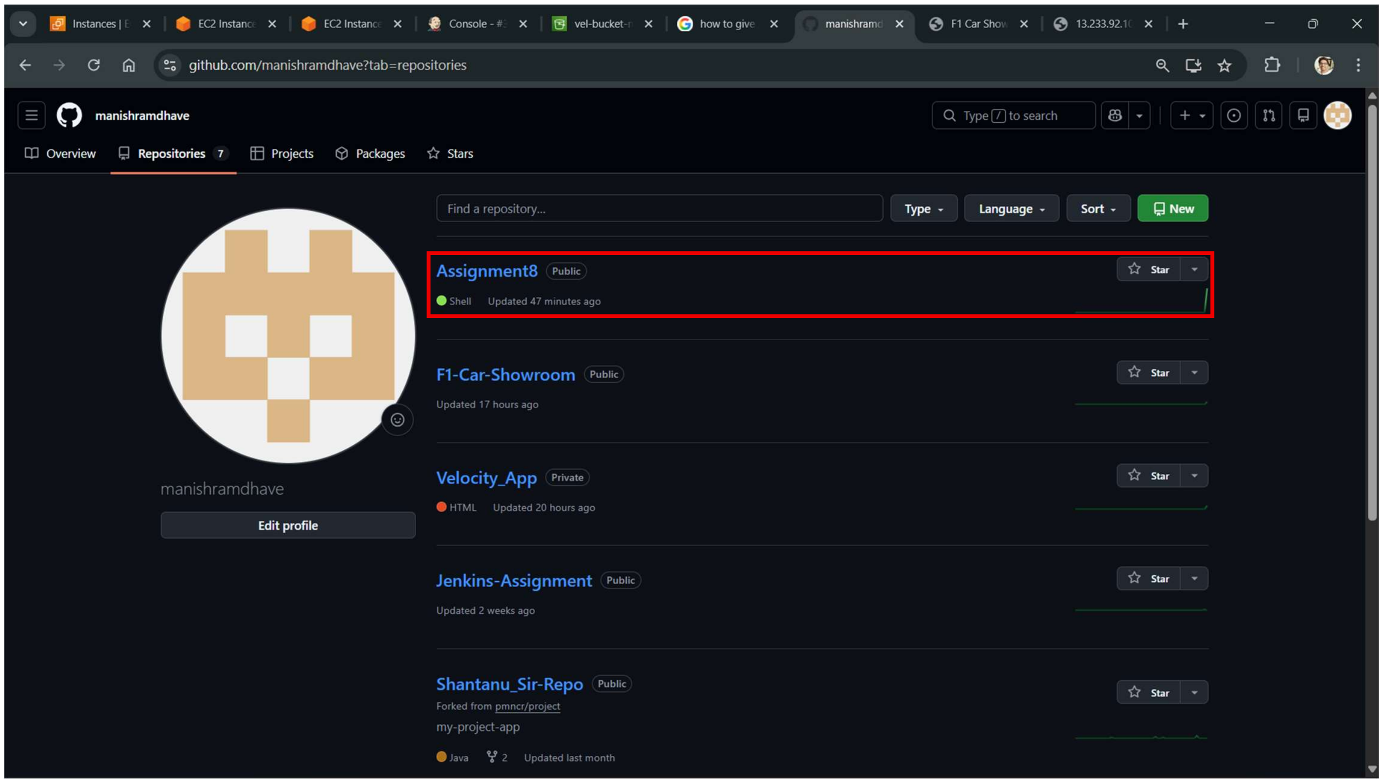
PublicIPs: 3.110.54.15 PrivateIPs: 172.31.10.152

Step 3: Installed **Apache-Tomcat-10 and Jenkins** on the **Jenkins Master Instance**:



```
[root@ip-172-31-38-117 ~]#
[root@ip-172-31-38-117 ~]# cd server
[root@ip-172-31-38-117 server]# ll
total 16
drwxrwxrwx. 9 root root 16384 Dec  2 22:57 apache-tomcat-10.1.50
[root@ip-172-31-38-117 server]# cd apache-tomcat-10.1.50/
[root@ip-172-31-38-117 apache-tomcat-10.1.50]#
[root@ip-172-31-38-117 apache-tomcat-10.1.50]#
[root@ip-172-31-38-117 apache-tomcat-10.1.50]#
[root@ip-172-31-38-117 apache-tomcat-10.1.50]# cd webapps
[root@ip-172-31-38-117 webapps]#
[root@ip-172-31-38-117 webapps]# ll
total 94056
drwxrwxrwx.  3 root root    16384 Dec  2 22:57 ROOT
drwxrwxrwx. 16 root root    16384 Dec  2 22:57 docs
drwxrwxrwx.  7 root root       99 Dec  2 22:57 examples
drwxrwxrwx.  6 root root       79 Dec  2 22:57 host-manager
drwxr-x---. 10 root root    16384 Jan 27 17:35 jenkins
-rwxrwxrwx.  1 root root 96260165 Jan 21 09:32 jenkins.war
drwxrwxrwx.  6 root root      114 Dec  2 22:57 manager
[root@ip-172-31-38-117 webapps]#
```

Step 4: Made a Private Repository named **'Assignment8'** in GitHub account:



github.com/manishramdhave?tab=repositories

manishramdhave

Overview | Repositories 7 | Projects | Packages | Stars

Find a repository... | Type | Language | Sort | New

Assignment8 Public
Shell · Updated 47 minutes ago

F1-Car-Showroom Public
Updated 17 hours ago

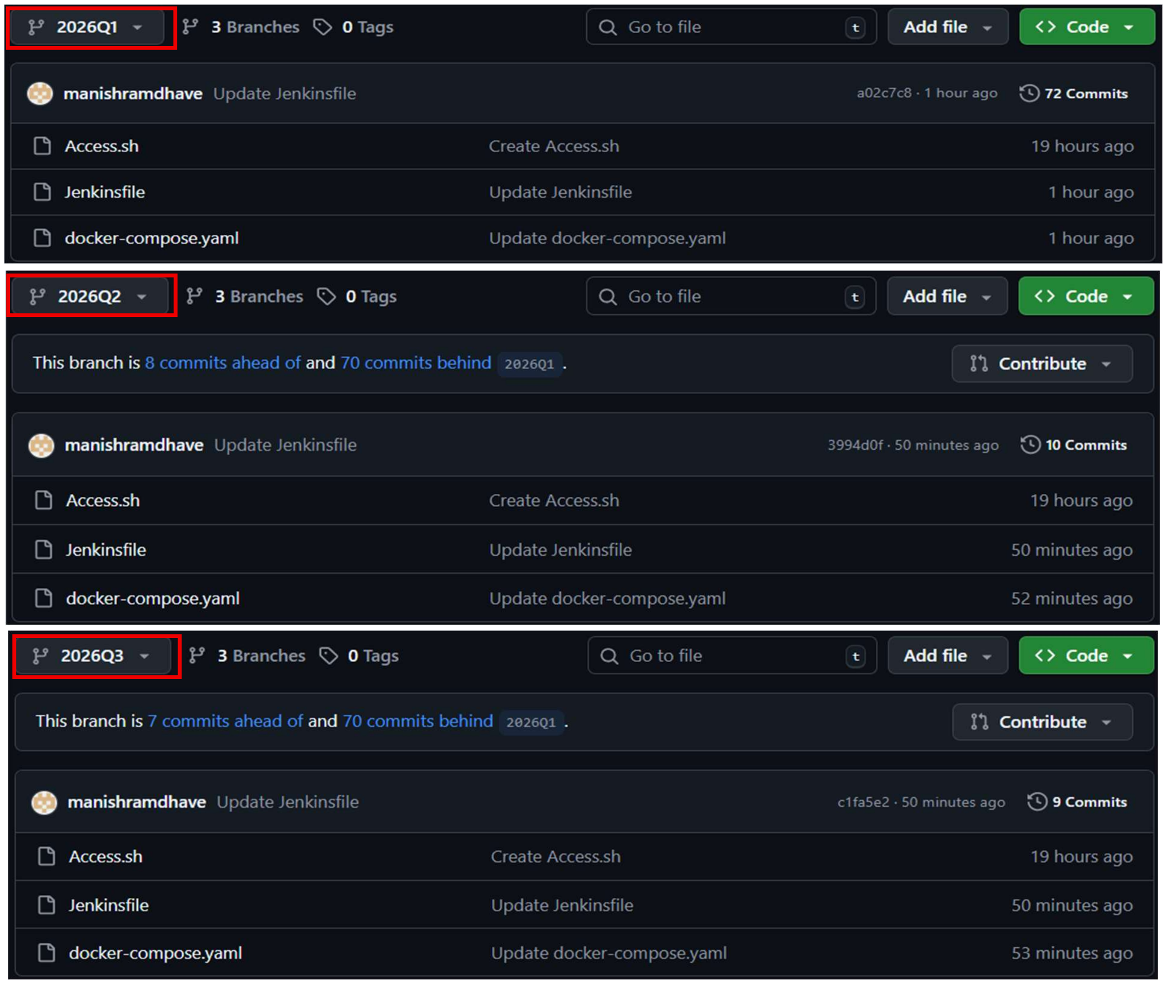
Velocity_App Private
HTML · Updated 20 hours ago

Jenkins-Assignment Public
Updated 2 weeks ago

Shantanu_Sir-Repo Public
Forked from pmncr/project
my-project-app
Java · 2 · Updated last month

manishramdhave
Edit profile

Step 5: Created three branches, **2026Q1, 2026Q2 and 2026Q3** in the '**Velocity-App**' Repository and pushed **three different 'Access.sh', 'Jenkinsfile'and 'docker-compose.yaml'** files in all the respective branches:


2026Q1 · 3 Branches · 0 Tags · Go to file · Add file · Code

manishramdhave Update Jenkinsfile · a02c7c8 · 1 hour ago · 72 Commits

Access.sh	Create Access.sh	19 hours ago
Jenkinsfile	Update Jenkinsfile	1 hour ago
docker-compose.yaml	Update docker-compose.yaml	1 hour ago

2026Q2 · 3 Branches · 0 Tags · Go to file · Add file · Code

This branch is 8 commits ahead of and 70 commits behind 2026Q1 . Contribute

manishramdhave Update Jenkinsfile · 3994d0f · 50 minutes ago · 10 Commits

Access.sh	Create Access.sh	19 hours ago
Jenkinsfile	Update Jenkinsfile	50 minutes ago
docker-compose.yaml	Update docker-compose.yaml	52 minutes ago

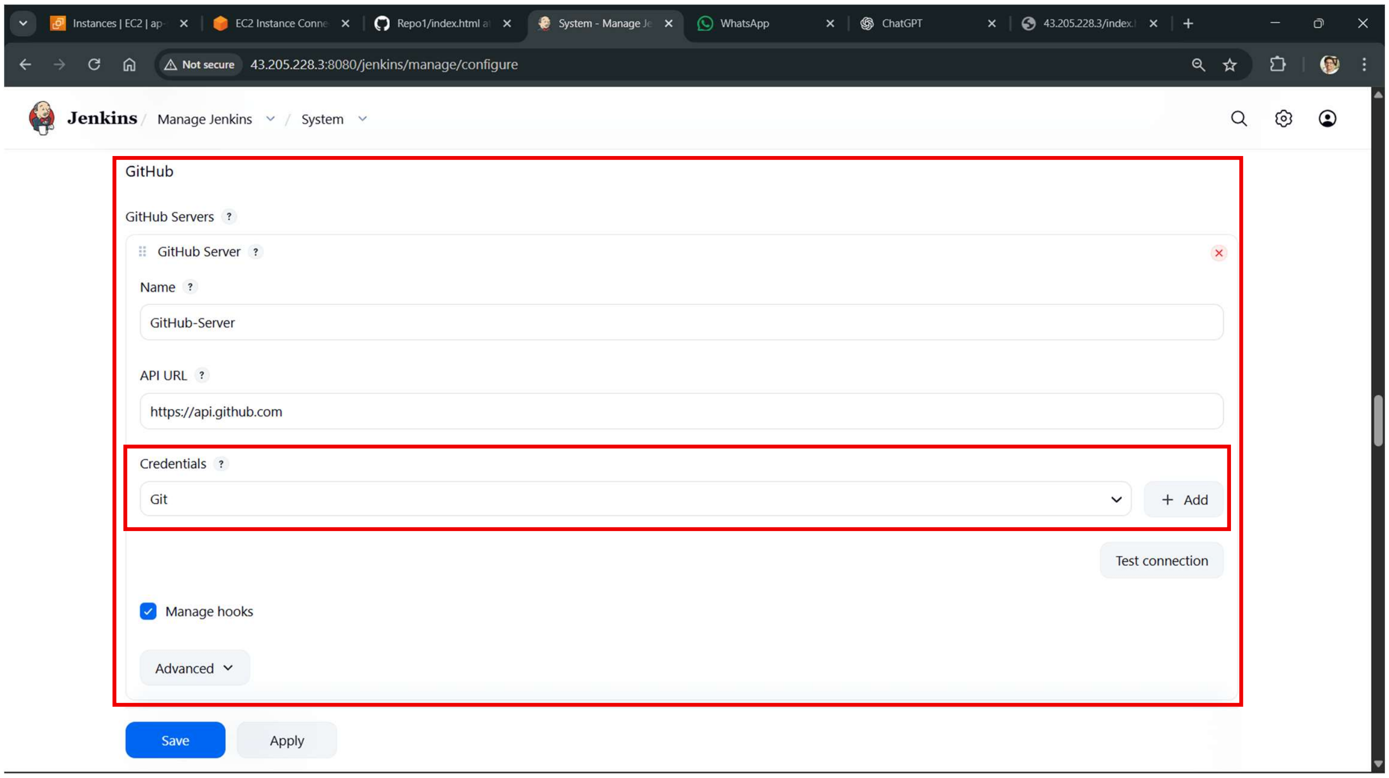
2026Q3 · 3 Branches · 0 Tags · Go to file · Add file · Code

This branch is 7 commits ahead of and 70 commits behind 2026Q1 . Contribute

manishramdhave Update Jenkinsfile · c1fa5e2 · 50 minutes ago · 9 Commits

Access.sh	Create Access.sh	19 hours ago
Jenkinsfile	Update Jenkinsfile	50 minutes ago
docker-compose.yaml	Update docker-compose.yaml	53 minutes ago

Step 6: Created an **API Connection between Jenkins to GitHub** Repositories in 'Manage Jenkins' by creating **a Secret Text (Credential)** using a GitHub Token in Jenkins:



43.205.228.3:8080/jenkins/manage/configure

GitHub

GitHub Servers

GitHub Server

Name: GitHub-Server

API URL: https://api.github.com

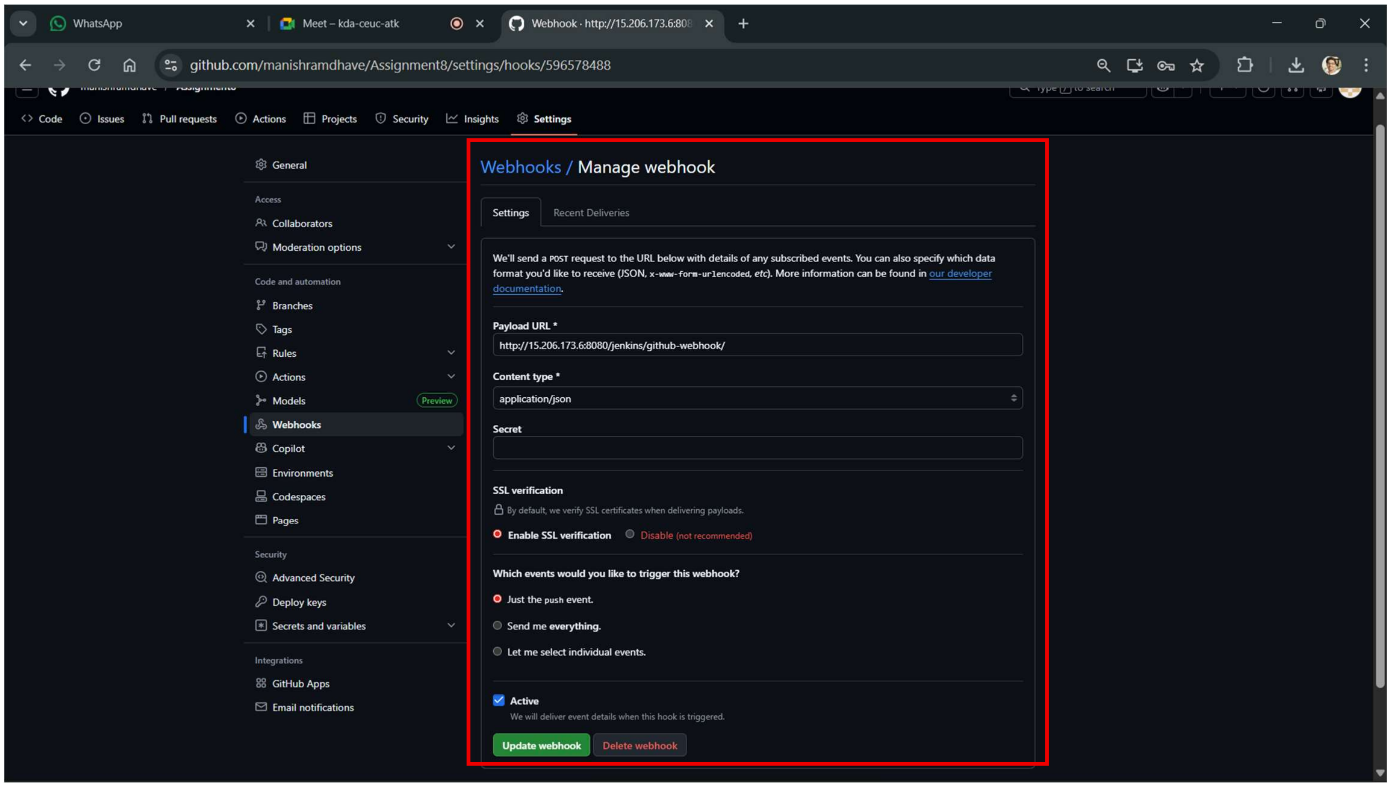
Credentials: Git · + Add

Test connection

☑ Manage hooks

Advanced

Step 7: Created a **API Connection by creating a 'GitHub Webhook'** by using the **Payload URL** of the **Jenkins Console**:


github.com/manishramdhave/Assignment8/settings/hooks/596578488

Webhooks / Manage webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in our developer documentation.

Payload URL *
http://15.206.173.6:8080/jenkins/github-webhook/

Content type *
application/json

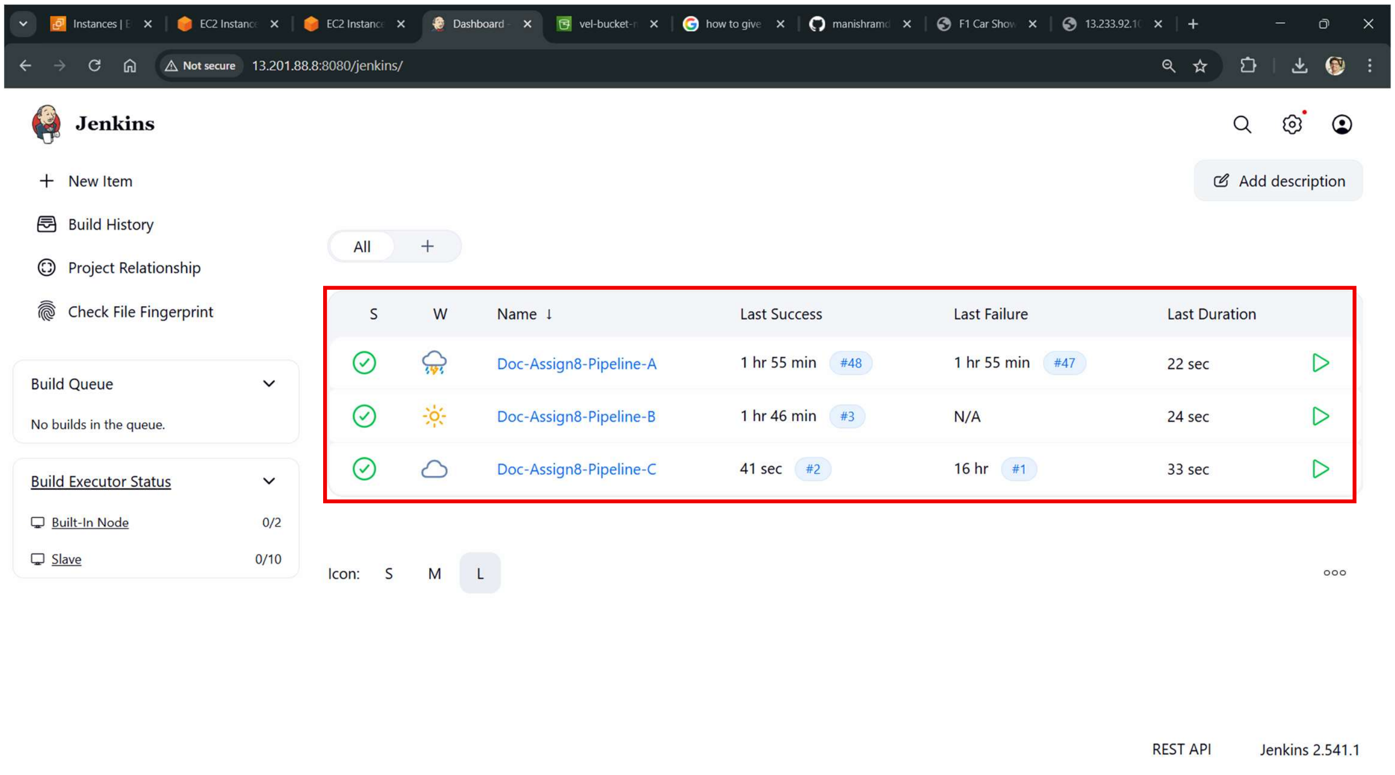
Secret

SSL verification
By default, we verify SSL certificates when delivering payloads.
[✓ Enable SSL verification] Disable (not recommended)

Which events would you like to trigger this webhook?
[✓ Just the push event.]
Send me everything.
Let me select individual events.

[✓ Active]
We will deliver event details when this hook is triggered.

Step 7: Launched the **Jenkins** and created three different **Pipeline Jobs** in it:

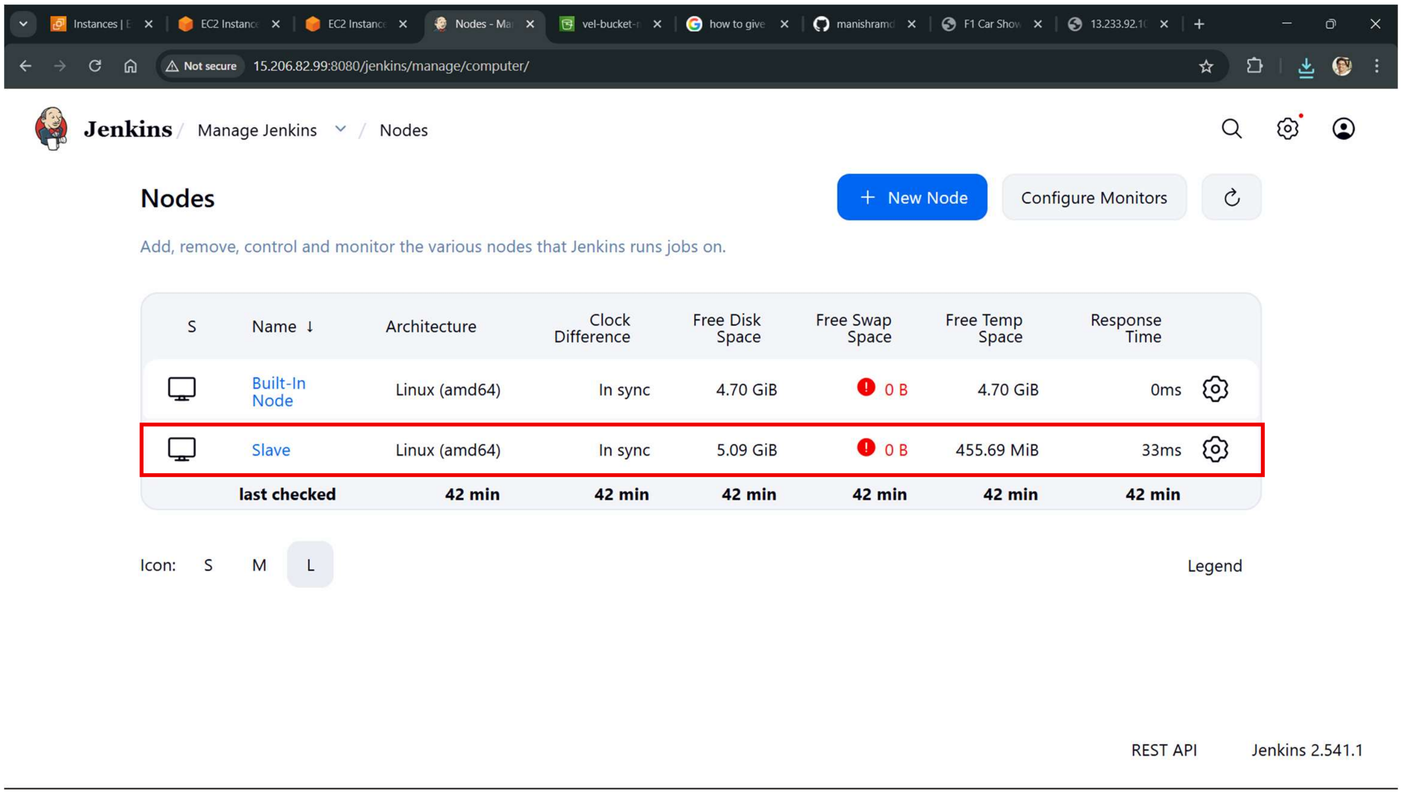

13.201.88.8:8080/jenkins/

S	W	Name ↓	Last Success	Last Failure	Last Duration
✓		Doc-Assign8-Pipeline-A	1 hr 55 min #48	1 hr 55 min #47	22 sec
✓		Doc-Assign8-Pipeline-B	1 hr 46 min #3	N/A	24 sec
✓		Doc-Assign8-Pipeline-C	41 sec #2	16 hr #1	33 sec

Build Queue
No builds in the queue.

Build Executor Status
Built-In Node 0/2
Slave 0/10

Step 8: Created an '**Node' Connection between Jenkins Master and Slave instances** 'Manage Jenkins' by creating **a SSH Username and Key (Credential)** using a Key-Pair and **Manually trusted key-verification Strategy**:


15.206.82.99:8080/jenkins/manage/computer/

Jenkins / Manage Jenkins / Nodes

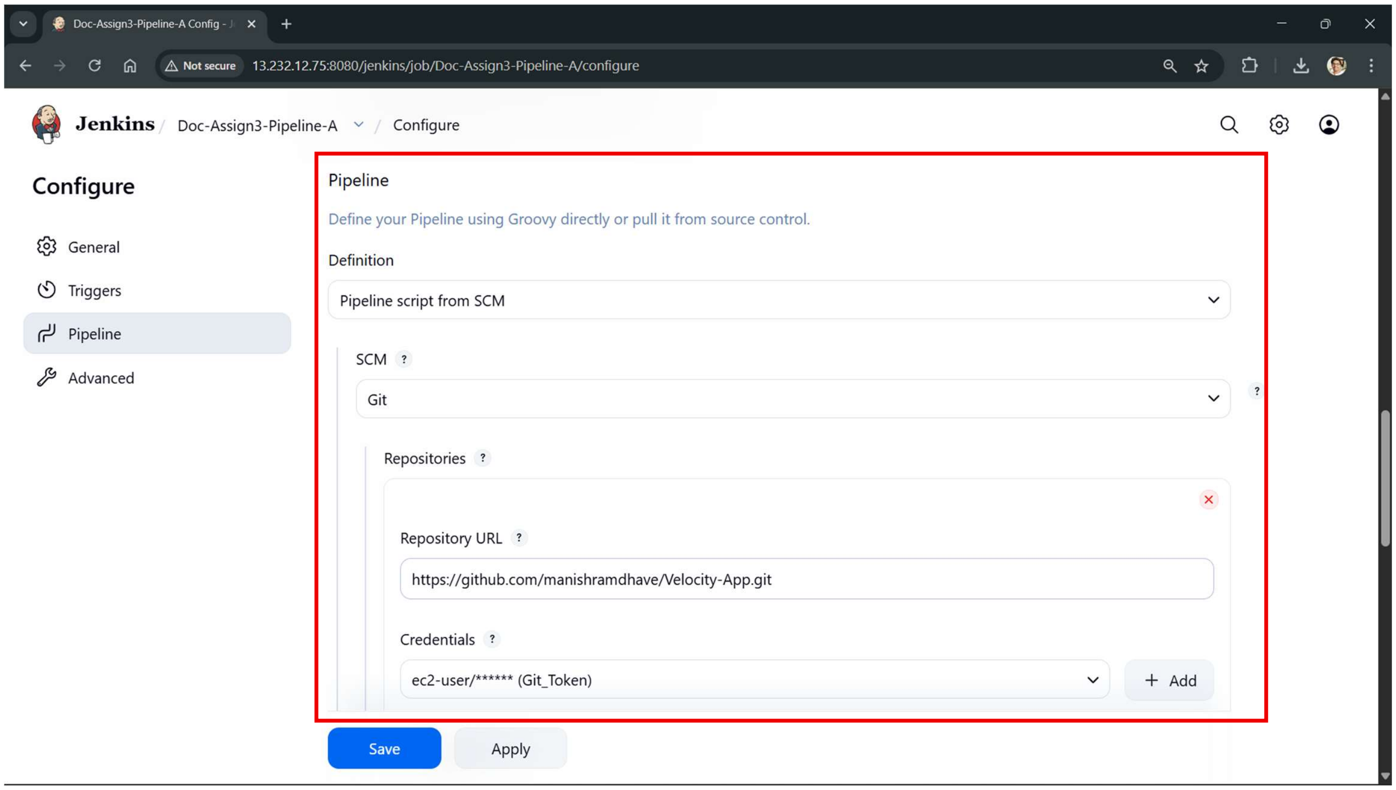
Nodes

Add, remove, control and monitor the various nodes that Jenkins runs jobs on.

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	4.70 GiB	0 B	4.70 GiB	0ms
	Slave	Linux (amd64)	In sync	5.09 GiB	0 B	455.69 MiB	33ms
	last checked	42 min	42 min	42 min	42 min	42 min	42 min

REST API Jenkins 2.541.1

Step 9: Used **'Pipeline script from SCM'** and selected the SCM as a **'Git'** which will follow the Jenkins pipeline script by using the **'Jenkinsfile'** in the repository **in each pipeline job**:


13.232.12.75:8080/jenkins/job/Doc-Assign3-Pipeline-A/configure

Jenkins / Doc-Assign3-Pipeline-A / Configure

Configure

Pipeline

Define your Pipeline using Groovy directly or pull it from source control.

Definition: Pipeline script from SCM

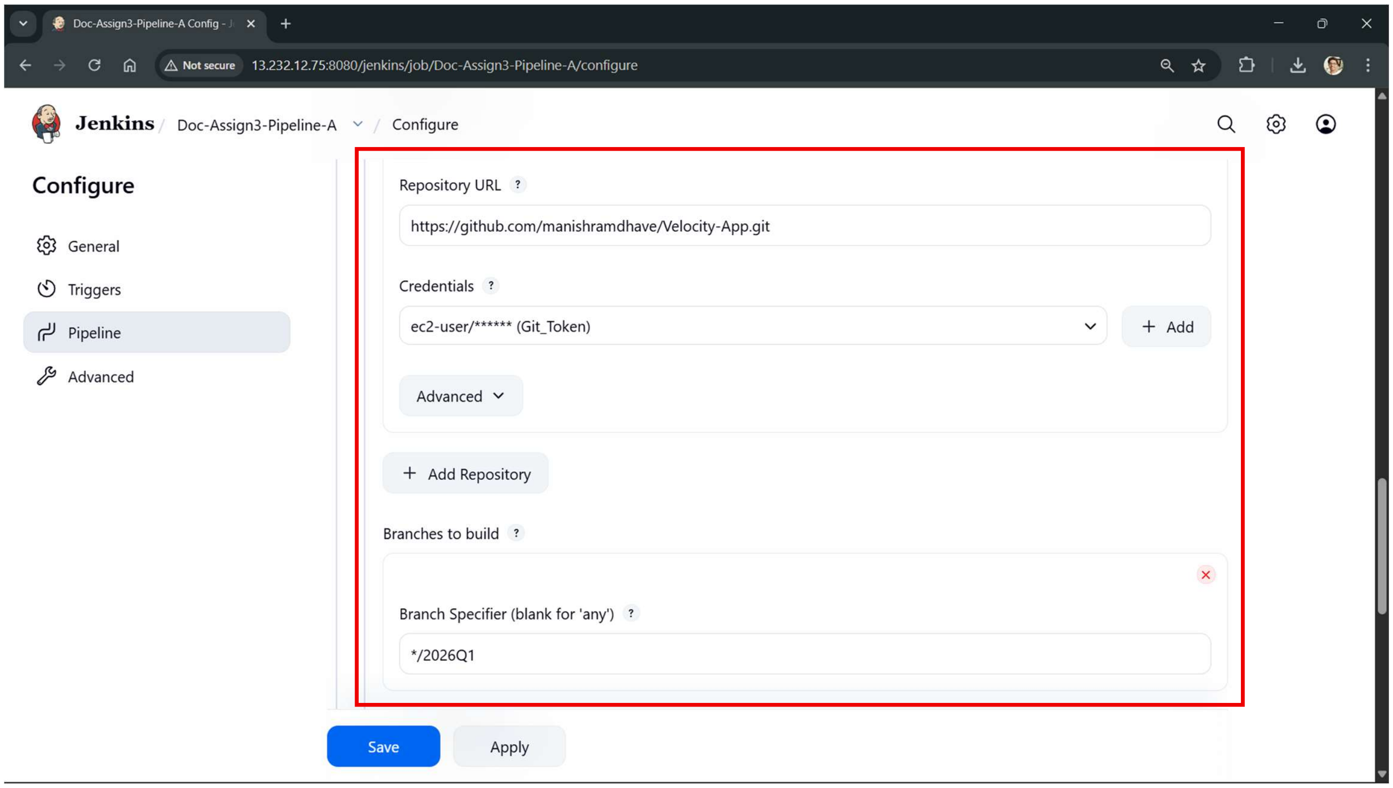
SCM: Git

Repositories

Repository URL: https://github.com/manishramdhave/Velocity-App.git

Credentials: ec2-user/****** (Git_Token)

Step 10: Integrated all Git branches, **2026Q1, 2026Q2 and 2026Q3** with Jenkins by creating ‘Credentials’ by using the Git Token **on all the pipeline** respectively:



13.232.12.75:8080/jenkins/job/Doc-Assign3-Pipeline-A/configure

Jenkins / Doc-Assign3-Pipeline-A / Configure

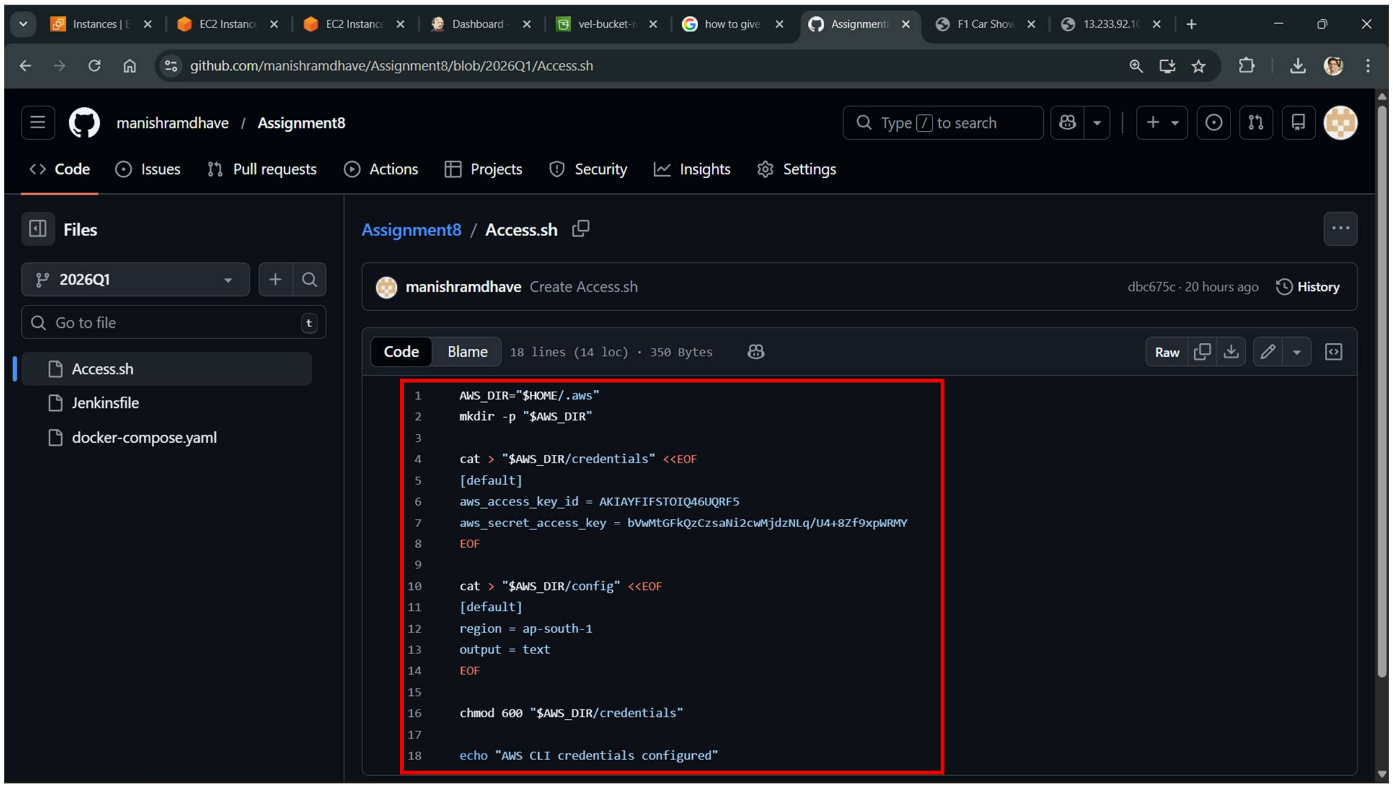
Repository URL: https://github.com/manishramdhave/Velocity-App.git

Credentials: ec2-user/****** (Git_Token)

Branches to build

Branch Specifier (blank for 'any'): */2026Q1

Step 11: Added AWS Configurations (i.e. **Access Key, Secret Key** etc.) in the **‘Access.sh’** file which run by Jenkinsfile command for **AWS CLI command processes in each Branch**:



github.com/manishramdhave/Assignment8/blob/2026Q1/Access.sh

manishramdhave / Assignment8

Branch: 2026Q1 — Files: Access.sh, Jenkinsfile, docker-compose.yaml

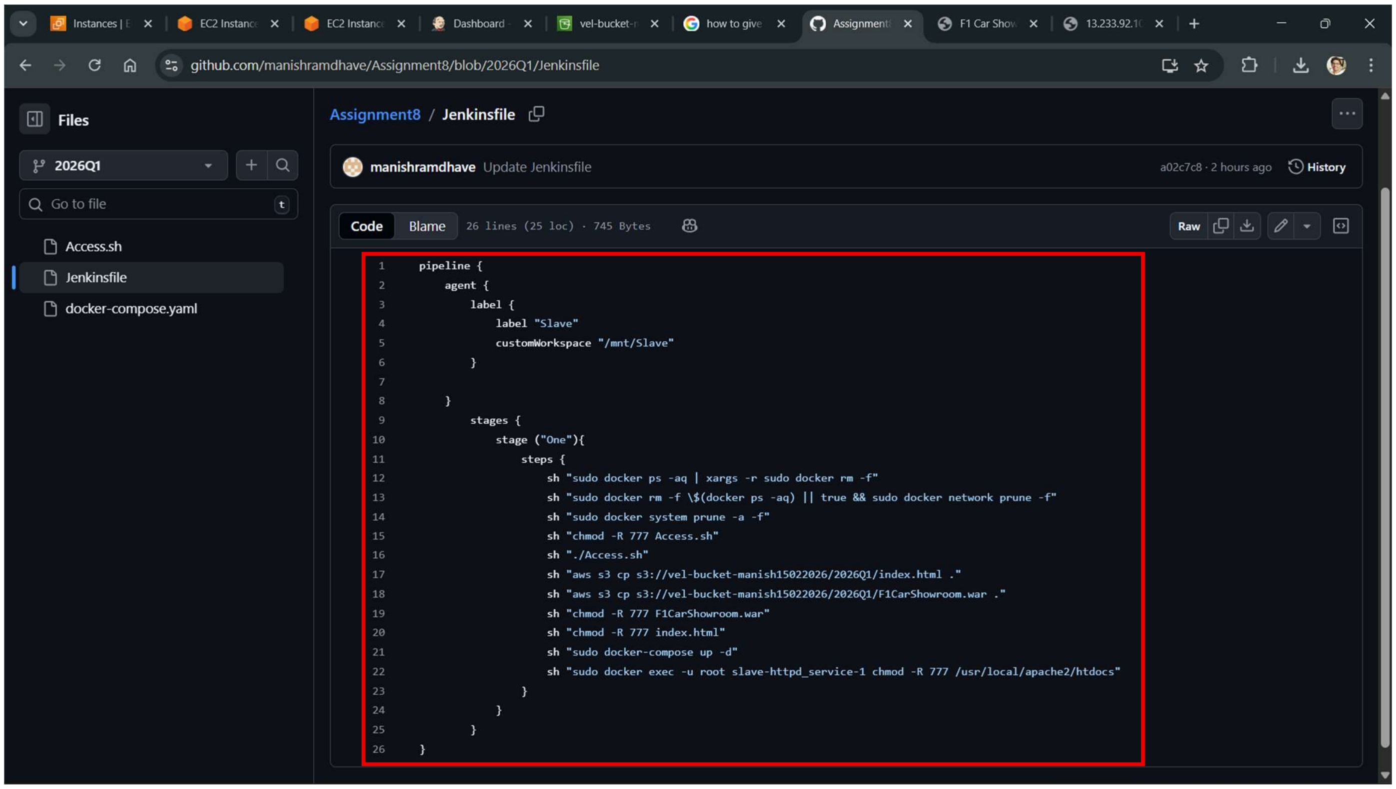
Assignment8 / Access.sh

manishramdhave Create Access.sh — dbc675c · 20 hours ago

18 lines (14 loc) · 350 Bytes

```
AWS_DIR="$HOME/.aws"
mkdir -p "$AWS_DIR"

cat > "$AWS_DIR/credentials" <<EOF
[default]
aws_access_key_id = AKIAYFIFSTOIQ46UQRF5
aws_secret_access_key = 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
EOF

cat > "$AWS_DIR/config" <<EOF
[default]
region = ap-south-1
output = text
EOF

chmod 600 "$AWS_DIR/credentials"

echo "AWS CLI credentials configured"
```

Step 12: Added **'Declarative Pipeline'** in the **'Jennkinsfile'** file which run all the mentioned command below:



github.com/manishramdhave/Assignment8/blob/2026Q1/Jenkinsfile

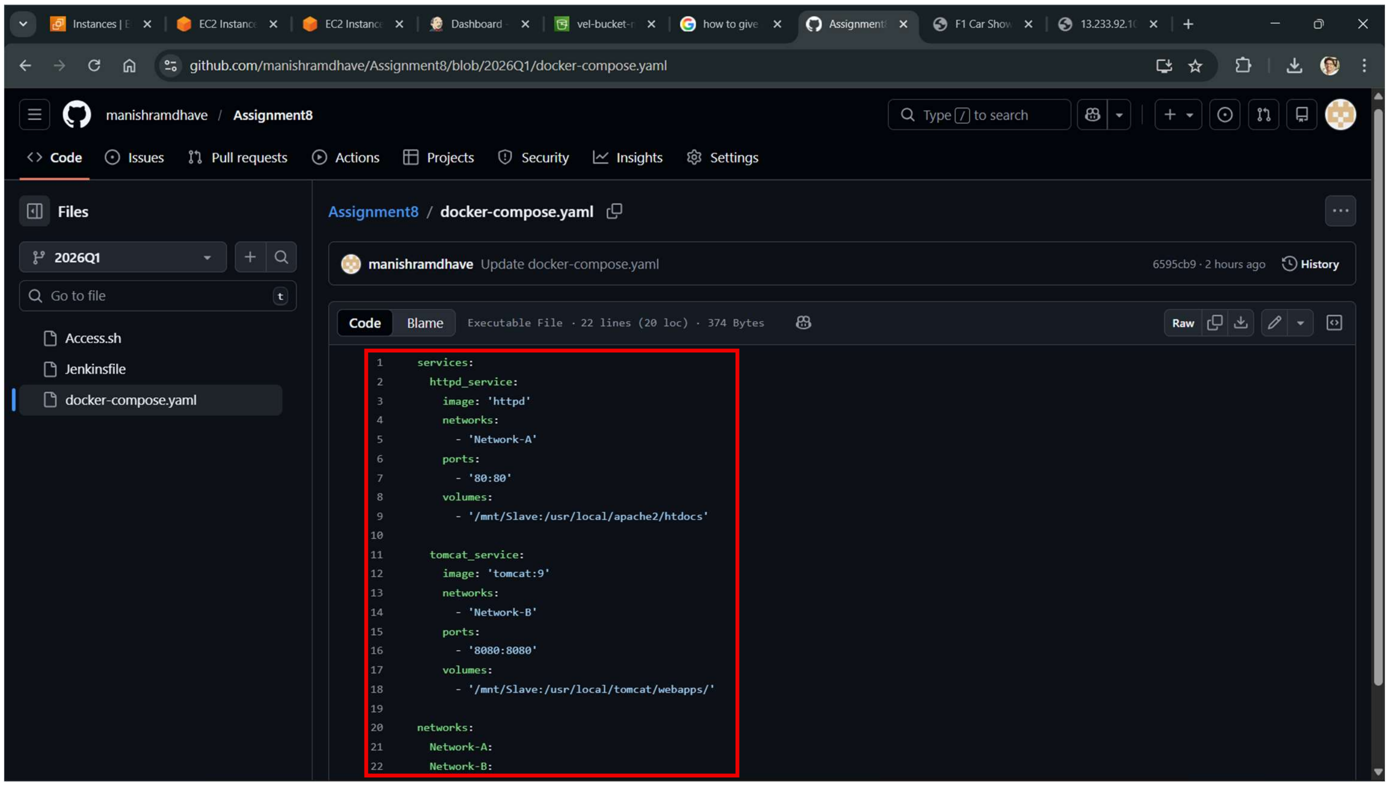
Assignment8 / Jenkinsfile

manishramdhave Update Jenkinsfile a02c7c8 · 2 hours ago History

26 lines (25 loc) · 745 Bytes

```
pipeline {
    agent {
        label {
            label "Slave"
            customWorkspace "/mnt/Slave"
        }

    }
        stages {
            stage ("One"){
                steps {
                    sh "sudo docker ps -aq | xargs -r sudo docker rm -f"
                    sh "sudo docker rm -f \$(docker ps -aq) || true && sudo docker network prune -f"
                    sh "sudo docker system prune -a -f"
                    sh "chmod -R 777 Access.sh"
                    sh "./Access.sh"
                    sh "aws s3 cp s3://vel-bucket-manish15022026/2026Q1/index.html ."
                    sh "aws s3 cp s3://vel-bucket-manish15022026/2026Q1/F1CarShowroom.war ."
                    sh "chmod -R 777 F1CarShowroom.war"
                    sh "chmod -R 777 index.html"
                    sh "sudo docker-compose up -d"
                    sh "sudo docker exec -u root slave-httpd_service-1 chmod -R 777 /usr/local/apache2/htdocs"
                }
            }
        }
}
```

Step 13: Added **'docker-compose.yaml'** file which will run by Jenkinsfile for Container creation in each branch:



github.com/manishramdhave/Assignment8/blob/2026Q1/docker-compose.yaml

manishramdhave / Assignment8

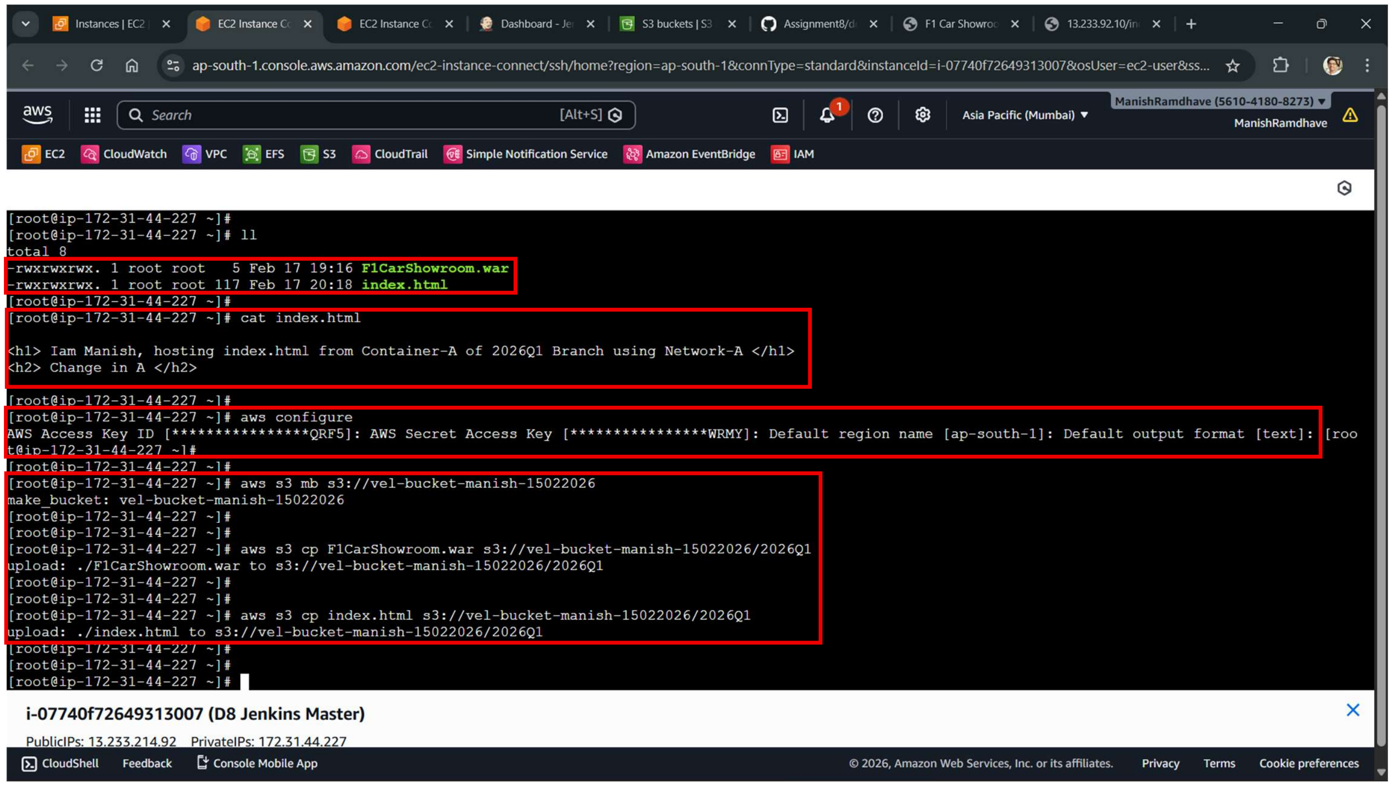
Assignment8 / docker-compose.yaml

manishramdhave Update docker-compose.yaml 6595cb9 · 2 hours ago History

Executable File · 22 lines (20 loc) · 374 Bytes

```
services:
  httpd_service:
    image: 'httpd'
    networks:
      - 'Network-A'
    ports:
      - '80:80'
    volumes:
      - '/mnt/Slave:/usr/local/apache2/htdocs'

  tomcat_service:
    image: 'tomcat:9'
    networks:
      - 'Network-B'
    ports:
      - '8080:8080'
    volumes:
      - '/mnt/Slave:/usr/local/tomcat/webapps/'

networks:
  Network-A:
  Network-B:
```

Step 14: By using the AWS CLI commands, we have uploaded the **'F1CarShowroom.war' and 'index.html' files** in the **'vel-bucket-manish15022026/2026Q1' S3 Bucket folder:**

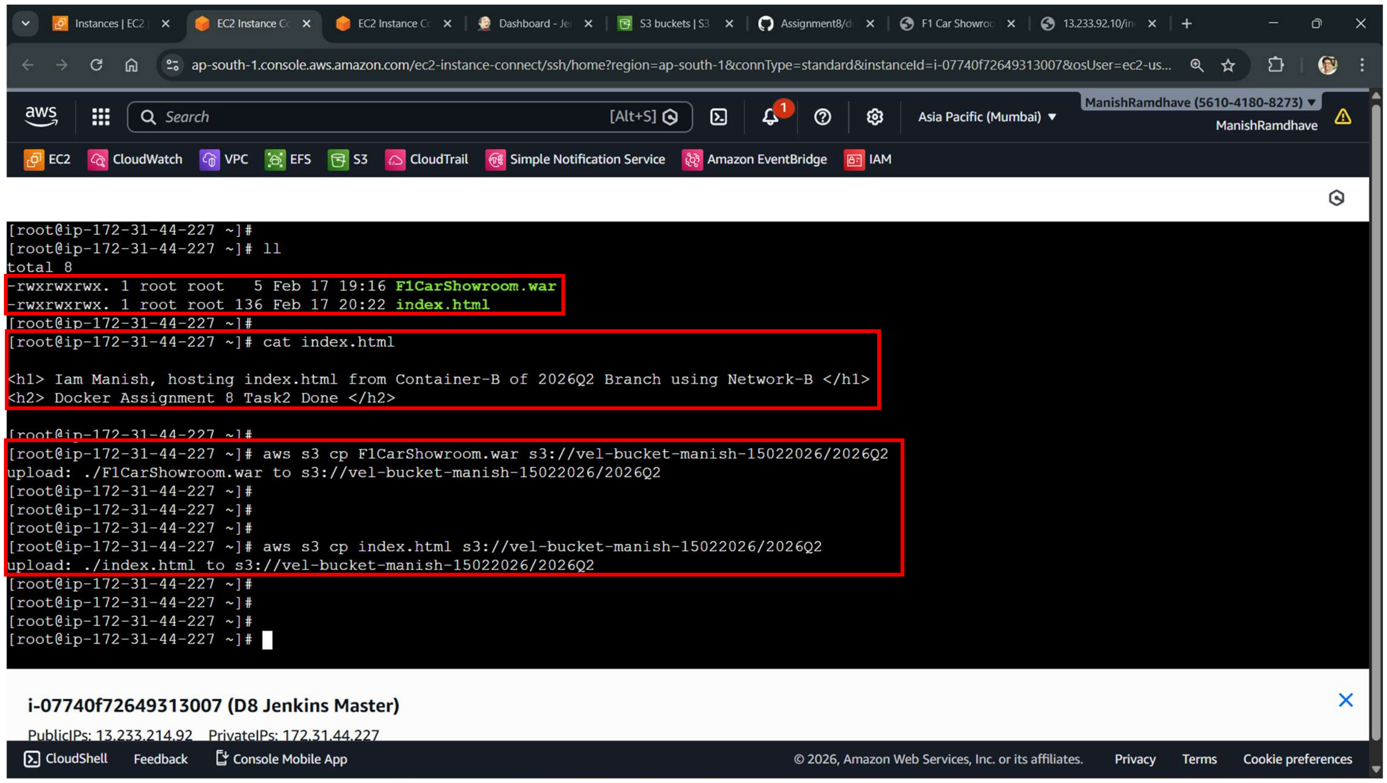


```
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# ll
total 8
-rwxrwxrwx. 1 root root   5 Feb 17 19:16 F1CarShowroom.war
-rwxrwxrwx. 1 root root 117 Feb 17 20:18 index.html
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# cat index.html

<h1> Iam Manish, hosting index.html from Container-A of 2026Q1 Branch using Network-A </h1>
<h2> Change in A </h2>

[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws configure
AWS Access Key ID [****************QRF5]: AWS Secret Access Key [****************WRMY]: Default region name [ap-south-1]: Default output format [text]: [roo
t@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 mb s3://vel-bucket-manish-15022026
make_bucket: vel-bucket-manish-15022026
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp F1CarShowroom.war s3://vel-bucket-manish-15022026/2026Q1
upload: ./F1CarShowroom.war to s3://vel-bucket-manish-15022026/2026Q1
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp index.html s3://vel-bucket-manish-15022026/2026Q1
upload: ./index.html to s3://vel-bucket-manish-15022026/2026Q1
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
```

i-07740f72649313007 (D8 Jenkins Master)

PublicIPs: 13.233.214.92   PrivateIPs: 172.31.44.227

Step 15: By using the AWS CLI commands, we have uploaded the **'F1CarShowroom.war' and 'index.html' files** in the **'vel-bucket-manish15022026/2026Q1' S3 Bucket folder:**

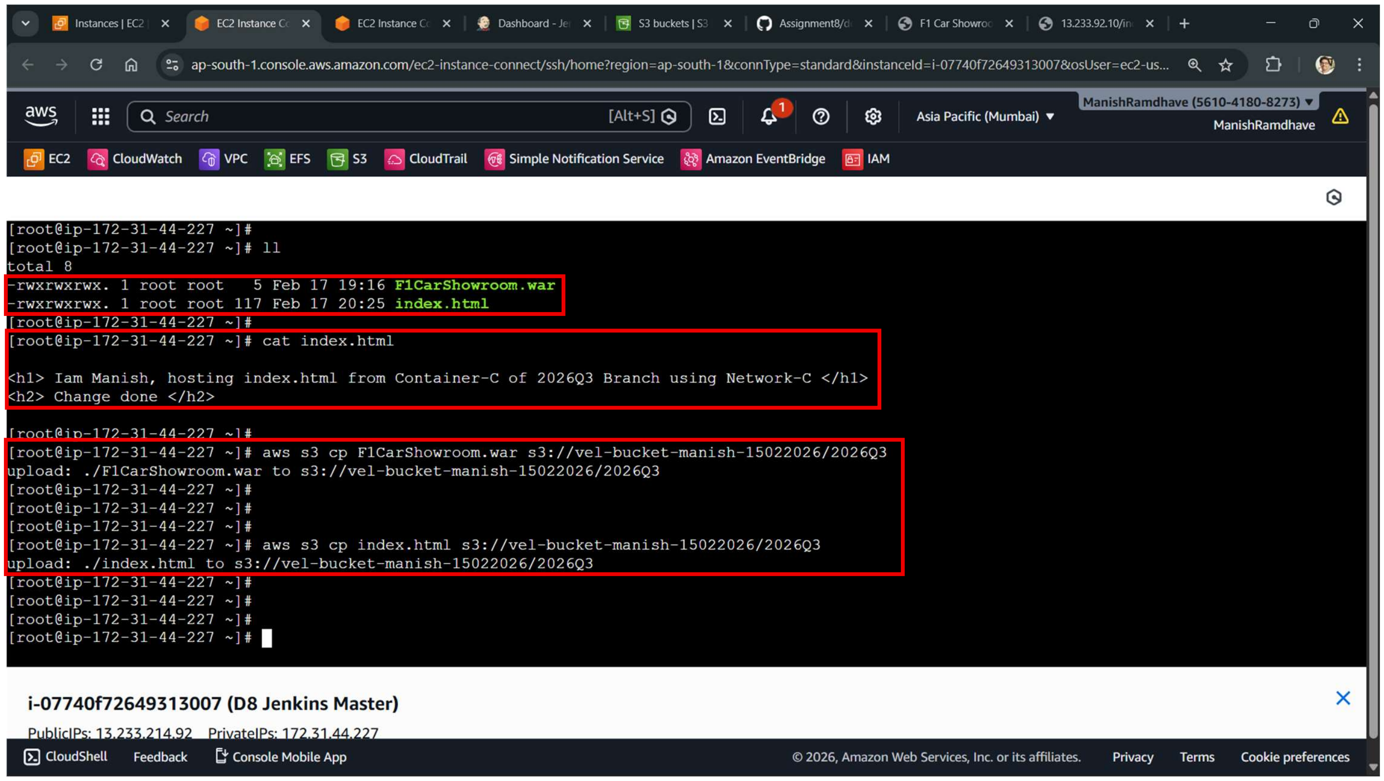


```
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# ll
total 8
-rwxrwxrwx. 1 root root   5 Feb 17 19:16 F1CarShowroom.war
-rwxrwxrwx. 1 root root 136 Feb 17 20:22 index.html
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# cat index.html

<h1> Iam Manish, hosting index.html from Container-B of 2026Q2 Branch using Network-B </h1>
<h2> Docker Assignment 8 Task2 Done </h2>

[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp F1CarShowroom.war s3://vel-bucket-manish-15022026/2026Q2
upload: ./F1CarShowroom.war to s3://vel-bucket-manish-15022026/2026Q2
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp index.html s3://vel-bucket-manish-15022026/2026Q2
upload: ./index.html to s3://vel-bucket-manish-15022026/2026Q2
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
```

i-07740f72649313007 (D8 Jenkins Master)

PublicIPs: 13.233.214.92   PrivateIPs: 172.31.44.227

Step 16: By using the AWS CLI commands, we have uploaded the **'F1CarShowroom.war' and 'index.html' files** in the **'vel-bucket-manish15022026/2026Q1'** S3 Bucket folder:



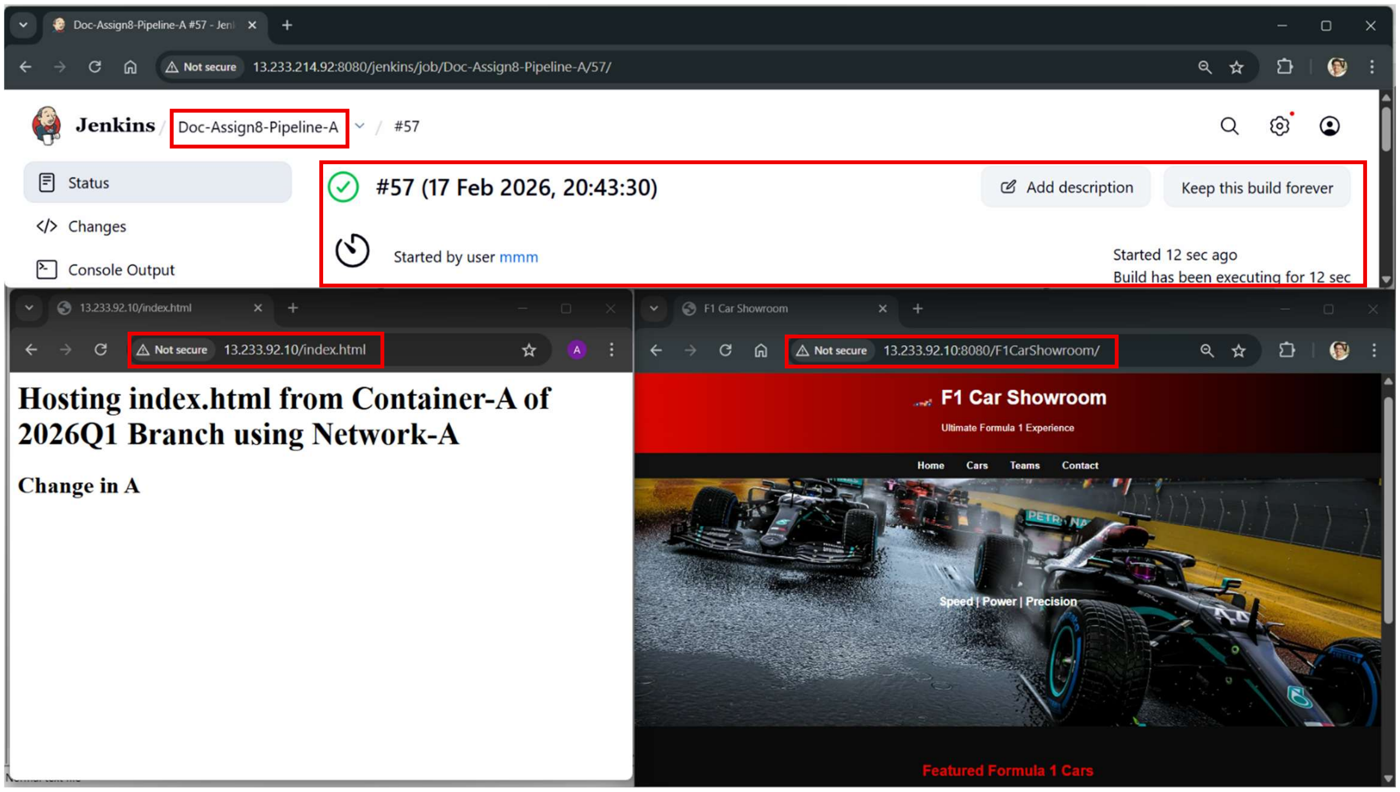
```
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# ll
total 8
-rwxrwxrwx. 1 root root   5 Feb 17 19:16 F1CarShowroom.war
-rwxrwxrwx. 1 root root 117 Feb 17 20:25 index.html
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# cat index.html

<h1> Iam Manish, hosting index.html from Container-C of 2026Q3 Branch using Network-C </h1>
<h2> Change done </h2>

[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp F1CarShowroom.war s3://vel-bucket-manish-15022026/2026Q3
upload: ./F1CarShowroom.war to s3://vel-bucket-manish-15022026/2026Q3
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]# aws s3 cp index.html s3://vel-bucket-manish-15022026/2026Q3
upload: ./index.html to s3://vel-bucket-manish-15022026/2026Q3
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
[root@ip-172-31-44-227 ~]#
```

i-07740f72649313007 (D8 Jenkins Master)

PublicIPs: 13.233.214.92   PrivateIPs: 172.31.44.227

Results:

1. When **Build** is done in by **'Doc-Assign8-Pipeline-A'**, the **'F1CarShowroom' application and 'index.html'** file is hosted from the **container** of **'Network-A'** by following the **'docker-compose.yaml'** script in the **GitHub Repository** of the **2026Q1 Branch** by using **Port No.80**:


Doc-Assign8-Pipeline-A #57 - Jen
Not secure 13.233.214.92:8080/jenkins/job/Doc-Assign8-Pipeline-A/57/
Jenkins / Doc-Assign8-Pipeline-A / #57
Status
Changes
Console Output
Add description
Keep this build forever
13.233.92.10/index.html
Not secure 13.233.92.10/index.html
F1 Car Showroom
Not secure 13.233.92.10:8080/F1CarShowroom/
Home Cars Teams Contact
Speed | Power | Precision

#57 (17 Feb 2026, 20:43:30)

Started by user mmm

Started 12 sec ago
Build has been executing for 12 sec

Hosting index.html from Container-A of 2026Q1 Branch using Network-A

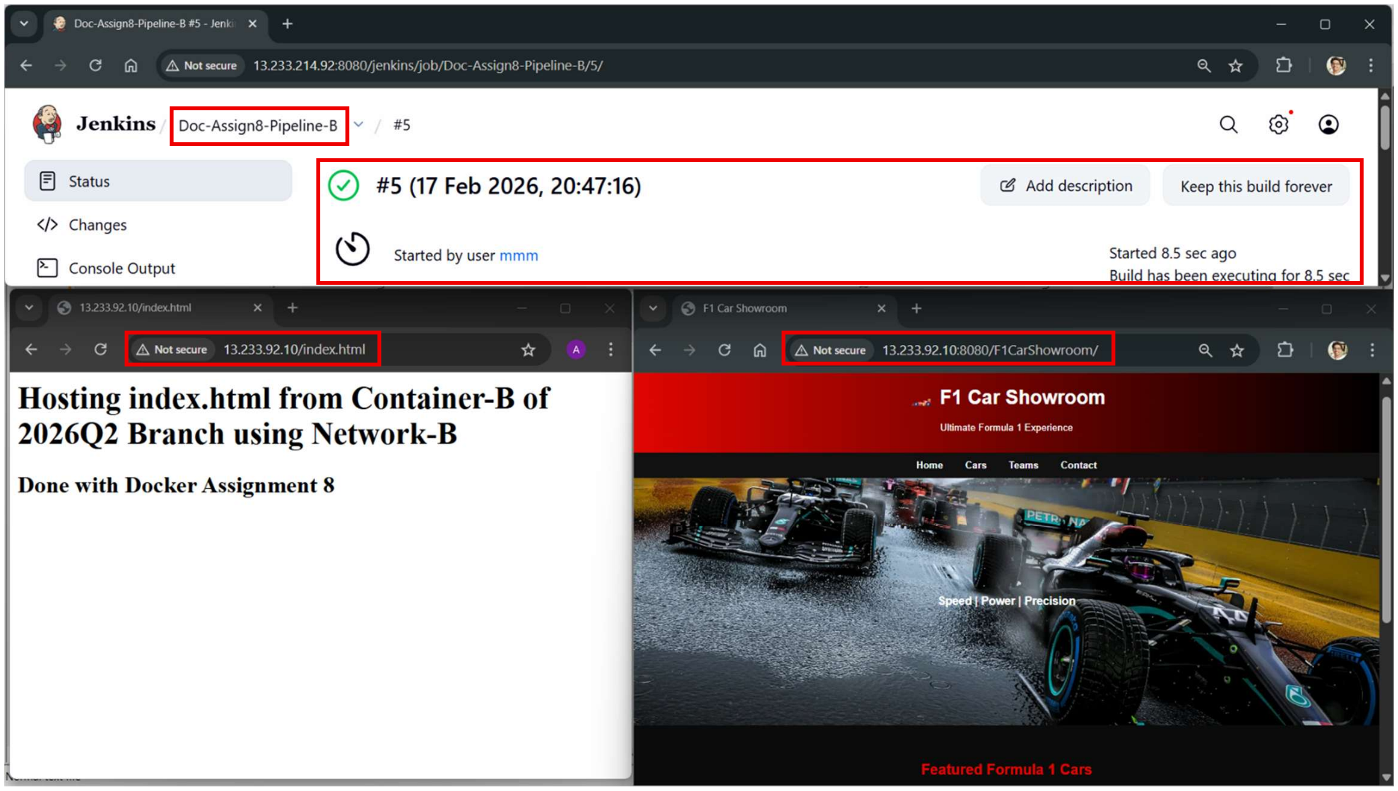
Change in A

F1 Car Showroom

Ultimate Formula 1 Experience

Featured Formula 1 Cars

2. When **Build** is done in by **'Doc-Assign8-Pipeline-B'**, the **'F1CarShowroom' application and 'index.html'** file is hosted from the **container** of **'Network-B'** by following the **'docker-compose.yaml'** script in the **GitHub Repository** of the **2026Q2 Branch** by using **Port No.80**:


Doc-Assign8-Pipeline-B #5 - Jenki
Not secure 13.233.214.92:8080/jenkins/job/Doc-Assign8-Pipeline-B/5/
Jenkins / Doc-Assign8-Pipeline-B / #5
Status
Changes
Console Output
Add description
Keep this build forever
13.233.92.10/index.html
Not secure 13.233.92.10/index.html
F1 Car Showroom
Not secure 13.233.92.10:8080/F1CarShowroom/
Home Cars Teams Contact
Speed | Power | Precision

#5 (17 Feb 2026, 20:47:16)

Started by user mmm

Started 8.5 sec ago
Build has been executing for 8.5 sec

Hosting index.html from Container-B of 2026Q2 Branch using Network-B

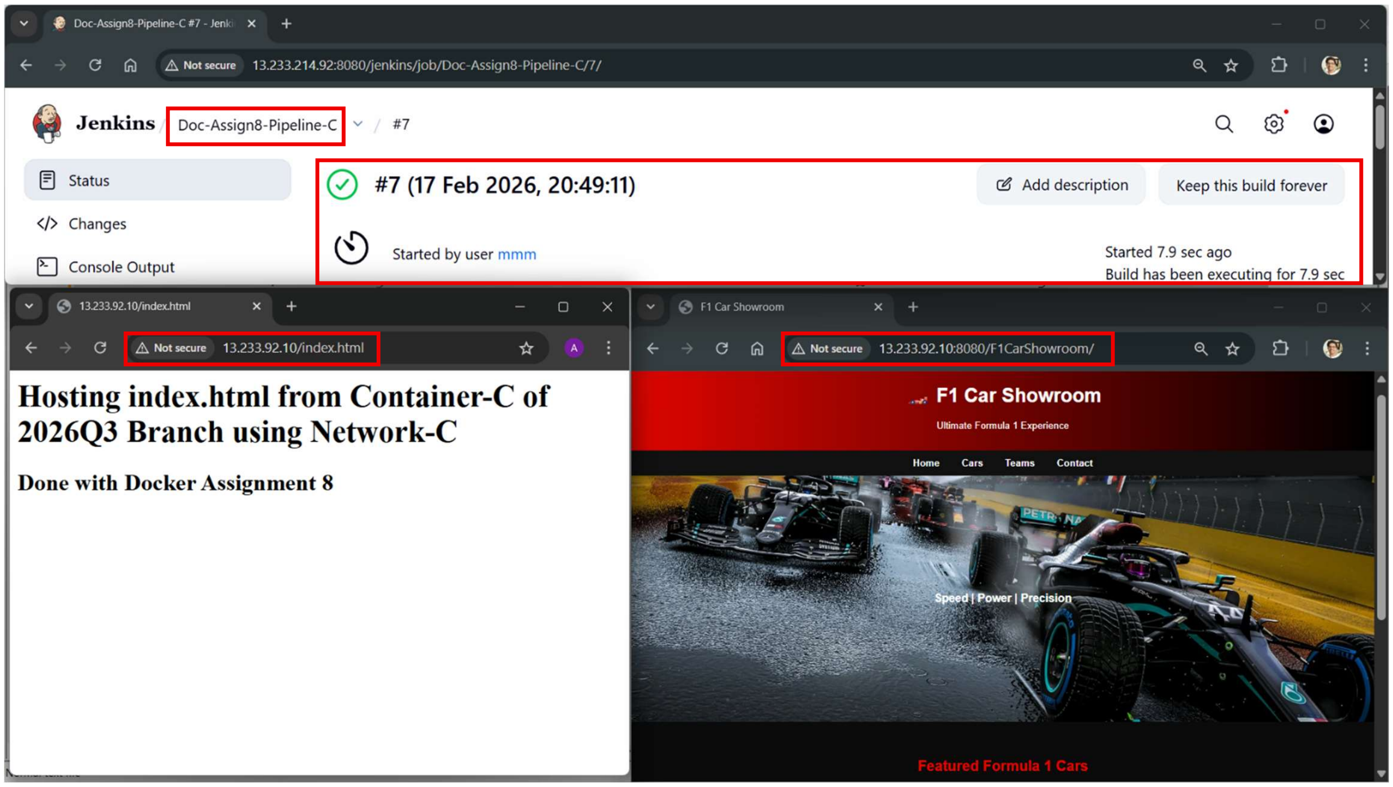
Done with Docker Assignment 8

F1 Car Showroom

Ultimate Formula 1 Experience

Featured Formula 1 Cars

3. When **Build** is done in by **'Doc-Assign8-Pipeline-C',** the **'F1CarShowroom' application and 'index.html'** file is hosted from the **container** of **'Network-A'** by following the **'docker-compose.yaml'** script in the **GitHub Repository** of the **2026Q3 Branch** by using **Port No.80**:


Doc-Assign8-Pipeline-C #7 - Jenkins

Not secure 13.233.214.92:8080/jenkins/job/Doc-Assign8-Pipeline-C/7/

Jenkins / Doc-Assign8-Pipeline-C / #7

Status
Changes
Console Output

#7 (17 Feb 2026, 20:49:11)

Add description
Keep this build forever

Started by user mmm

Started 7.9 sec ago
Build has been executing for 7.9 sec

Not secure 13.233.92.10/index.html

Hosting index.html from Container-C of 2026Q3 Branch using Network-C

Done with Docker Assignment 8

F1 Car Showroom

Not secure 13.233.92.10:8080/F1CarShowroom/