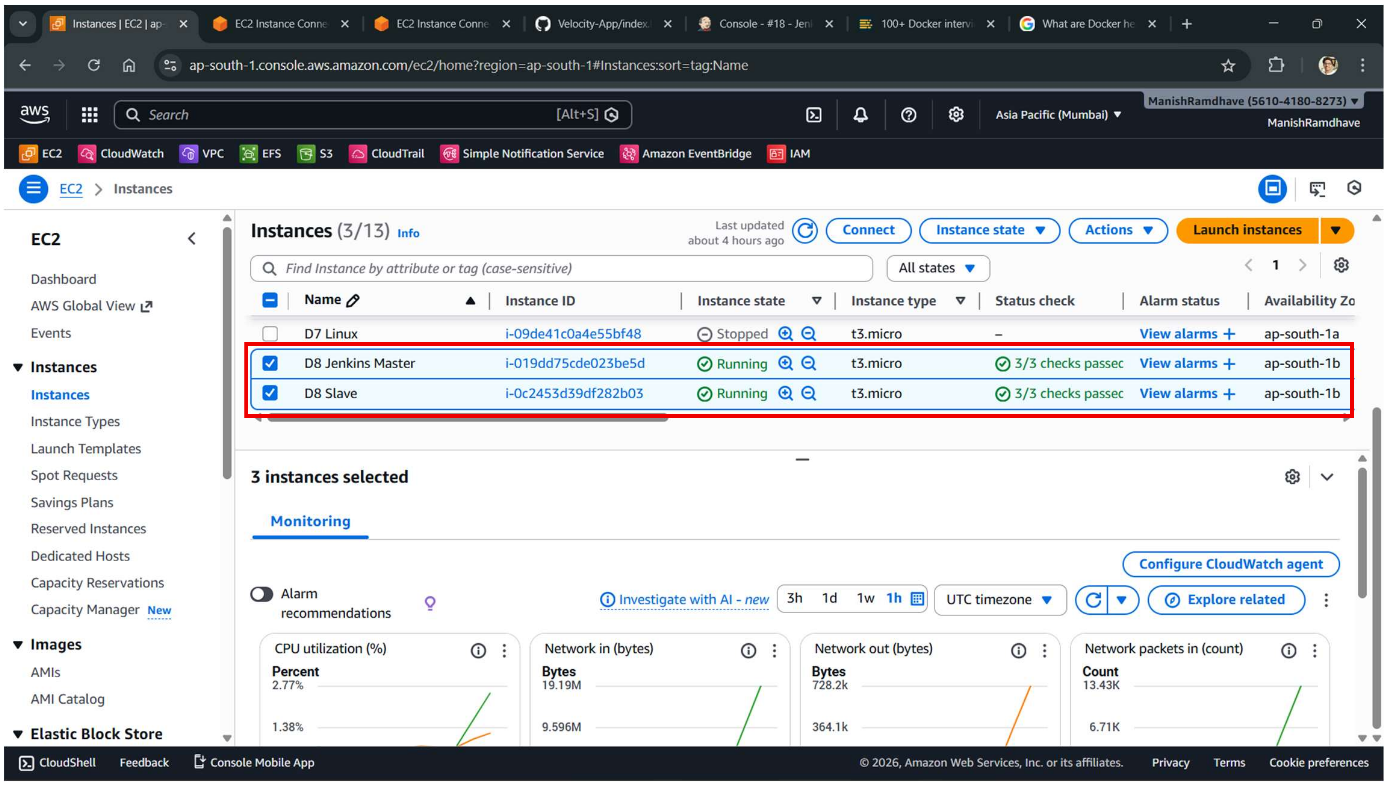
Docker Assignment 8 (Task 1)

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



ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#Instances:sort=tag:Name

Instances (3/13) Info

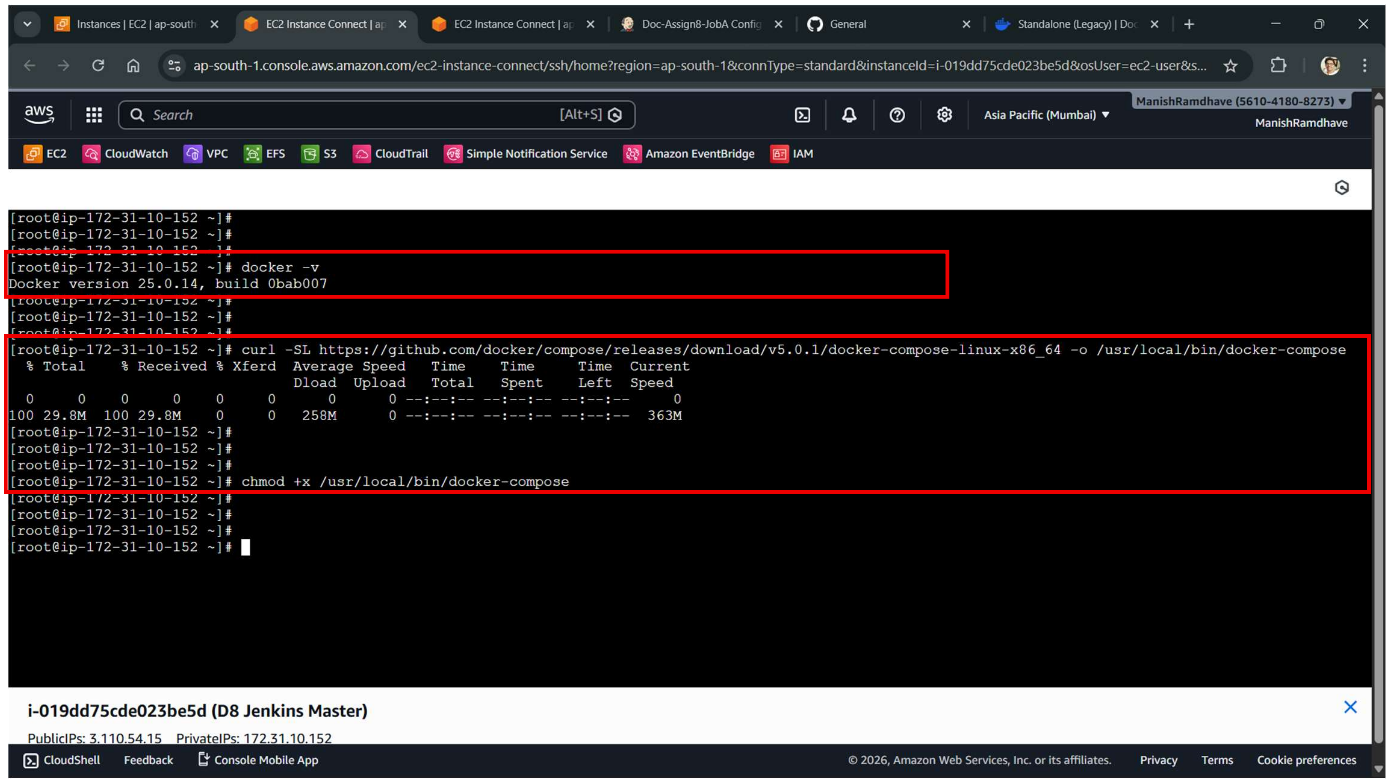
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zo
D7 Linux	i-09de41c0a4e55bf48	Stopped	t3.micro	–	View alarms +	ap-south-1a
D8 Jenkins Master	i-019dd75cde023be5d	Running	t3.micro	3/3 checks passec	View alarms +	ap-south-1b
D8 Slave	i-0c2453d39df282b03	Running	t3.micro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

3 instances selected

Monitoring

CPU utilization (%)	Network in (bytes)	Network out (bytes)	Network packets in (count)
Percent 2.77%	Bytes 19.19M	Bytes 728.2k	Count 13.43K
1.38%	9.596M	364.1k	6.71K

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



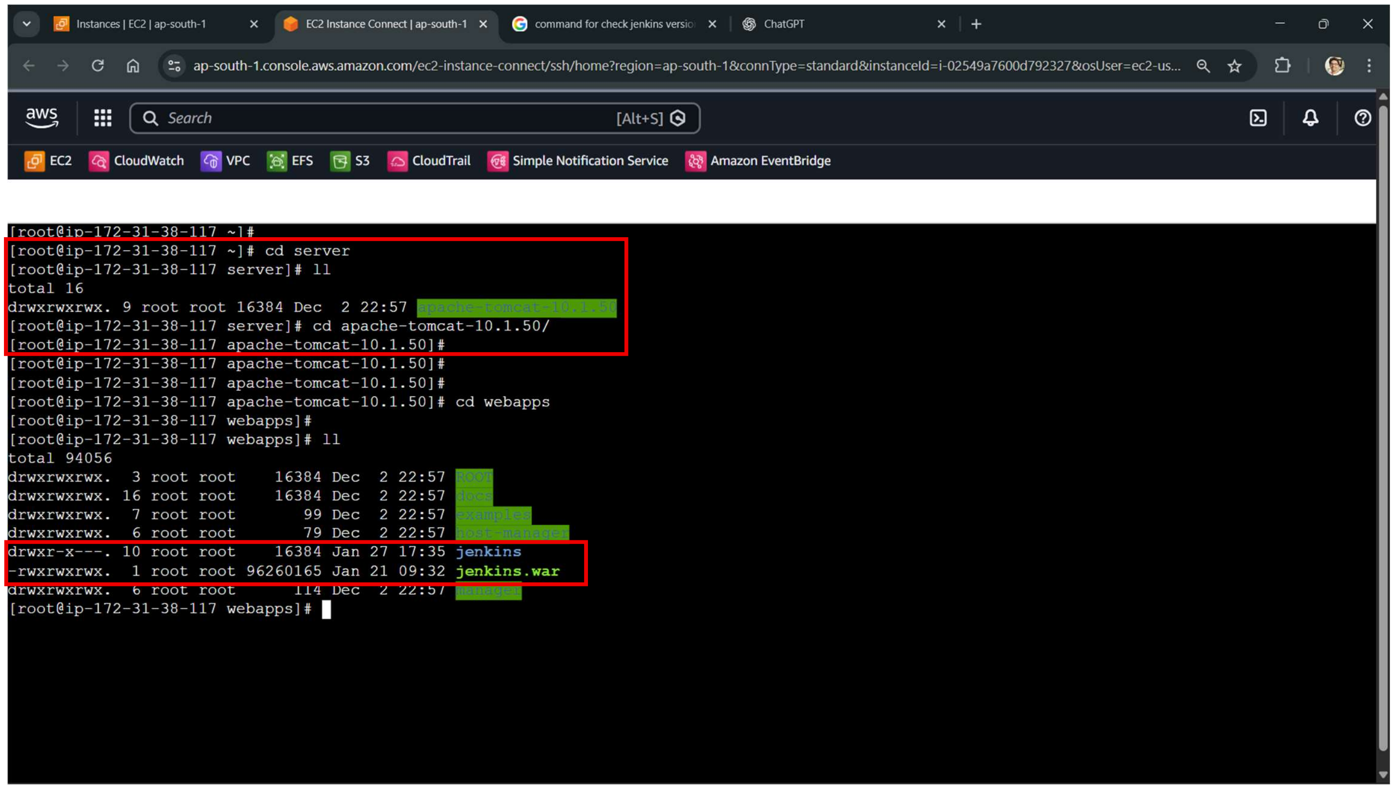
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=ap-south-1&connType=standard&instanceId=i-019dd75cde023be5d&osUser=ec2-user&s...

```
[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)

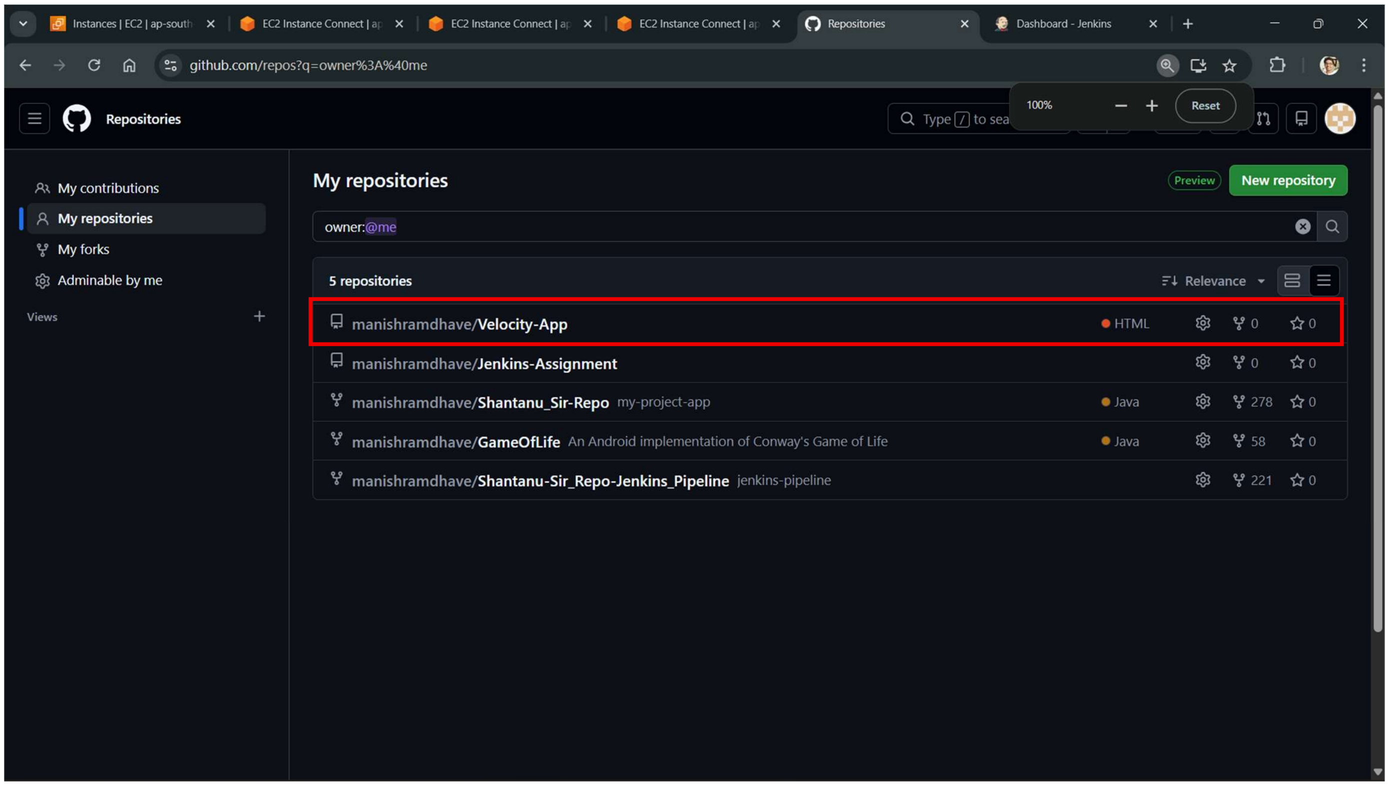
PublicIPs: 3.110.54.15 PrivateIPs: 172.31.10.152

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 **'Velocity-App'** in GitHub account:



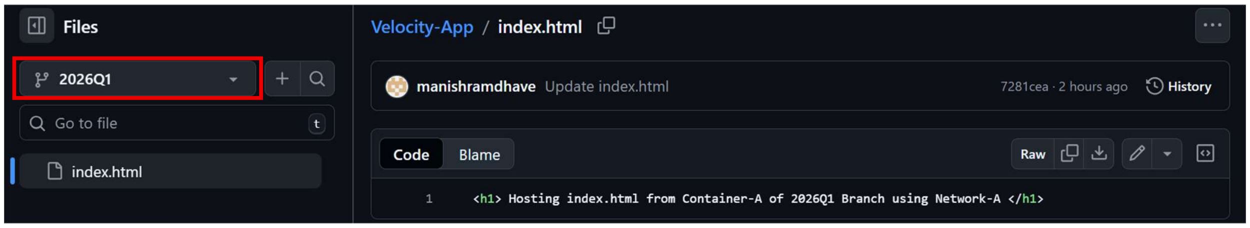
My repositories

owner:@me

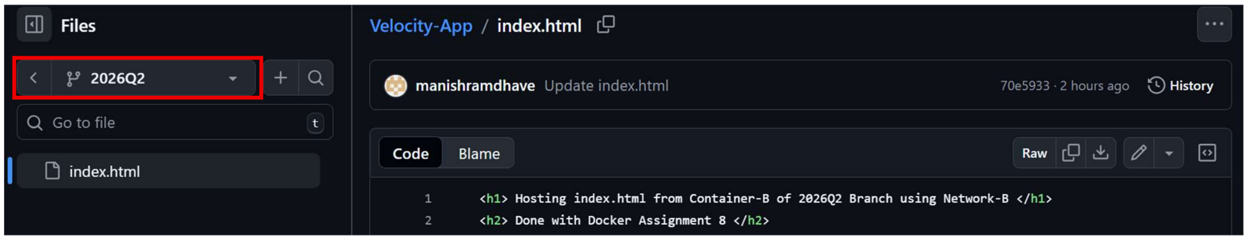
5 repositories

Repository	Description	Language	Forks	Stars
manishramdhave/**Velocity-App**		HTML	0	0
manishramdhave/**Jenkins-Assignment**			0	0
manishramdhave/**Shantanu_Sir-Repo**	my-project-app	Java	278	0
manishramdhave/**GameOfLife**	An Android implementation of Conway's Game of Life	Java	58	0
manishramdhave/**Shantanu-Sir_Repo-Jenkins_Pipeline**	jenkins-pipeline		221	0

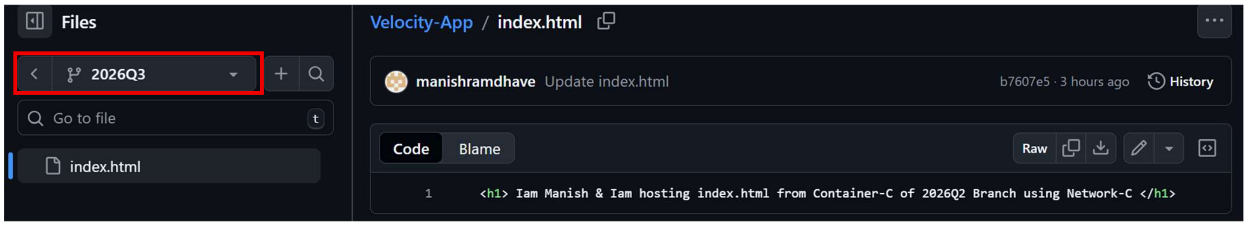
Step 5: Created three branches, **2026Q1, 2026Q2 and 2026Q3** in the '**Velocity-App**' Repository and pushed **three different 'index.html'** files in the respective branches:


Files
2026Q1
Go to file
index.html
Velocity-App / index.html
manishramdhave Update index.html 7281cea · 2 hours ago History
Code Blame Raw

```
<h1> Hosting index.html from Container-A of 2026Q1 Branch using Network-A </h1>
```

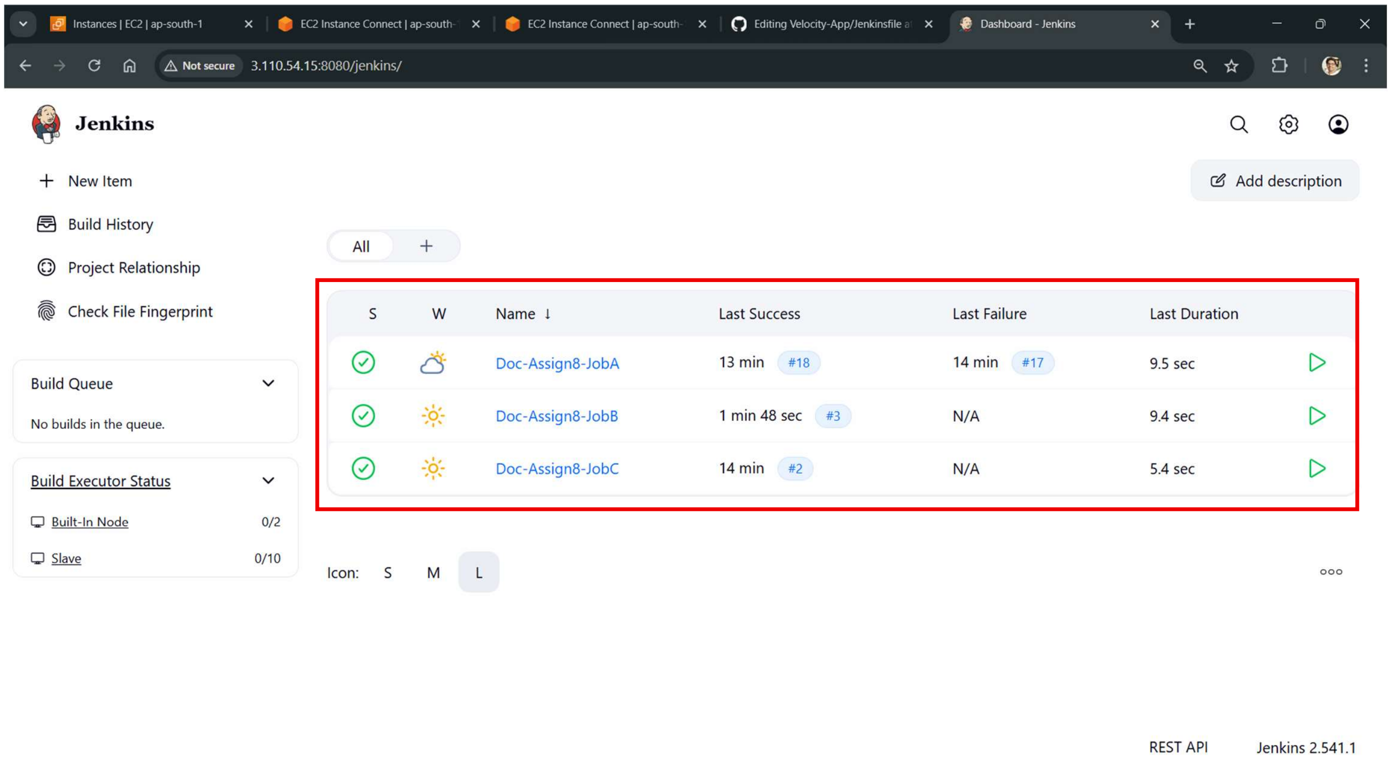

Files
2026Q2
Go to file
index.html
Velocity-App / index.html
manishramdhave Update index.html 70e5933 · 2 hours ago History
Code Blame Raw

```
<h1> Hosting index.html from Container-B of 2026Q2 Branch using Network-B </h1>
<h2> Done with Docker Assignment 8 </h2>
```


Files
2026Q3
Go to file
index.html
Velocity-App / index.html
manishramdhave Update index.html b7607e5 · 3 hours ago History
Code Blame Raw

```
<h1> Iam Manish & Iam hosting index.html from Container-C of 2026Q2 Branch using Network-C </h1>
```

Step 6: Launched the Jenkins and created three different **Freestyle Jobs** in it:


Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south- | EC2 Instance Connect | ap-south- | Editing Velocity-App/Jenkinsfile at | Dashboard - Jenkins
Not secure 3.110.54.15:8080/jenkins/

Jenkins
New Item
Build History
Project Relationship
Check File Fingerprint
Add description
All +

Build Queue
No builds in the queue.

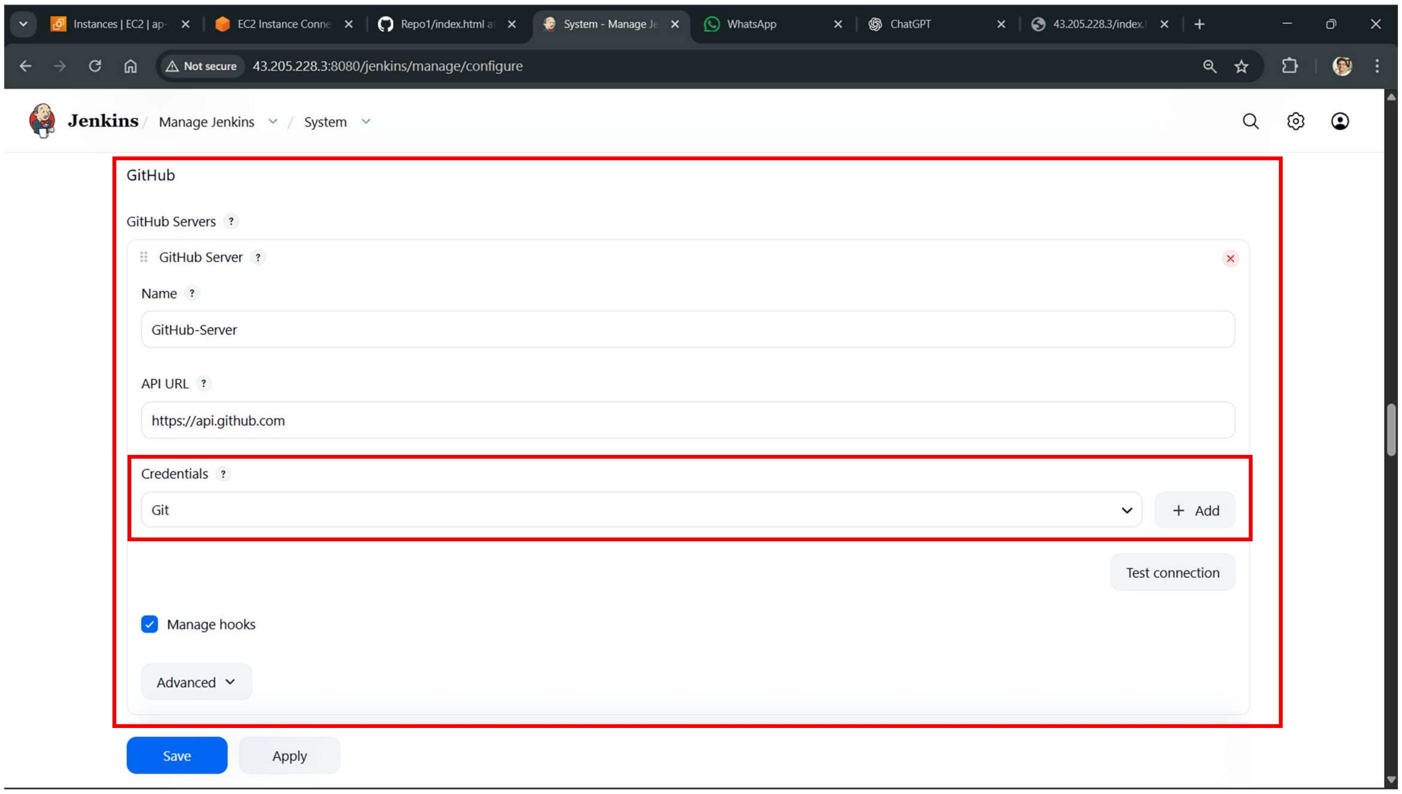
Build Executor Status
Built-In Node 0/2
Slave 0/10

S	W	Name ↓	Last Success	Last Failure	Last Duration
✓	⛅	Doc-Assign8-JobA	13 min #18	14 min #17	9.5 sec
✓	☀	Doc-Assign8-JobB	1 min 48 sec #3	N/A	9.4 sec
✓	☀	Doc-Assign8-JobC	14 min #2	N/A	5.4 sec

Icon: S M L

REST API Jenkins 2.541.1

Step 7: 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

Jenkins / Manage Jenkins / System

GitHub

GitHub Servers

GitHub Server

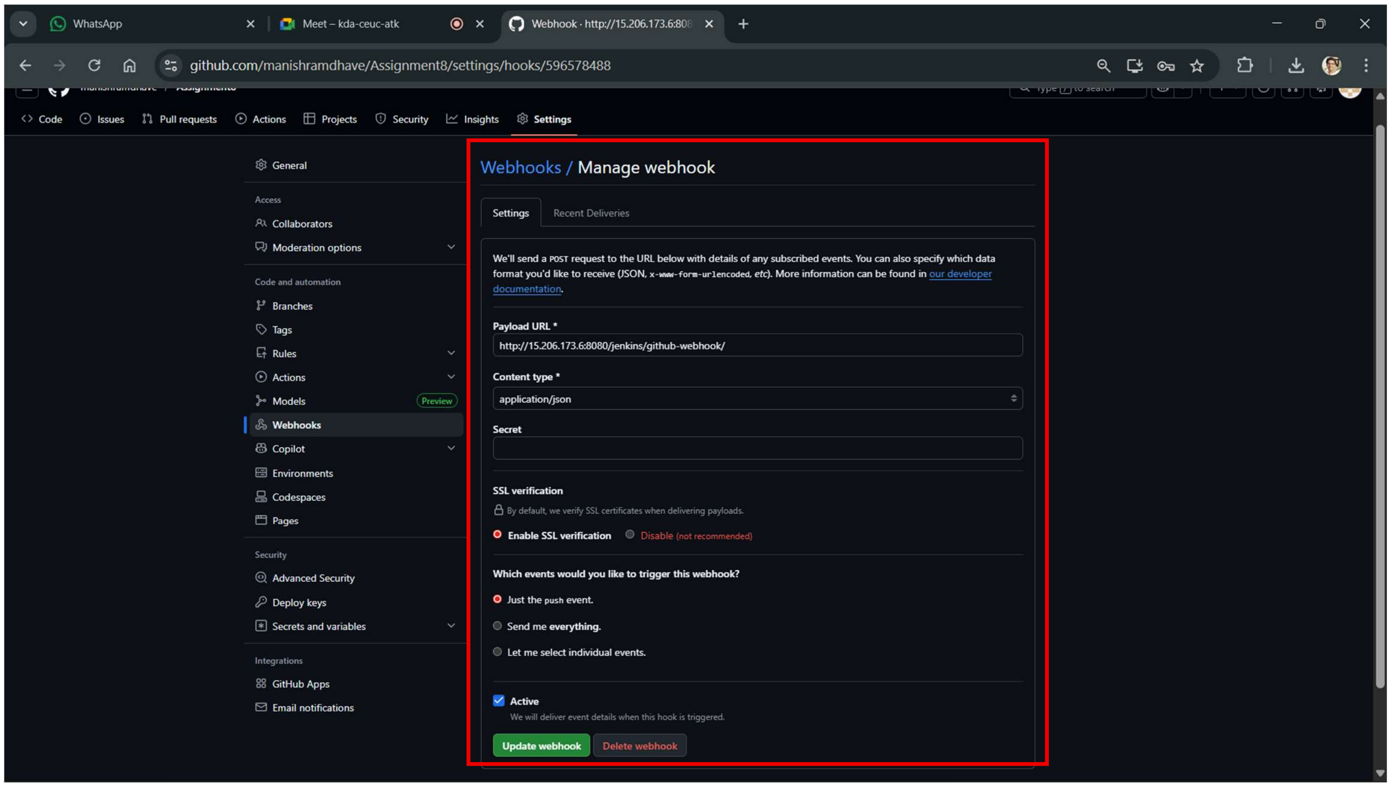
Name: GitHub-Server

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

Credentials: Git

Manage hooks ✓

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)

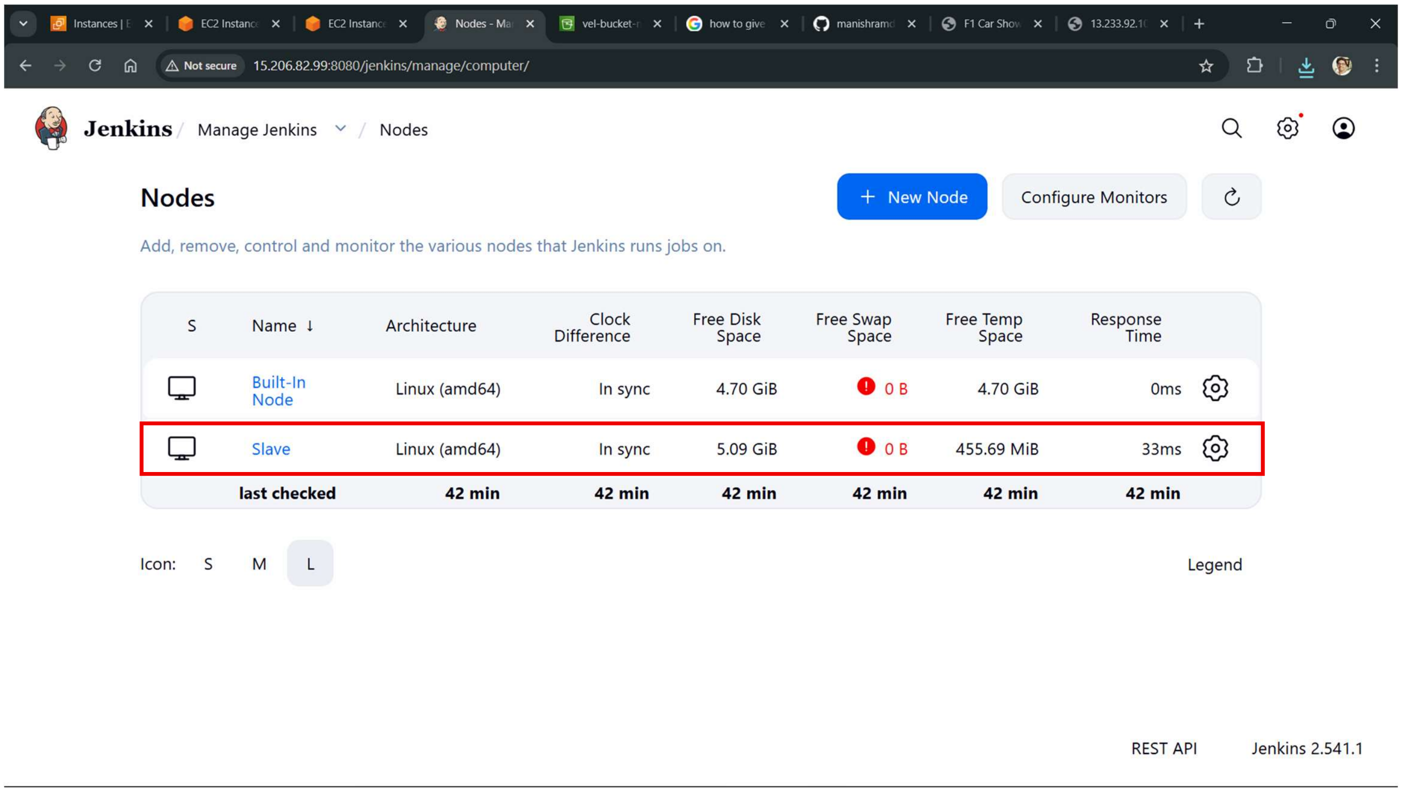
Which events would you like to trigger this webhook?

[✓ Just the push event.] Send me everything. Let me select individual events.

Active ✓

We will deliver event details when this hook is triggered.

Step 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

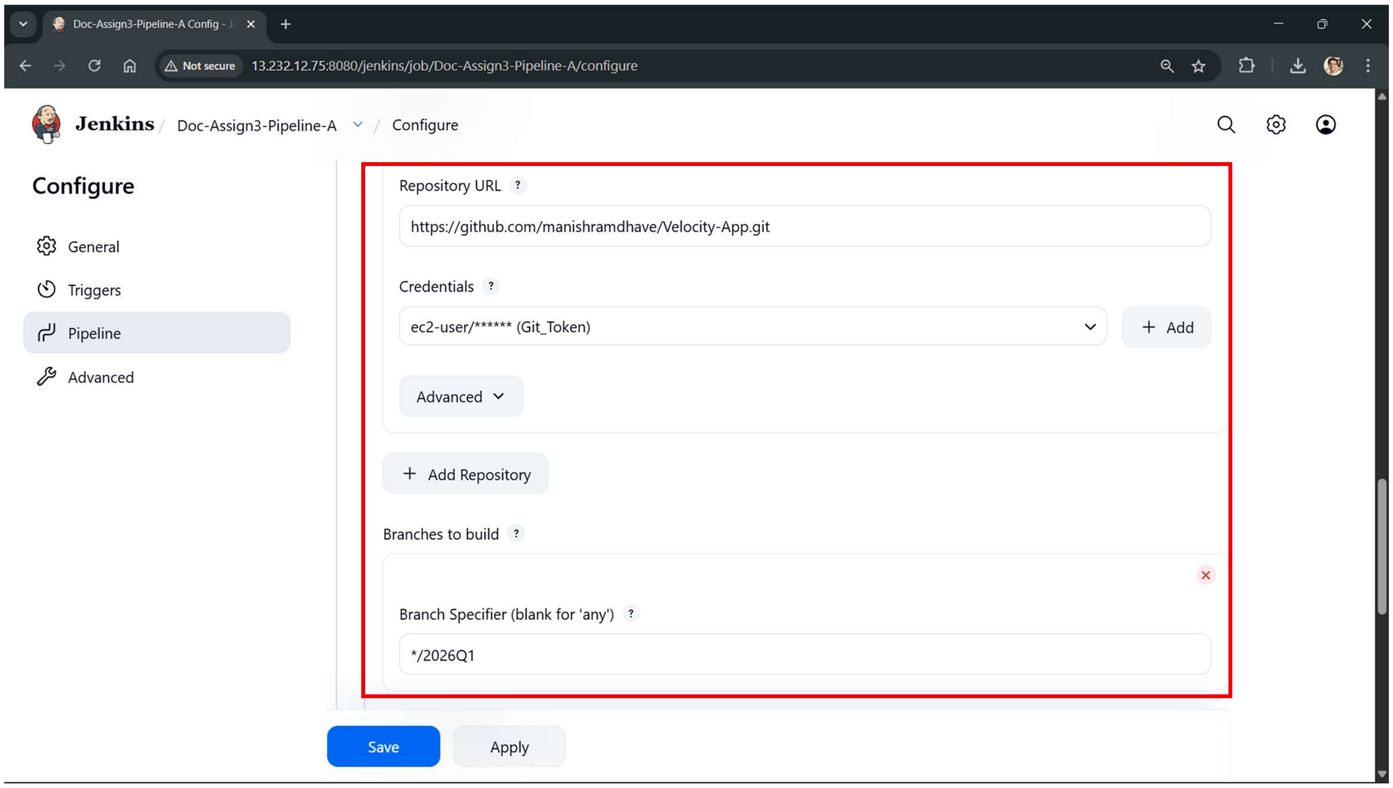
Nodes

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



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

Jenkins / Doc-Assign3-Pipeline-A / Configure

Configure: General, Triggers, Pipeline, Advanced

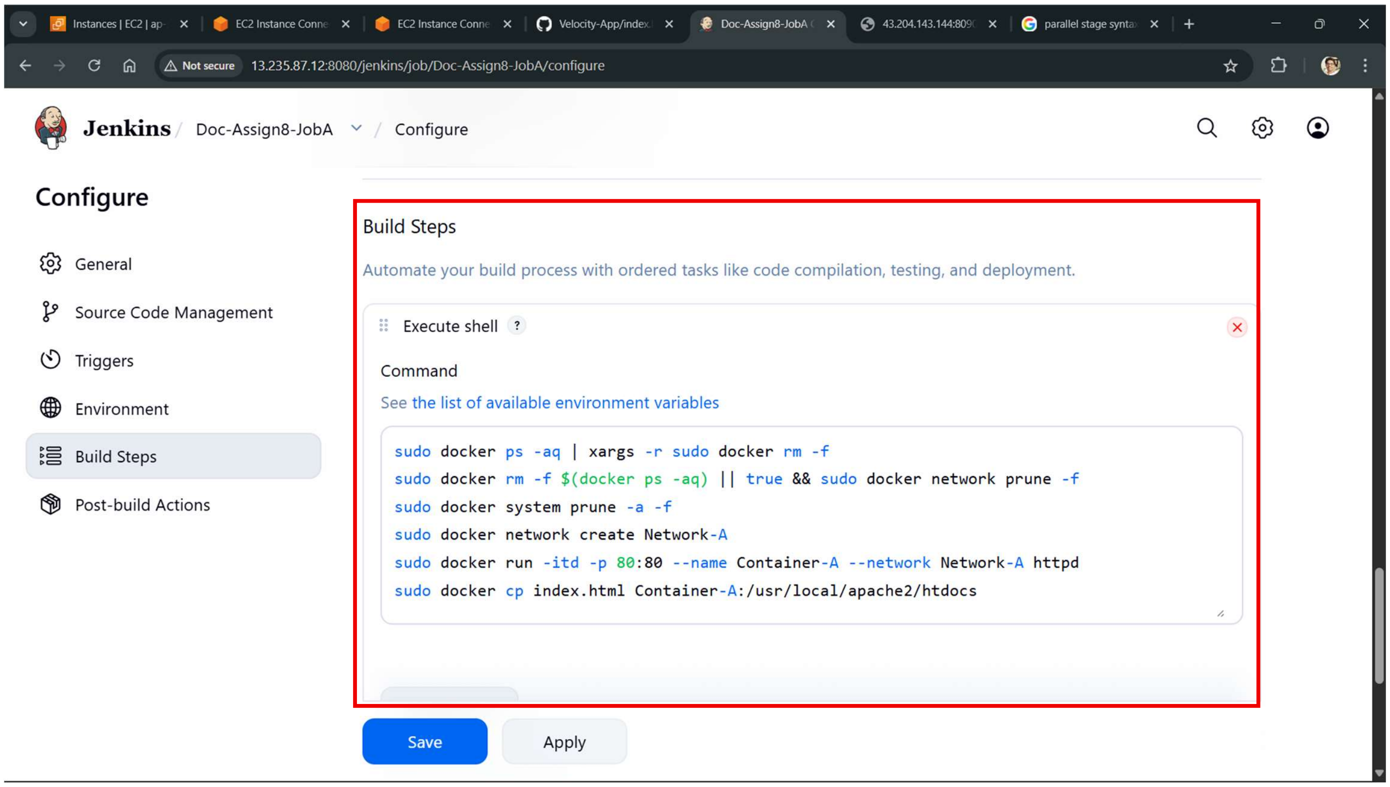
Repository URL: https://github.com/manishramdhave/Velocity-App.git

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

Branches to build

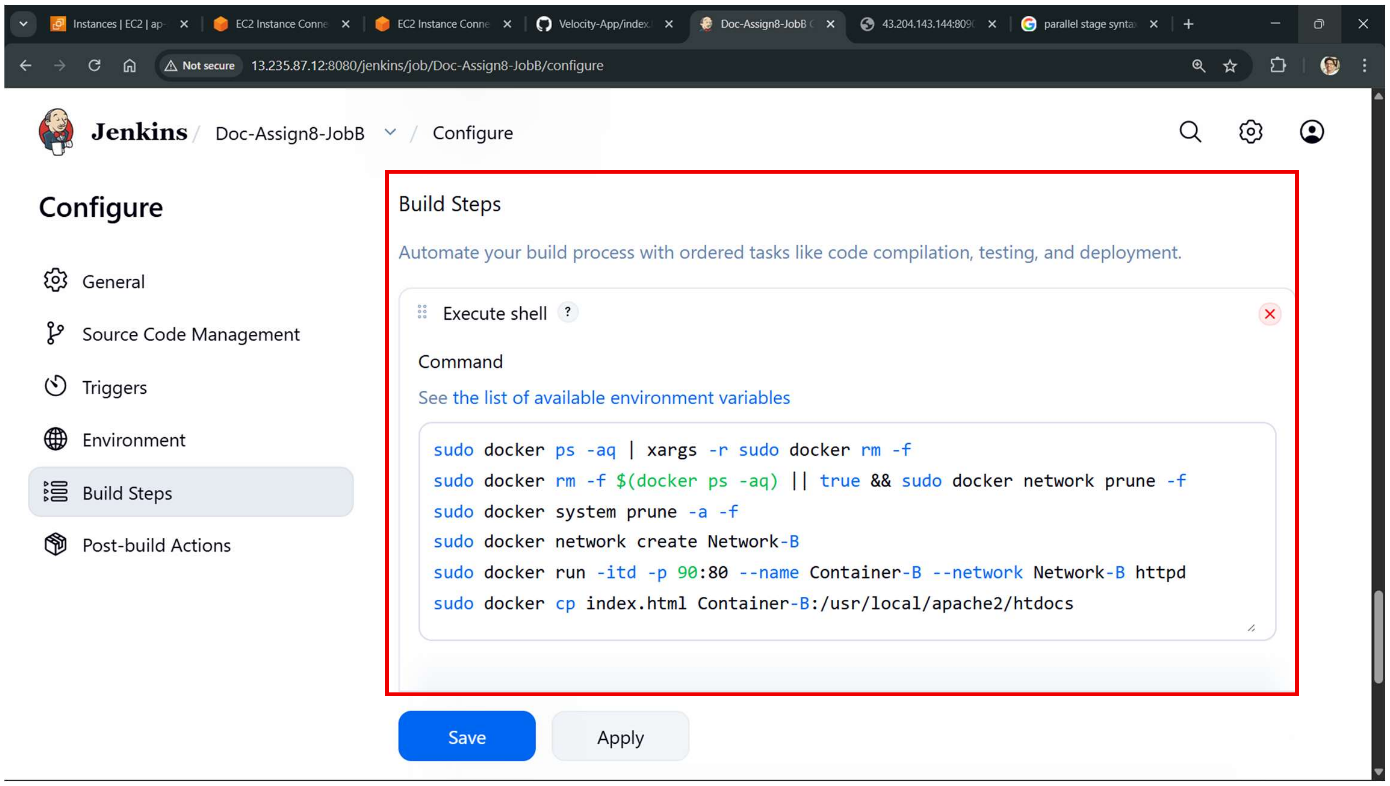
Branch Specifier (blank for 'any'): */2026Q1

Step 10: In **Build Steps of Doc-Assign8-JobA,** we have executed the following shell commands for **Network-A**:



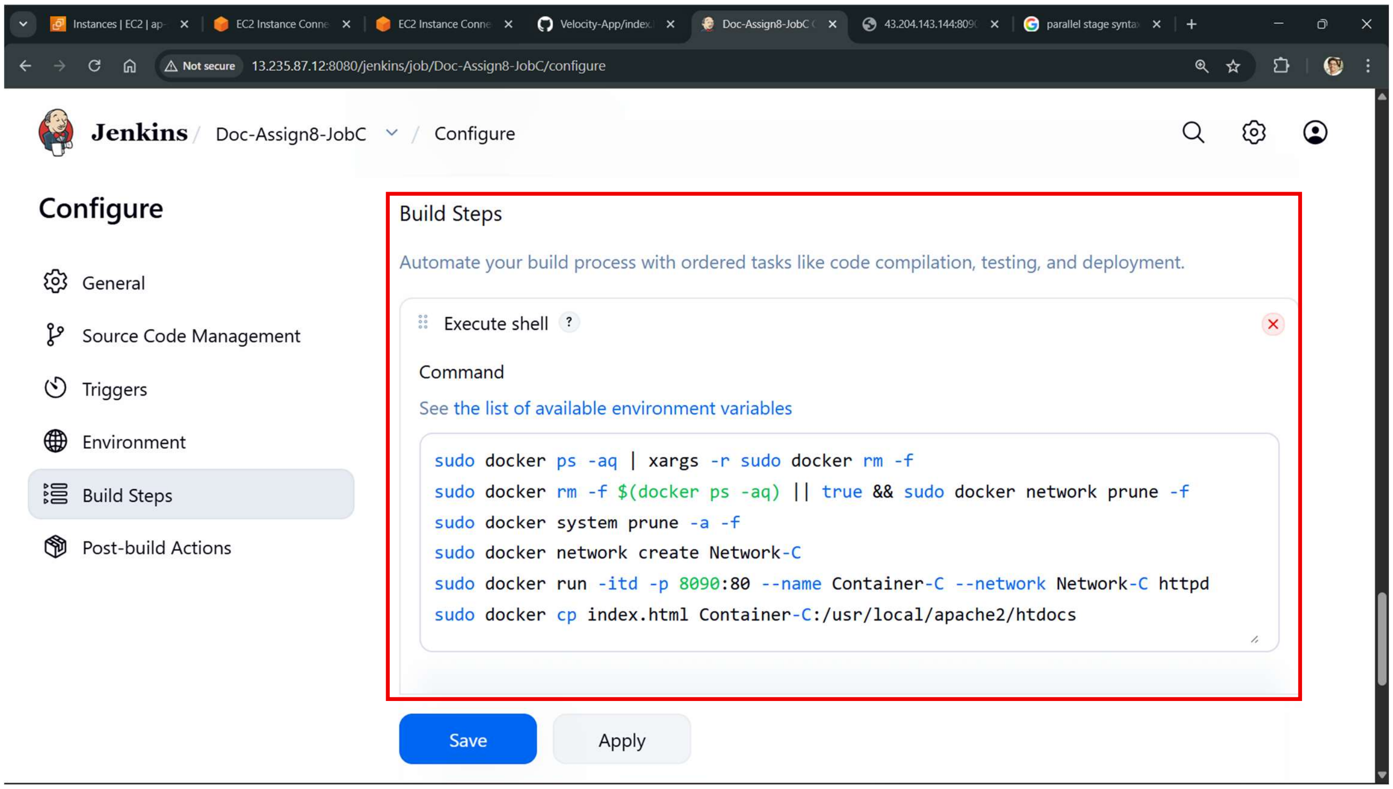
```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-A
sudo docker run -itd -p 80:80 --name Container-A --network Network-A httpd
sudo docker cp index.html Container-A:/usr/local/apache2/htdocs
```

Step 11: In **Build Steps of Doc-Assign8-JobB,** we have executed the following shell commands for **Network-B**:



```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-B
sudo docker run -itd -p 90:80 --name Container-B --network Network-B httpd
sudo docker cp index.html Container-B:/usr/local/apache2/htdocs
```

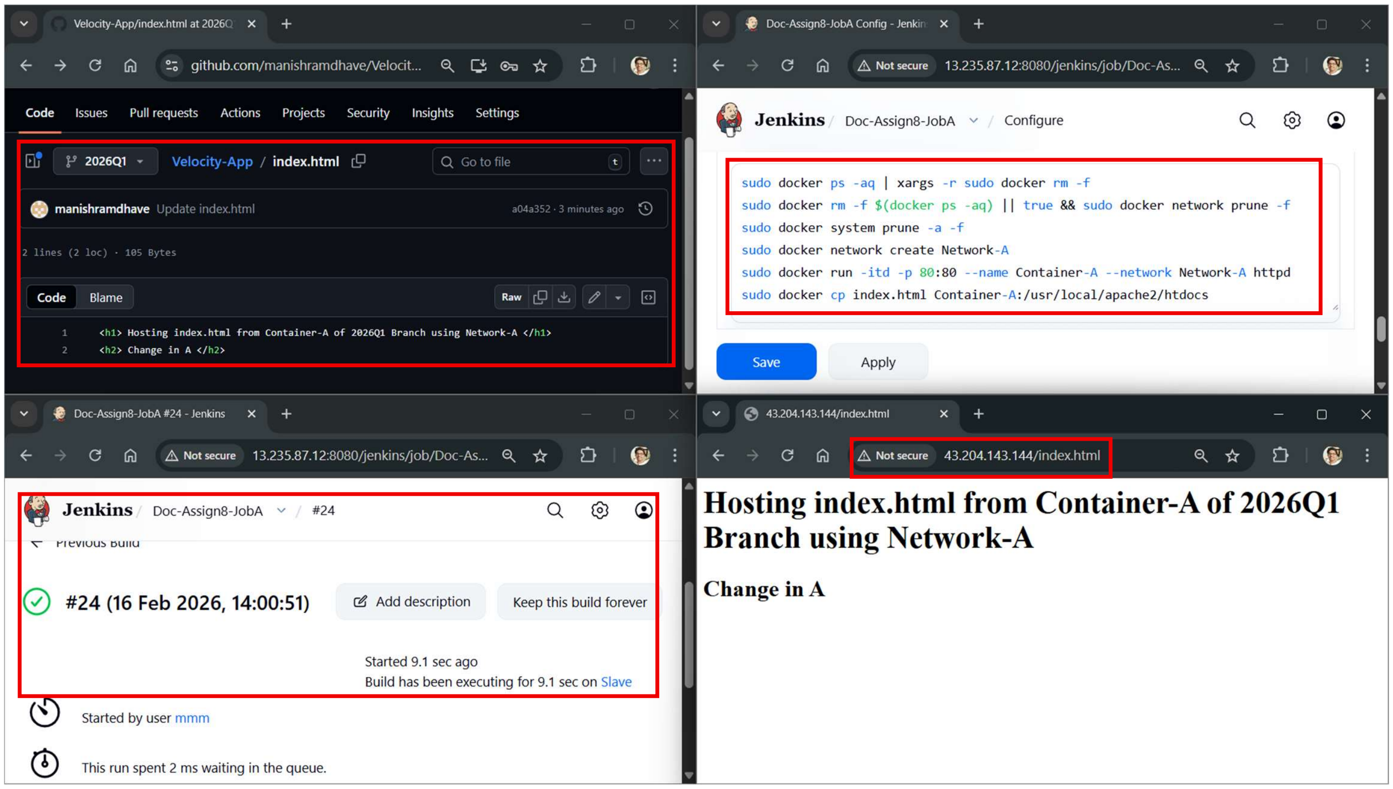
Step 12: In **Build Steps of Doc-Assign8-JobC,** we have executed the following shell commands for **Network-C**:



```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-C
sudo docker run -itd -p 8090:80 --name Container-C --network Network-C httpd
sudo docker cp index.html Container-C:/usr/local/apache2/htdocs
```

Results:

1. When changes are done in **2026Q1 branch**, Build is triggered by **'Doc-Assign8-JobA'** and the updated index.html file is hosted from the **'Container-A'** of **'Network-A'** by following the shell script in the **'Build Steps'** file of the same branch and hosted the using **Port No.80**:



2026Q1 Velocity-App / index.html

manishramdhave Update index.html a04a352 · 3 minutes ago

2 lines (2 loc) · 105 Bytes

```
<h1> Hosting index.html from Container-A of 2026Q1 Branch using Network-A </h1>
<h2> Change in A </h2>
```

Jenkins / Doc-Assign8-JobA / Configure

```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-A
sudo docker run -itd -p 80:80 --name Container-A --network Network-A httpd
sudo docker cp index.html Container-A:/usr/local/apache2/htdocs
```

Jenkins / Doc-Assign8-JobA / #24

#24 (16 Feb 2026, 14:00:51)

Started 9.1 sec ago
Build has been executing for 9.1 sec on Slave

Started by user mmm

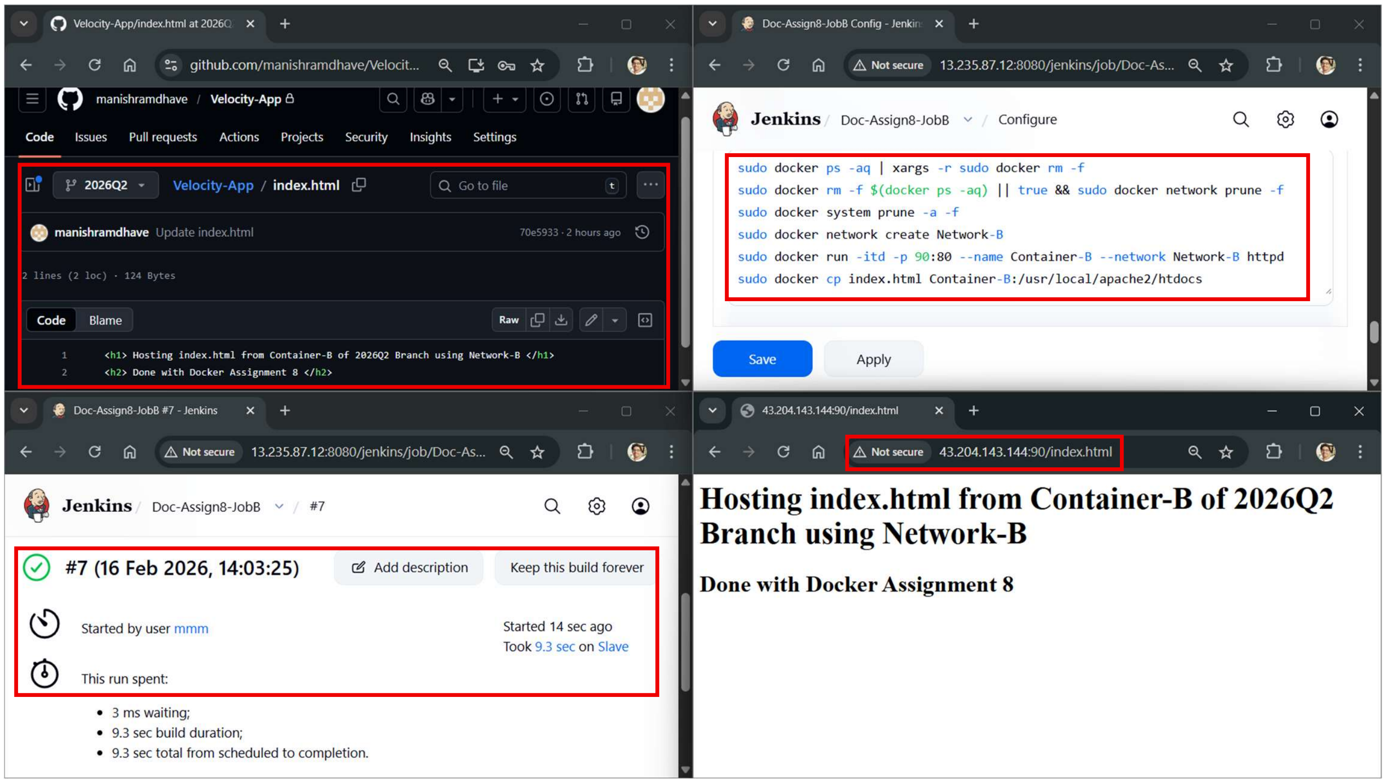
This run spent 2 ms waiting in the queue.

43.204.143.144/index.html

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

Change in A

2. When changes are done in **2026Q2 branch**, Build is triggered by **'Doc-Assign8-JobB'** and the updated index.html file is hosted from the **'Container-B'** of **'Network-B'** by following the shell script in the **'Build Steps'** file of the same branch and hosted the using **Port No.90**:



2026Q2 Velocity-App / index.html

manishramdhave Update index.html 70e5933 · 2 hours ago

2 lines (2 loc) · 124 Bytes

```
<h1> Hosting index.html from Container-B of 2026Q2 Branch using Network-B </h1>
<h2> Done with Docker Assignment 8 </h2>
```

Jenkins / Doc-Assign8-JobB / Configure

```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-B
sudo docker run -itd -p 90:80 --name Container-B --network Network-B httpd
sudo docker cp index.html Container-B:/usr/local/apache2/htdocs
```

Jenkins / Doc-Assign8-JobB / #7

#7 (16 Feb 2026, 14:03:25)

Started by user mmm

Started 14 sec ago
Took 9.3 sec on Slave

This run spent:

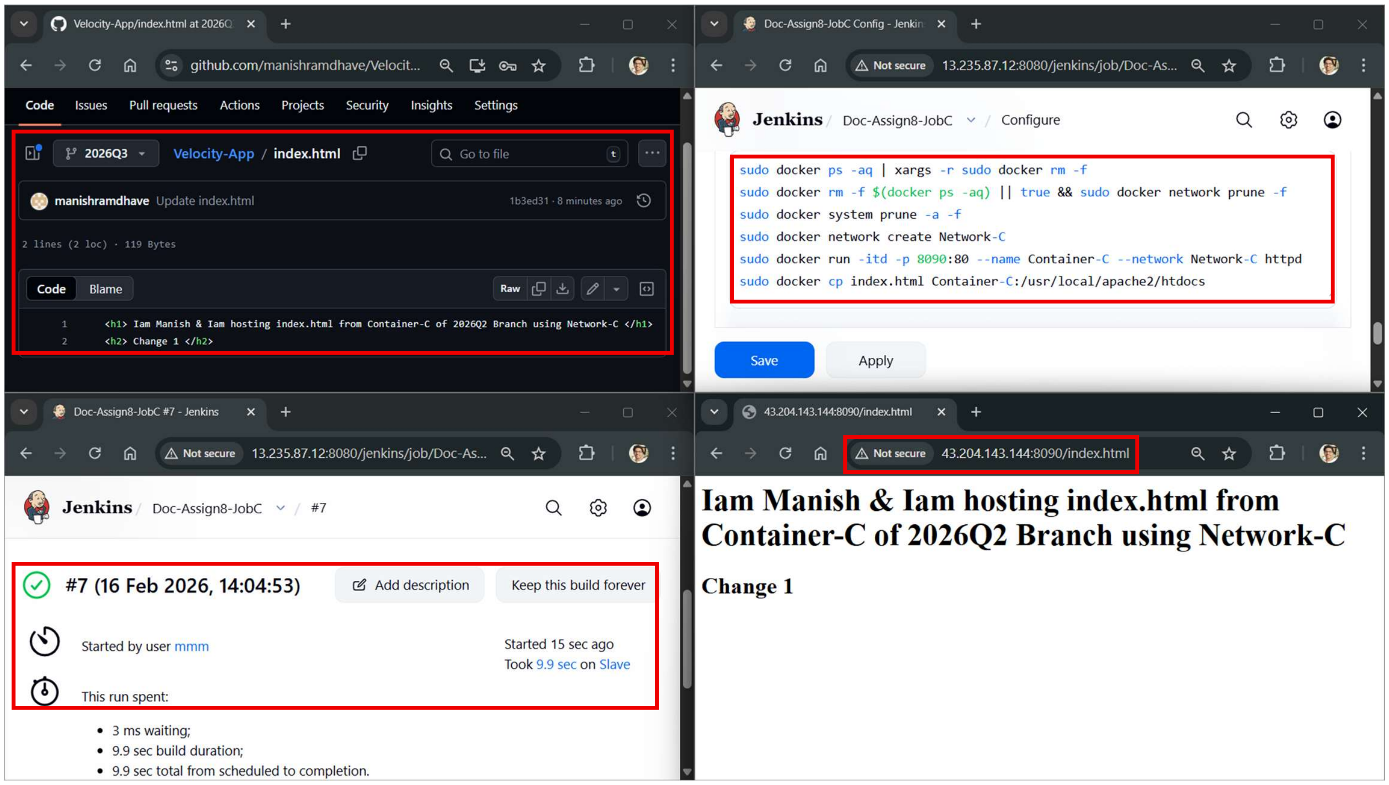
- 3 ms waiting;
- 9.3 sec build duration;
- 9.3 sec total from scheduled to completion.

43.204.143.144:90/index.html

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

Done with Docker Assignment 8

3. When changes are done in **2026Q3 branch**, Build is triggered by **‘Doc-Assign8-JobC’** and the updated index.html file is hosted from the **‘Container-C’** of **‘Network-C’** by following the shell script in the **‘Build Steps’** file of the same branch and hosted the using **Port No.8090**:


Velocity-App/index.html at 2026Q
github.com/manishramdhave/Velocit...
Code
Issues
Pull requests
Actions
Projects
Security
Insights
Settings
2026Q3
Velocity-App / index.html
Go to file
manishramdhave Update index.html
1b3ed31 · 8 minutes ago
2 lines (2 loc) · 119 Bytes
Code
Blame
Raw

```
<h1> Iam Manish & Iam hosting index.html from Container-C of 2026Q2 Branch using Network-C </h1>
<h2> Change 1 </h2>
```

Doc-Assign8-JobC Config - Jenkins
Not secure 13.235.87.12:8080/jenkins/job/Doc-As...
Jenkins / Doc-Assign8-JobC / Configure

```
sudo docker ps -aq | xargs -r sudo docker rm -f
sudo docker rm -f $(docker ps -aq) || true && sudo docker network prune -f
sudo docker system prune -a -f
sudo docker network create Network-C
sudo docker run -itd -p 8090:80 --name Container-C --network Network-C httpd
sudo docker cp index.html Container-C:/usr/local/apache2/htdocs
```

Save
Apply
Doc-Assign8-JobC #7 - Jenkins
Not secure 13.235.87.12:8080/jenkins/job/Doc-As...
Jenkins / Doc-Assign8-JobC / #7
Add description
Keep this build forever

#7 (16 Feb 2026, 14:04:53)

Started by user mmm

Started 15 sec ago
Took 9.9 sec on Slave

This run spent:

- 3 ms waiting;
- 9.9 sec build duration;
- 9.9 sec total from scheduled to completion.

43.204.143.144:8090/index.html
Not secure 43.204.143.144:8090/index.html

Iam Manish & Iam hosting index.html from Container-C of 2026Q2 Branch using Network-C

Change 1