



DEVOPS JENKINS ASSIGNMENT 2

Done By:

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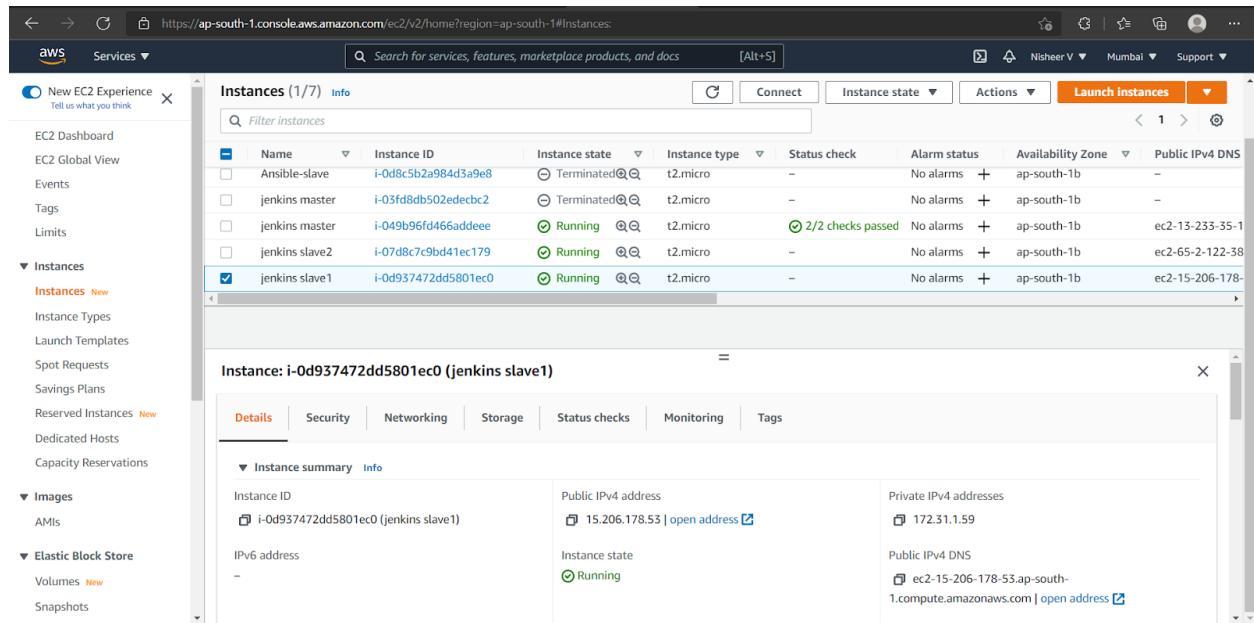
Under the Guidance of:

Dr. Uma S

Problem Statement

Creating a Jenkins CICD master slave pipeline

1. This is the jenkins master, jenkins slave 1 and jenkins slave 2 aws instances



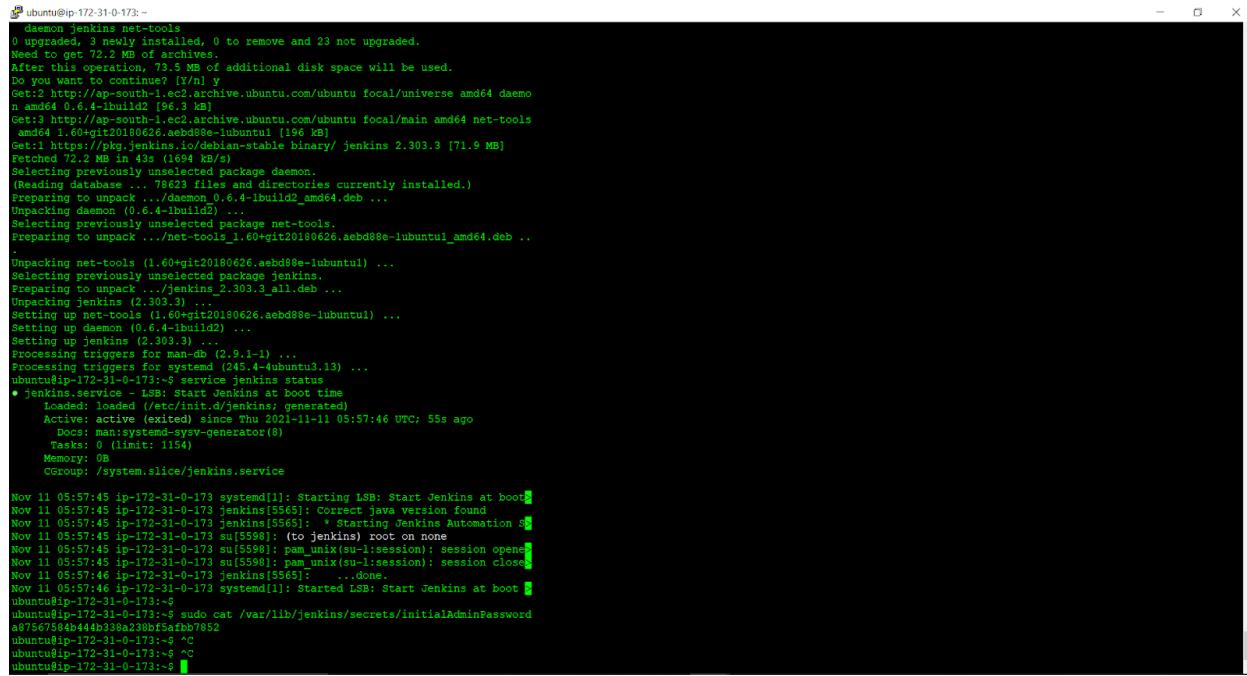
The screenshot shows the AWS EC2 Instances page. The left sidebar shows the navigation menu with 'Instances' selected. The main table lists seven instances, with 'jenkins slave1' selected. The details for 'jenkins slave1' are shown in a modal window, including its instance ID, public and private IP addresses, and instance state.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Ansible-slave	i-0d8c5b2a984d3a9e8	Terminated	t2.micro	-	No alarms	ap-south-1b	-
jenkins master	i-03fd8db502edecb2	Terminated	t2.micro	-	No alarms	ap-south-1b	-
jenkins master	i-049b96fd466addee	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1b	ec2-13-233-35-1
jenkins slave2	i-07d8c7c9bd41ec179	Running	t2.micro	-	No alarms	ap-south-1b	ec2-65-2-122-58
jenkins slave1	i-0d937472dd5801ec0	Running	t2.micro	-	No alarms	ap-south-1b	ec2-15-206-178-53.ap-south-1.compute.amazonaws.com

Instance: i-0d937472dd5801ec0 (jenkins slave1)

Details	Security	Networking	Storage	Status checks	Monitoring	Tags
Instance summary						
Instance ID i-0d937472dd5801ec0 (jenkins slave1)	Public IPv4 address 15.206.178.53 open address	Private IPv4 addresses 172.31.1.59				
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-15-206-178-53.ap-south-1.compute.amazonaws.com open address				

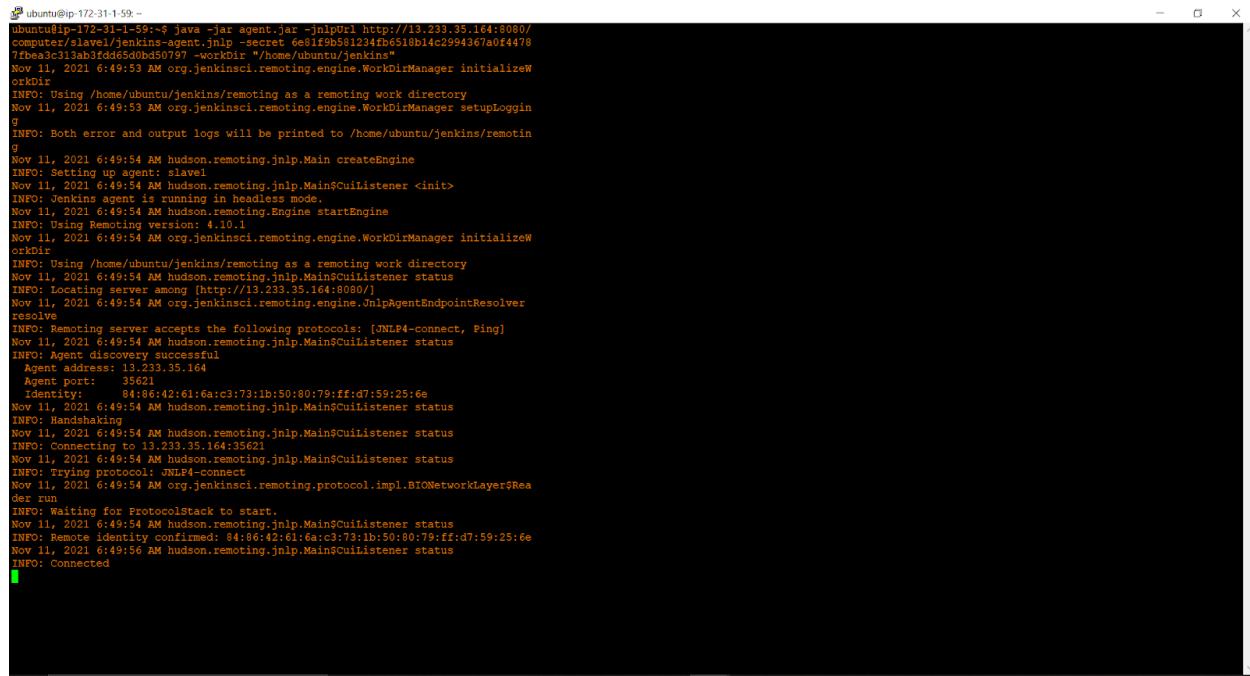
2.This is the jenkins master ec2 instance launched through putty, where jenkins is installed and status is active



```
ubuntu@ip-172-31-0-173:~$ sudo apt-get update
[...]
ubuntu@ip-172-31-0-173:~$ sudo apt-get install jenkins
[...]
ubuntu@ip-172-31-0-173:~$ systemctl status jenkins
● jenkins.service - Start Jenkins at boot time
   Loaded: loaded (/etc/init.d/jenkins; generated)
   Active: active (exited) since Thu 2021-11-11 05:57:46 UTC; 55s ago
     Docs: man:systemd-sysv-generator(8)
   Tasks: 0 (limit: 1154)
   Memory: 0B
   CGroup: /system.slice/jenkins.service

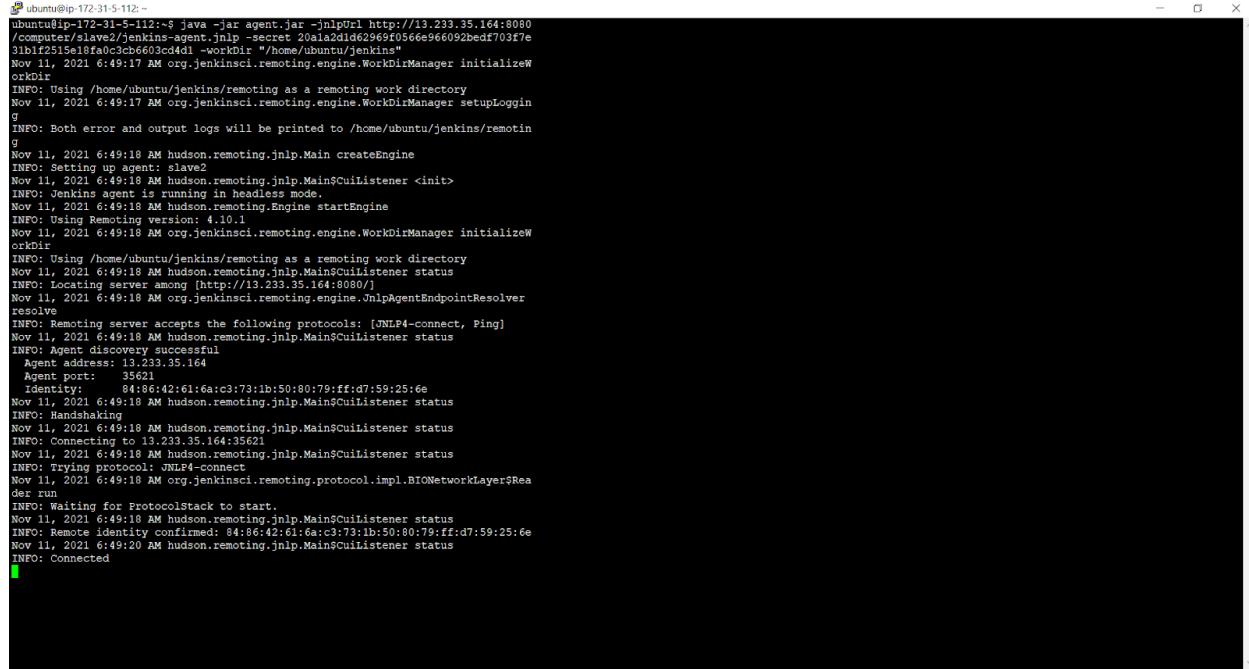
Nov 11 05:57:45 ip-172-31-0-173 systemd[1]: Starting Jenkins at boot...
Nov 11 05:57:45 ip-172-31-0-173 jenkins[5565]: Correct java version found
Nov 11 05:57:45 ip-172-31-0-173 jenkins[5565]: * Starting Jenkins Automation ...
Nov 11 05:57:45 ip-172-31-0-173 su[5598]: (to jenkins) root on none
Nov 11 05:57:45 ip-172-31-0-173 su[5598]: pam_unix(su-1:session): session opened for user jenkins by (uid=0)
Nov 11 05:57:45 ip-172-31-0-173 su[5598]: pam_unix(su-1:session): session closed for user jenkins
Nov 11 05:57:46 ip-172-31-0-173 jenkins[5565]: ...done.
Nov 11 05:57:46 ip-172-31-0-173 systemd[1]: Started LSB: Start Jenkins at boot ...
ubuntu@ip-172-31-0-173:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
a87567584b44fb338a238bf5afbb7852
ubuntu@ip-172-31-0-173:~$ ^C
ubuntu@ip-172-31-0-173:~$ ^C
ubuntu@ip-172-31-0-173:~$
```

3. This is the jenkins slave1 node connected to Jenkins server



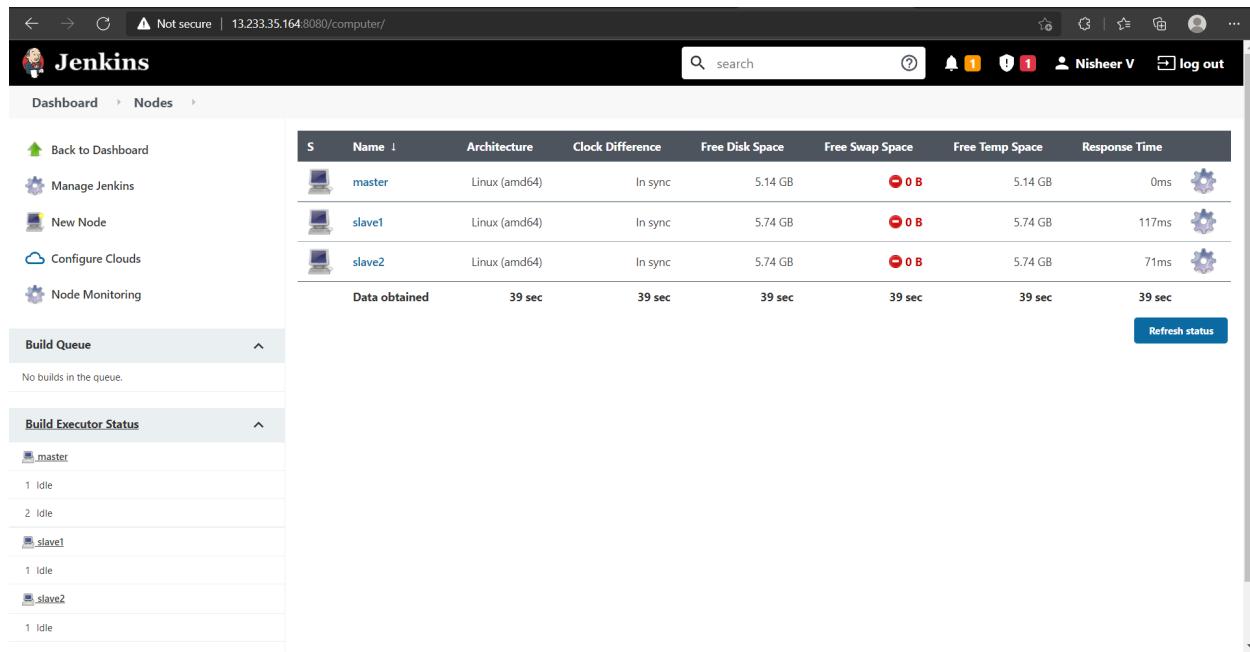
```
ubuntu@ip-172-31-1-59:~$ java -jar agent.jar -jnlpUrl http://13.233.35.164:8080/computer/slave1/jenkins-agent.jnlp -secret e61f9b581234fb651b1d1c2994367a0f44787fbfa3c313ab5ffd650bd450797 -workdir "/home/ubuntu/jenkins"
Nov 11, 2021 6:49:54 AM org.jenkinsci.remoting.engine.WorkDirManager initializeW
orkDir
INFO: Using /home/ubuntu/jenkins/remoting as a remoting work directory
Nov 11, 2021 6:49:53 AM org.jenkinsci.remoting.engine.WorkDirManager setupLoggin
g
INFO: Both error and output logs will be printed to /home/ubuntu/jenkins/remotin
g
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main createEngine
INFO: Setting up agent: slave1
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener <init>
INFO: Jenkins agent is running in headless mode.
Nov 11, 2021 6:49:54 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 4.10.1
Nov 11, 2021 6:49:54 AM org.jenkinsci.remoting.engine.WorkDirManager initializeW
orkDir
INFO: Using /home/ubuntu/jenkins/remoting as a remoting work directory
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Locating server among [http://13.233.35.164:8080/]
Nov 11, 2021 6:49:54 AM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver
resolve
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Agent discovery successful
  Agent address: 13.233.35.164
  Agent port: 35621
  Identity: 84:86:42:61:6a:c3:73:1b:50:80:79:ff:d7:59:25:6e
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Handshaking
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Connecting to 13.233.35.164:35621
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Nov 11, 2021 6:49:54 AM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Rea
der run
INFO: Waiting for ProtocolStack to start.
Nov 11, 2021 6:49:54 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Remote identity confirmed: 84:86:42:61:6a:c3:73:1b:50:80:79:ff:d7:59:25:6e
Nov 11, 2021 6:49:56 AM hudson.remoting.Jnlp.Main$CuiListener status
INFO: Connected
```

4. This is the jenkins slave2 node connected to Jenkins server



```
ubuntu@ip-172-31-5-112:~  
ubuntu@ip-172-31-5-112:~$ java -jar agent.jar http://13.233.35.164:8080  
/computer/slave2/jenkins-agent.jnlp -secret 20a1a2d1d6296f0566e966092bed703f7e  
31b1f2515e18fa0a3ccb6603cd41 -workdir "/home/ubuntu/jenkins"  
Nov 11, 2021 6:49:17 AM org.jenkinsci.remoting.engine.WorkDirManager initializeW  
orkDir  
INFO: Using /home/ubuntu/jenkins/remoting as a remoting work directory  
Nov 11, 2021 6:49:17 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogin  
g  
INFO: Both error and output logs will be printed to /home/ubuntu/jenkins/remotin  
g  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main createEngine  
INFO: Setting up agent: slave2  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener <init>  
INFO: Jenkins agent is running in headless mode.  
Nov 11, 2021 6:49:18 AM hudson.remoting.Engine startEngine  
INFO: Using Remoting version: 4.10.1  
Nov 11, 2021 6:49:18 AM org.jenkinsci.remoting.engine.WorkDirManager initializeW  
orkDir  
INFO: Using /home/ubuntu/jenkins/remoting as a remoting work directory  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Locating server: amono [http://13.233.35.164:8080]  
Nov 11, 2021 6:49:18 AM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver  
resolve  
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Agent discovery successful  
  Agent address: 13.233.35.164  
  Agent port: 35621  
  Identity: 84:86:42:61:6a:c3:73:1b:50:80:79:ff:d7:59:25:6e  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Handshaking  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Connected to amono [13.233.35.164:35621]  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Trying protocol: JNLP4-connect  
Nov 11, 2021 6:49:18 AM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Rea  
der run  
INFO: Waiting for ProtocolStack to start.  
Nov 11, 2021 6:49:18 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Remote identity confirmed: 84:86:42:61:6a:c3:73:1b:50:80:79:ff:d7:59:25:6e  
Nov 11, 2021 6:49:20 AM hudson.remoting.jnlp.Main$CuiListener status  
INFO: Connected
```

5. This is the fully connected master and slaves setup



The screenshot shows the Jenkins dashboard with the following details:

Header: Not secure | 13.233.35.164:8080/computer/ | Jenkins | search | Nisheer V | log out

Left Sidebar:

- Back to Dashboard
- Manage Jenkins
- New Node
- Configure Clouds
- Node Monitoring

Build Queue: No builds in the queue.

Build Executor Status:

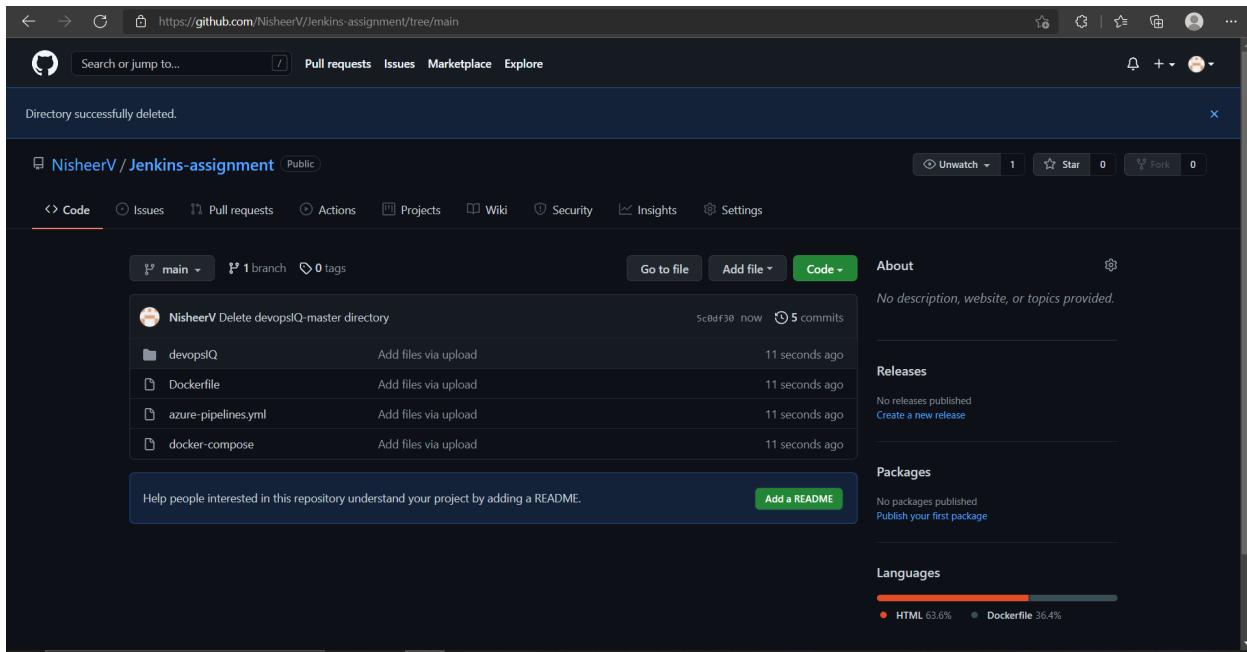
Node	Idle
master	1
slave1	2
slave2	1

Nodes Table:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
1	master	Linux (amd64)	In sync	5.14 GB	0 B	5.14 GB	0ms
2	slave1	Linux (amd64)	In sync	5.74 GB	0 B	5.74 GB	117ms
3	slave2	Linux (amd64)	In sync	5.74 GB	0 B	5.74 GB	71ms

Buttons: Refresh status

6. This is the github repository which contains the project files



The screenshot shows a GitHub repository page for 'NisheerV / Jenkins-assignment'. The repository is public and has a single commit from 'NisheerV' that deleted the 'devopsIQ-master' directory. The commit message is 'Delete devopsIQ-master directory'. The commit was made 11 seconds ago and has 5 commits. The repository has 1 branch and 0 tags. There are tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The Code tab is selected. The repository has 1 star and 0 forks. The 'About' section notes 'No description, website, or topics provided.' The 'Releases' section indicates 'No releases published' and 'Create a new release'. The 'Packages' section shows 'No packages published' and 'Publish your first package'. The 'Languages' section shows a breakdown: HTML 63.6% and Dockerfile 36.4%.

Directory successfully deleted.

NisheerV / Jenkins-assignment (Public)

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags

NisheerV Delete devopsIQ-master directory 5c0df30 now 5 commits

File	Commit	Time Ago
devopsIQ	Add files via upload	11 seconds ago
Dockerfile	Add files via upload	11 seconds ago
azure-pipelines.yml	Add files via upload	11 seconds ago
docker-compose	Add files via upload	11 seconds ago

Help people interested in this repository understand your project by adding a README. [Add a README](#)

About

No description, website, or topics provided.

Releases

No releases published [Create a new release](#)

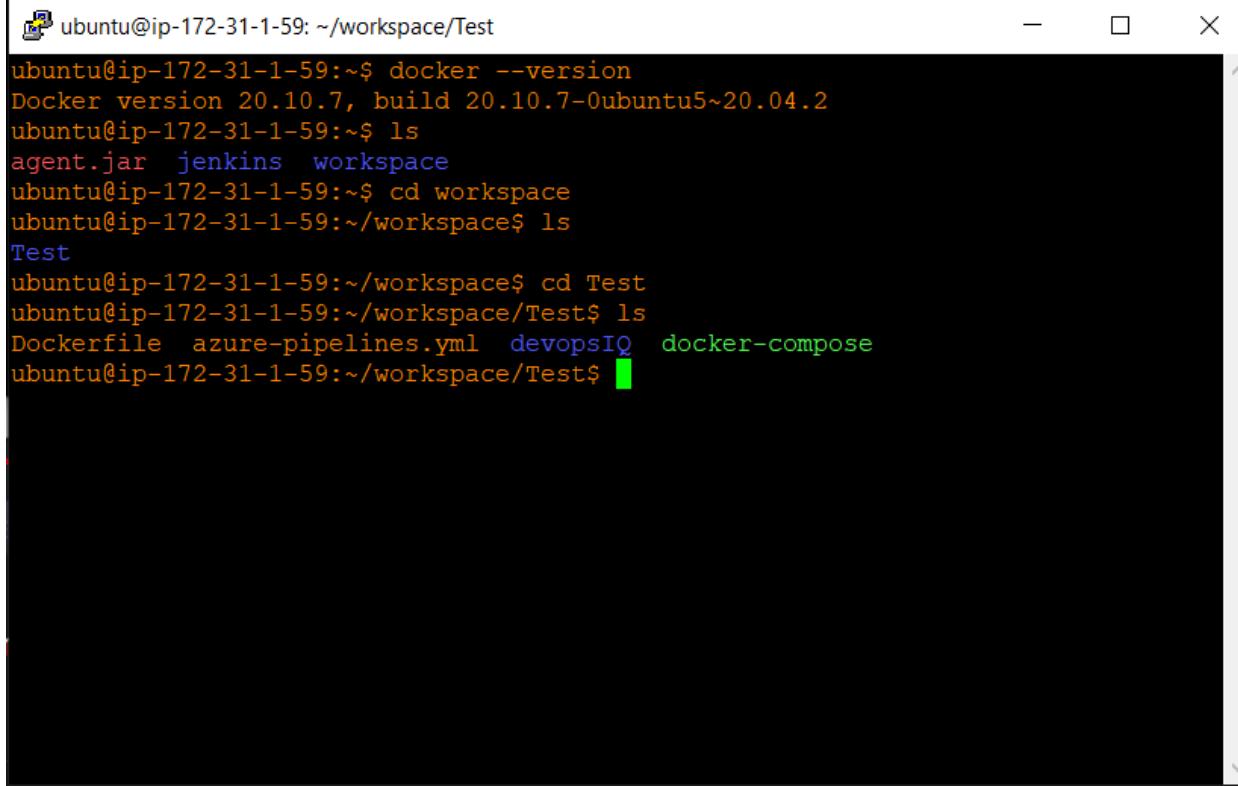
Packages

No packages published [Publish your first package](#)

Languages

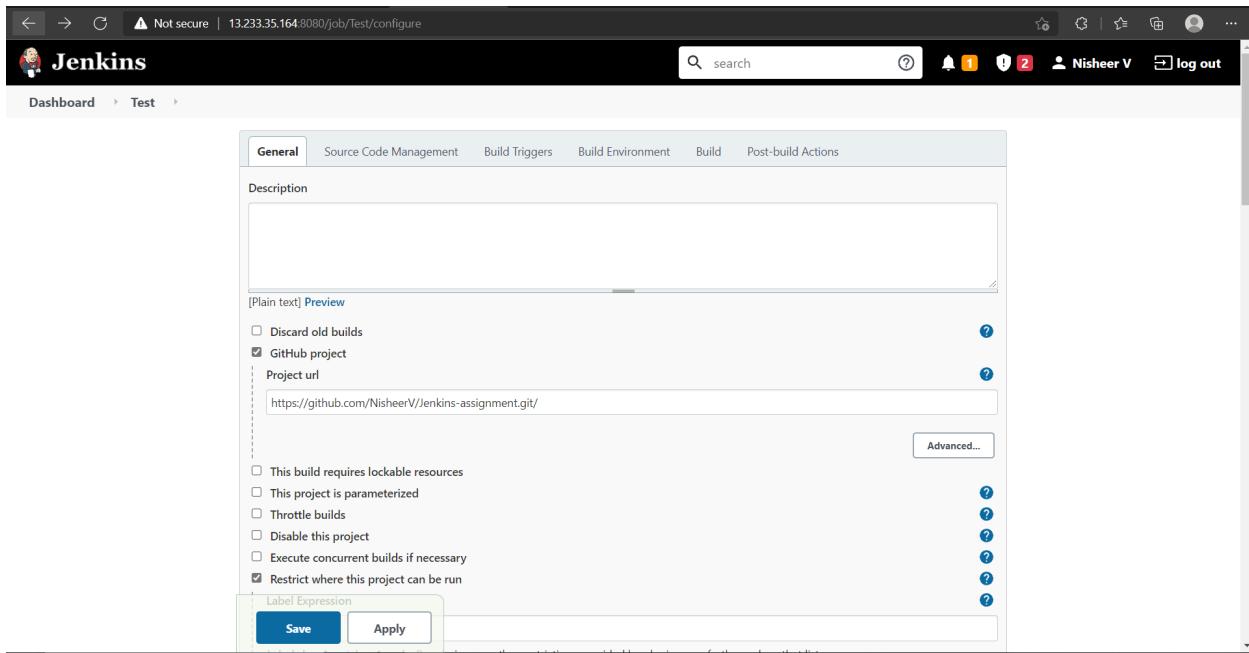
HTML 63.6% Dockerfile 36.4%

7. Checking contents of slave1 test server after executing build step.



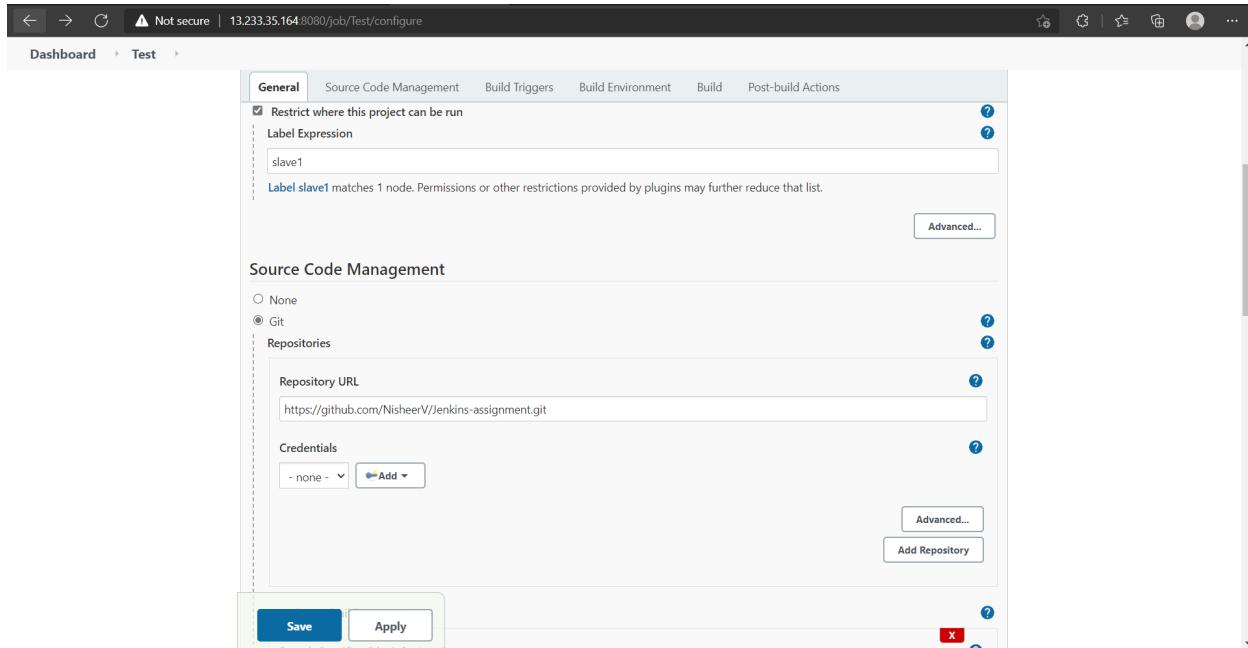
```
ubuntu@ip-172-31-1-59: ~/workspace/Test
ubuntu@ip-172-31-1-59:~$ docker --version
Docker version 20.10.7, build 20.10.7-0ubuntu5~20.04.2
ubuntu@ip-172-31-1-59:~$ ls
agent.jar jenkins workspace
ubuntu@ip-172-31-1-59:~$ cd workspace
ubuntu@ip-172-31-1-59:~/workspace$ ls
Test
ubuntu@ip-172-31-1-59:~/workspace$ cd Test
ubuntu@ip-172-31-1-59:~/workspace/Test$ ls
Dockerfile azure-pipelines.yml devopsIQ docker-compose
ubuntu@ip-172-31-1-59:~/workspace/Test$
```

8. Configuring the test server by first adding Github project link



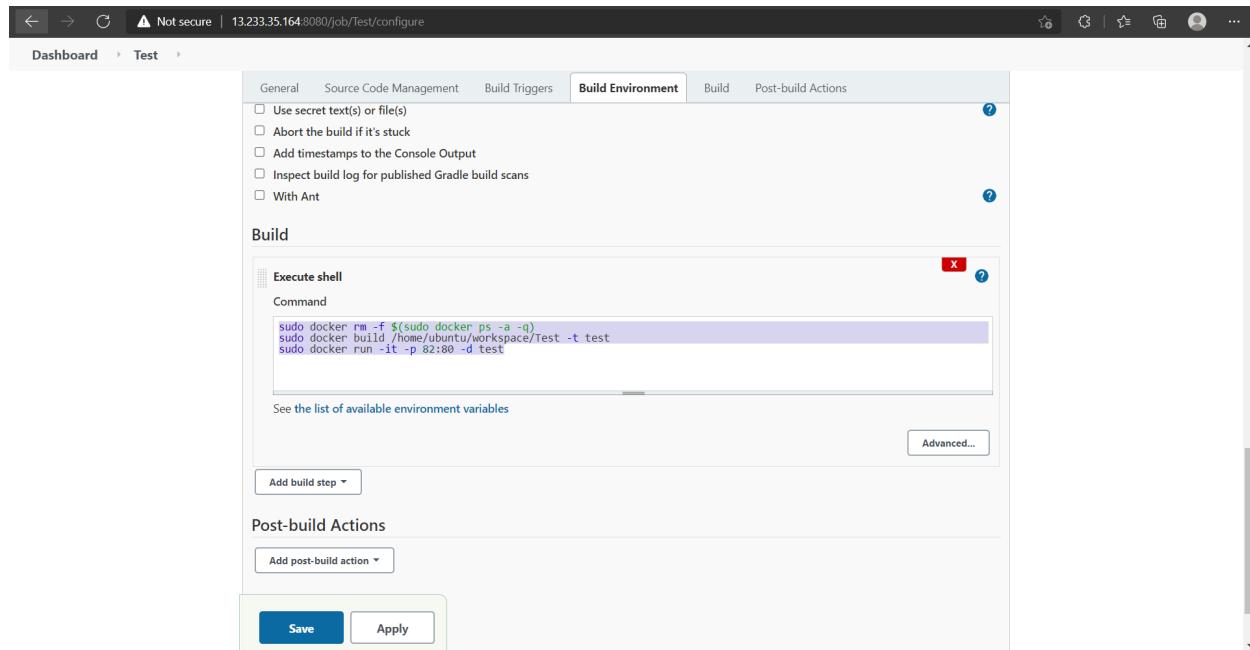
The screenshot shows the Jenkins configuration interface for a job named 'Test'. The 'General' tab is selected. In the 'Source Code Management' section, the 'GitHub project' checkbox is checked, and the 'Project url' is set to <https://github.com/NisheerV/Jenkins-assignment.git>. The 'Advanced...' button is visible. Below the checkboxes, there are several other options: 'This build requires lockable resources', 'This project is parameterized', 'Throttle builds', 'Disable this project', 'Execute concurrent builds if necessary', and 'Restrict where this project can be run'. The 'Restrict where this project can be run' checkbox is checked. At the bottom, there are 'Label Expression' and 'Save' buttons, with 'Save' being highlighted in blue.

9. Restricting project to slave 1 and Adding Source code management as Git when configuring for the test server.



The screenshot shows the Jenkins job configuration page for a job named 'Test'. The 'General' tab is selected. Under 'Restrict where this project can be run', the 'Label Expression' is set to 'slave1'. Below this, a note states: 'Label slave1 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.' The 'Source Code Management' section is expanded, showing 'Git' selected as the provider. The 'Repository URL' is set to 'https://github.com/NisheerV/Jenkins-assignment.git'. The 'Credentials' dropdown is set to '- none -'. At the bottom of the configuration page are 'Save' and 'Apply' buttons.

10. Adding build steps to the test server



Not secure | 13.233.35.164:8080/job/Test/configure

Dashboard > Test >

General Source Code Management Build Triggers **Build Environment** Build Post-build Actions

Use secret text(s) or file(s) Abort the build if it's stuck Add timestamps to the Console Output Inspect build log for published Gradle build scans With Ant

Build

Execute shell X ?

Command

```
sudo docker rm -f $(sudo docker ps -a -q)
sudo docker build /home/ubuntu/workspace/Test -t test
sudo docker run -it -p 82:80 -d test
```

See the list of available environment variables Advanced...

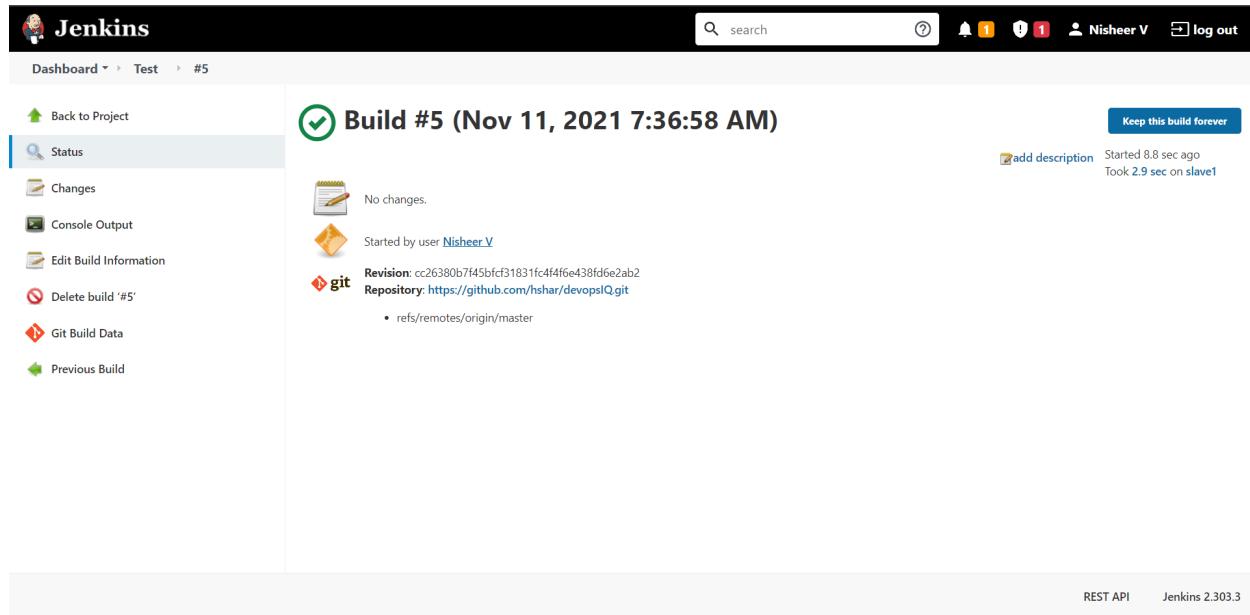
Add build step ▾

Post-build Actions

Add post-build action ▾

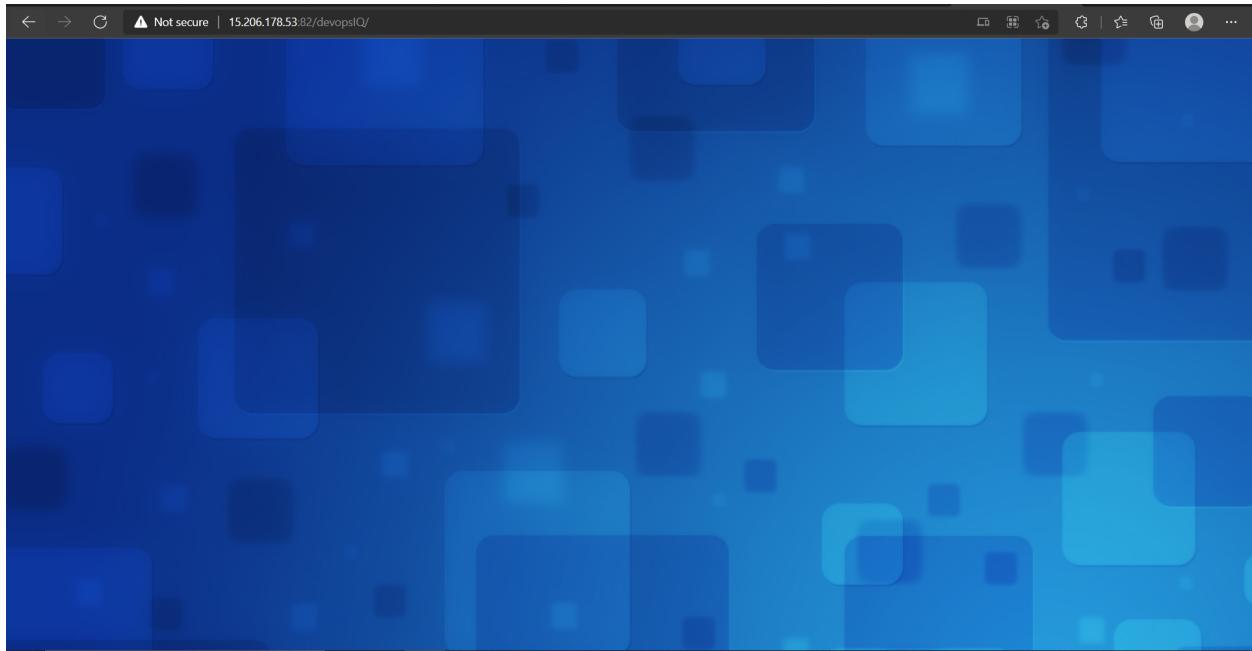
Save **Apply**

11. First successful build on slave 1 test server



The screenshot shows the Jenkins web interface for a build named 'Test' (Build #5). The build was successful, indicated by a green checkmark icon and the text 'Build #5 (Nov 11, 2021 7:36:58 AM)'. The build was started by user 'Nisheer V' and took 2.9 sec on slave1. The build status is 'No changes.' and the repository information is provided: Revision: cc26380b7f45bfcf31831fc4f4f6e438fd6e2ab2, Repository: <https://github.com/hshar/devops1Q.git>, and ref: refs/remotes/origin/master. The sidebar on the left shows links for Back to Project, Status, Changes, Console Output, Edit Build Information, Delete build #5, Git Build Data, and Previous Build. The top right corner shows user 'Nisheer V' and a 'log out' link. The bottom right corner shows 'REST API' and 'Jenkins 2.303.3'.

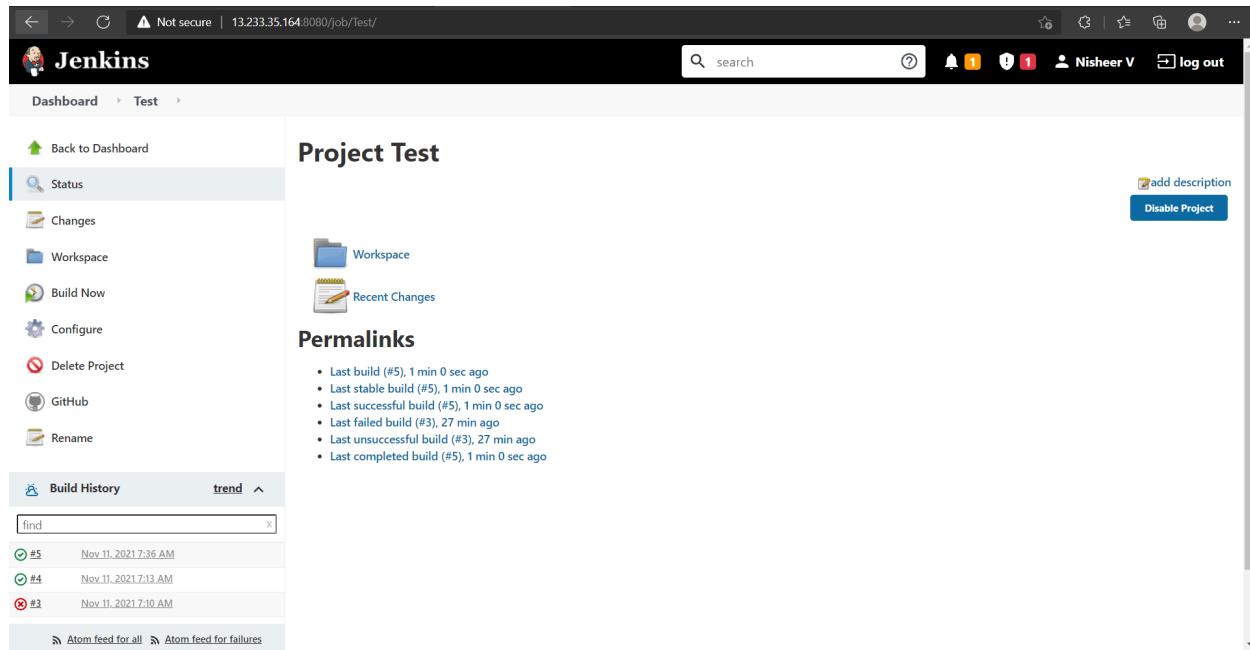
12.Working website on test server



13. Now testing the test server by removing the current container

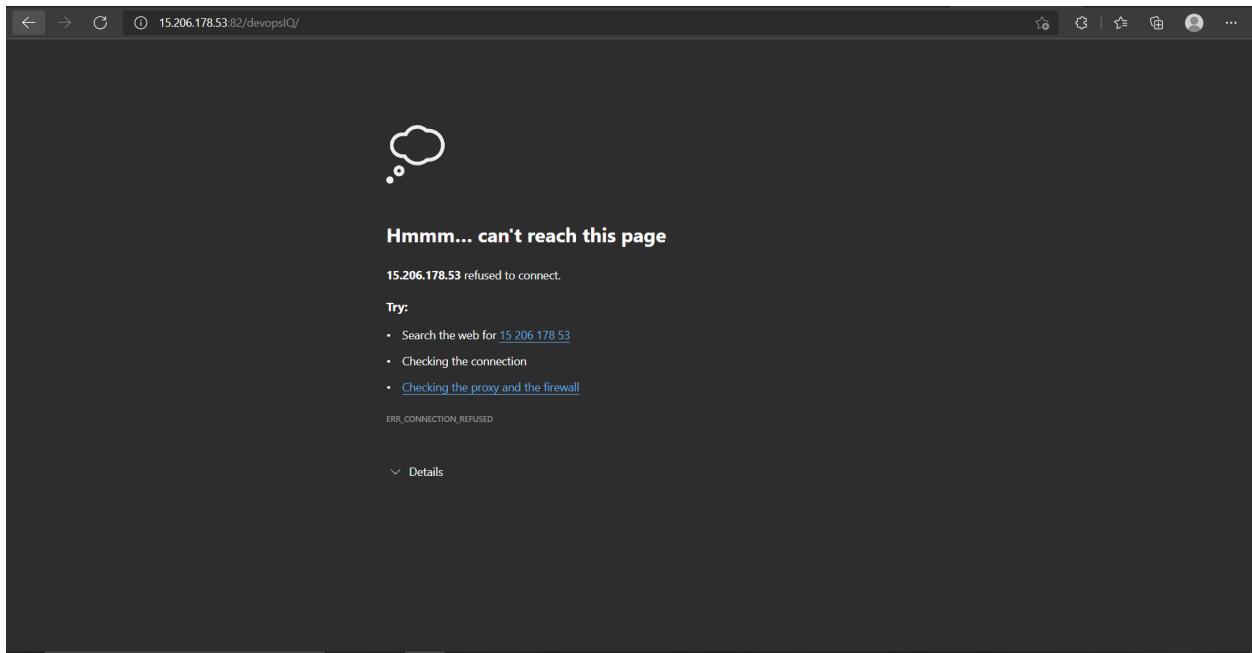
```
ubuntu@ip-172-31-1-59:~/workspace/Test
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker run -it -p 82:80 -d test
c6ba5c965afa7e1e670e2136c2a61c800b15855c118f4e0c6696c62c9ba101a41
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS
PORTS NAMES
c6ba5c965afa test "/bin/sh -c 'apachec_'" 9 minutes ago Up 9 minutes
0.0.0.0:82->80/tcp, :::82->80/tcp serene_northcutt
ubuntu@ip-172-31-1-59:~/workspace/Test$ ^C
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker rm -f c6ba5c965afa
c6ba5c965afa
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker run -it -d ubuntu
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
7b1a6a824481: Pull complete
Digest: sha256:626ffef5ff7566e00254b638eb7e0f3b11d4da9675000f4781a50ae200f3322
Status: Downloaded newer image for ubuntu:latest
e395da7a5502a77174e136c6662d2a639fc00e43a10103554606fcfc1a0523
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS
PORTS NAMES
fd9000ac9f7a test "/bin/sh -c 'apachec_'" About a minute ago Up About
a minute 0.0.0.0:82->80/tcp, :::82->80/tcp dreamy_yallow
ubuntu@ip-172-31-1-59:~/workspace/Test$ ^C
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker rm -f ^C
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker rm -f fd9000ac9f7a
fd9000ac9f7a
ubuntu@ip-172-31-1-59:~/workspace/Test$
```

14. Project test build status



The screenshot shows the Jenkins interface for a project named "Test". The top navigation bar indicates the URL as "13.233.35.164:8080/job/Test/". The main content area is titled "Project Test". On the left, a sidebar menu includes "Back to Dashboard", "Status" (which is selected and highlighted in blue), "Changes", "Workspace", "Build Now", "Configure", "Delete Project", "GitHub", and "Rename". The "Status" section displays a "Workspace" icon and a "Recent Changes" icon. On the right, there are buttons for "add description" and "Disable Project". Below the sidebar, a "Build History" section is titled "Build History" with a "trend" dropdown set to "▲". It includes a search bar with the placeholder "find" and a list of builds: #5 (Nov 11, 2021 7:36 AM, green checkmark), #4 (Nov 11, 2021 7:13 AM, green checkmark), and #3 (Nov 11, 2021 7:10 AM, red X). At the bottom of the history section are links for "Atom feed for all" and "Atom feed for failures".

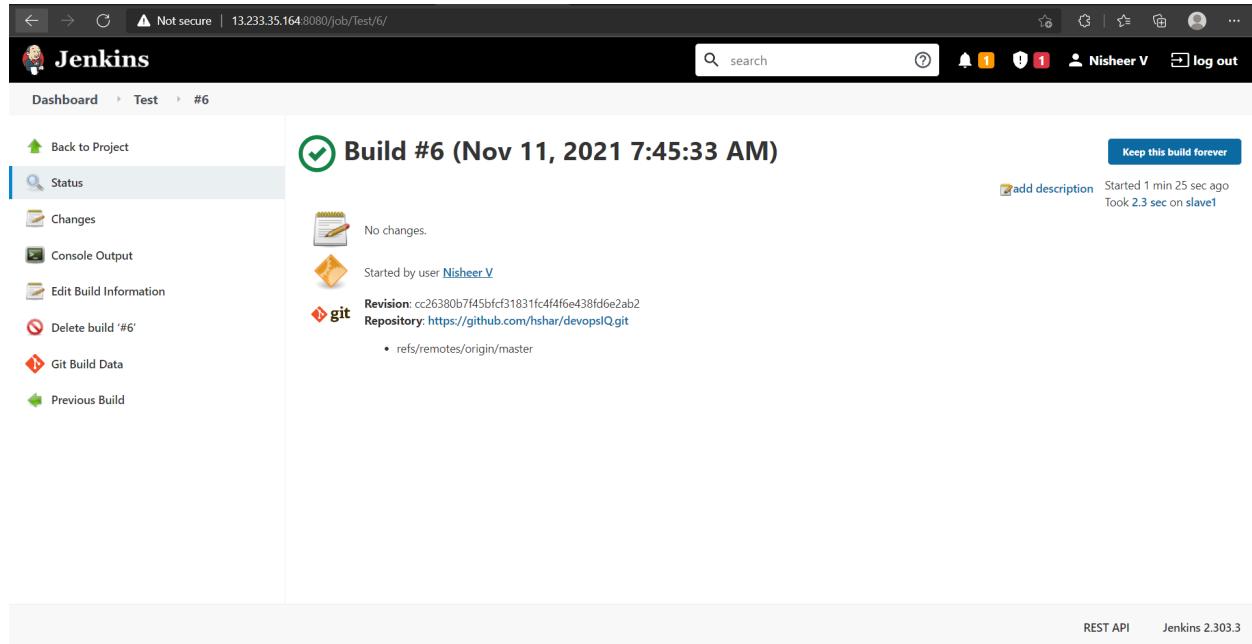
15.Checking the website if the container has been removed



16.Adding command to build an arbitrary container

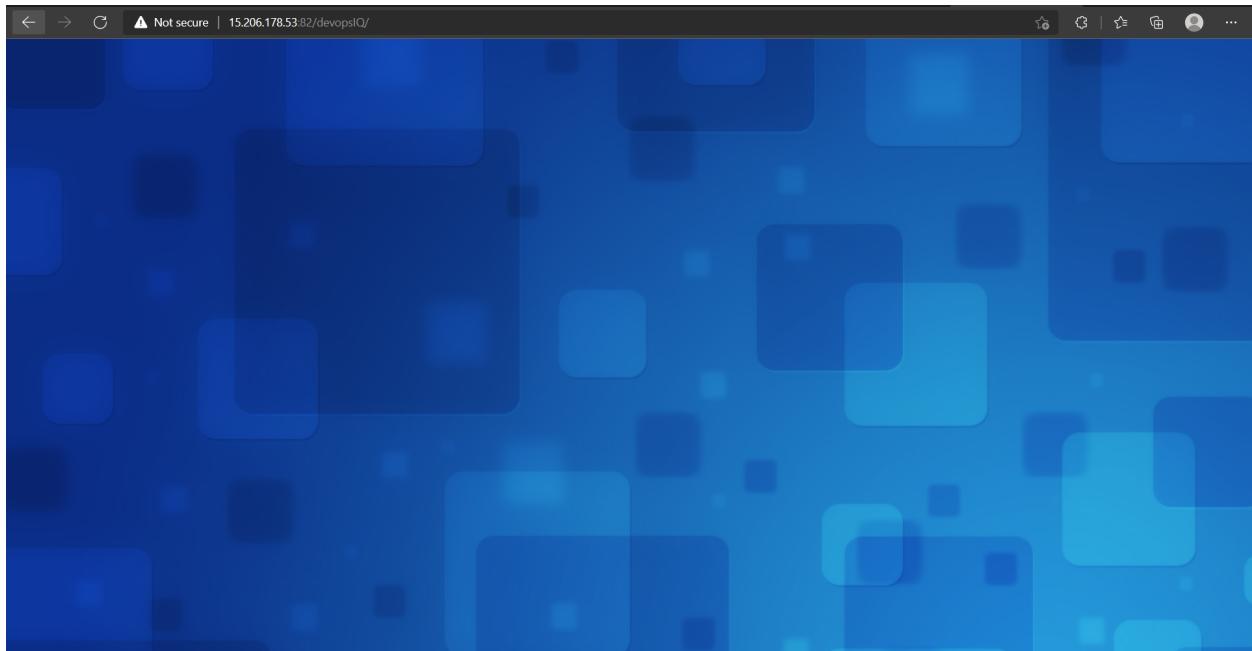
```
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker run -it -p 82:80 -d test
c6ba5c965afa  test    "/bin/sh -c 'apachectl'"  9 minutes ago  Up 9 minutes
0.0.0.0:82->80/tcp, :::82->80/tcp  serene_northcutt
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
c6ba5c965afa        test    "/bin/sh -c 'apachectl'"  9 minutes ago  Up 9 minutes
0.0.0.0:82->80/tcp, :::82->80/tcp  serene_northcutt
ubuntu@ip-172-31-1-59:~/workspace/Test$ ^C
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker rm -f c6ba5c965afa
c6ba5c965afa
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker run -it -d ubuntu
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
7b1a6ab2e448: Pull complete
Digest: sha256:626ffef5ff7566e00254b638eb7e0f3b11d4da9675000f4781a50ae200f3322
Status: Downloaded newer image for ubuntu:latest
ed395da7a5502a77174e136cb66d2a639fc00e43a310103554606fcfc1a0523
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED            STATUS              PORTS
fd9000acf7a        test    "/bin/sh -c 'apachectl'"  About a minute ago  Up About
a minute  0.0.0.0:82->80/tcp, :::82->80/tcp  dreamy_yallow
ubuntu@ip-172-31-1-59:~/workspace/Test$ ^C
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker rm -f fd9000acf7a
fd9000acf7a
ubuntu@ip-172-31-1-59:~/workspace/Test$ sudo docker run -it -d ubuntu
f948d707ff4a9442fe0097901fe802d5339e646216698f03276fe1045a41a
ubuntu@ip-172-31-1-59:~/workspace/Test$
```

17. Running new build to check if the test server is executing all commands

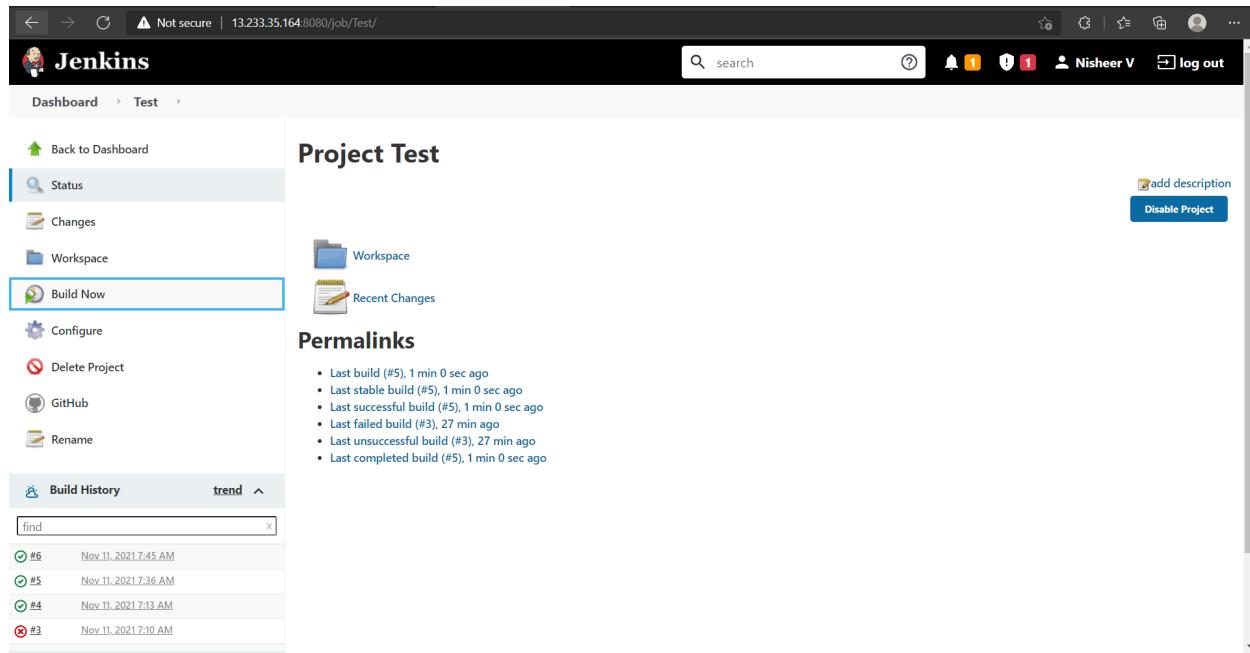


The screenshot shows a Jenkins build page for build #6. The top navigation bar includes links for 'Dashboard', 'Test', and '#6'. The main title is 'Build #6 (Nov 11, 2021 7:45:33 AM)'. A 'Keep this build forever' button is visible. The left sidebar contains links for 'Status', 'Changes', 'Console Output', 'Edit Build Information', 'Delete build #6', 'Git Build Data', and 'Previous Build'. The main content area shows a green checkmark icon and the text 'Build #6 (Nov 11, 2021 7:45:33 AM)'. It indicates 'No changes.' and shows the build was started by user 'Nisheer V'. The 'git' section shows the revision 'cc26380b7f45bfcf31831fc4f4f6e438fd6e2ab2' and the repository 'https://github.com/hshar/devops1Q.git'. A note at the bottom states 'Took 2.3 sec on slave1'. The bottom right of the page shows 'REST API' and 'Jenkins 2.303.3'.

18.New build is successful



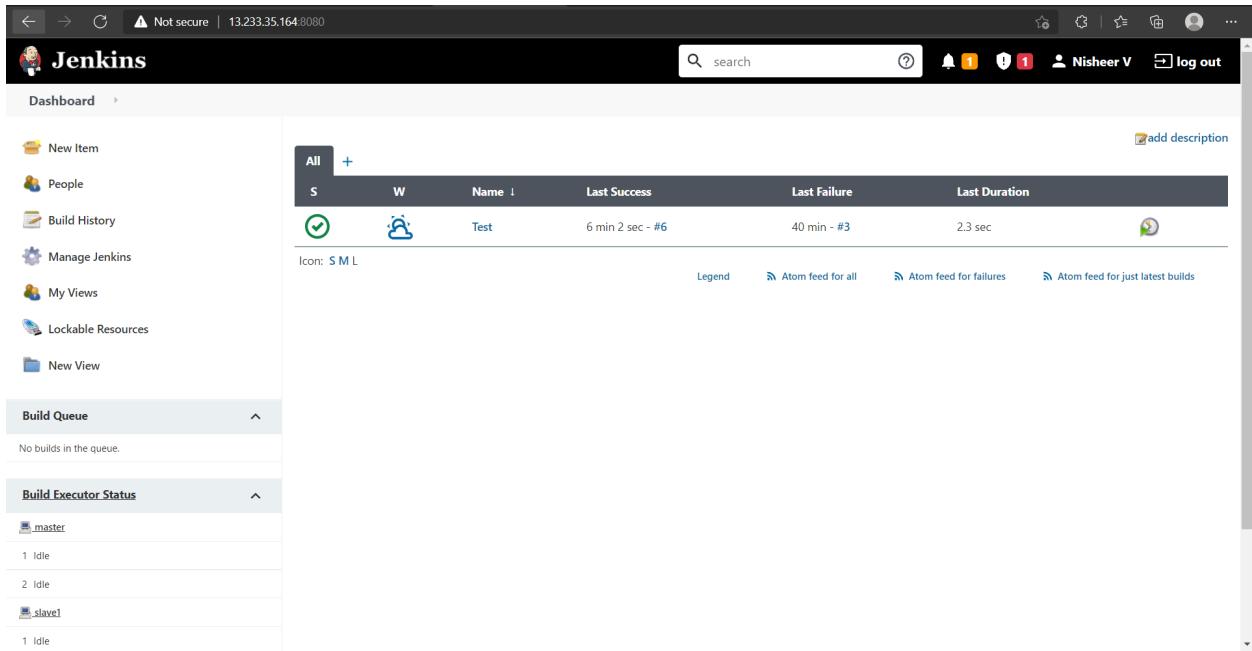
19. This is the test server build status



The screenshot shows the Jenkins interface for a project named 'Test'. The left sidebar contains links for 'Back to Dashboard', 'Status', 'Changes', 'Workspace', 'Build Now' (which is highlighted with a blue border), 'Configure', 'Delete Project', 'GitHub', and 'Rename'. The main content area is titled 'Project Test' and shows a 'Workspace' icon and a 'Recent Changes' icon. On the right, there are buttons for 'add description' and 'Disable Project'. Below these are 'Permalinks' and a list of build history. The build history table has columns for 'Build' and 'Time'. The data is as follows:

Build	Time
#6	Nov 11, 2021 7:45 AM
#5	Nov 11, 2021 7:36 AM
#4	Nov 11, 2021 7:13 AM
#3	Nov 11, 2021 7:10 AM

20.This is the running test server project dashboard



The screenshot shows the Jenkins dashboard for a project named 'Test'. The dashboard includes a sidebar with links for 'New Item', 'People', 'Build History', 'Manage Jenkins', 'My Views', 'Lockable Resources', and 'New View'. The main area displays a table with columns: All, S, W, Name, Last Success, Last Failure, and Last Duration. The 'Test' job is listed with the following details: Status (S) is green (Success), Workstation (W) is a blue cloud icon, Name is 'Test', Last Success was 6 min 2 sec - #6, Last Failure was 40 min - #3, and Last Duration was 2.3 sec. Below the table, there is a legend and links for Atom feeds: 'Atom feed for all', 'Atom feed for failures', and 'Atom feed for just latest builds'. The sidebar also shows sections for 'Build Queue' (No builds in the queue) and 'Build Executor Status' (master: 1 idle, slave1: 1 idle).

All	S	W	Name	Last Success	Last Failure	Last Duration
			Test	6 min 2 sec - #6	40 min - #3	2.3 sec

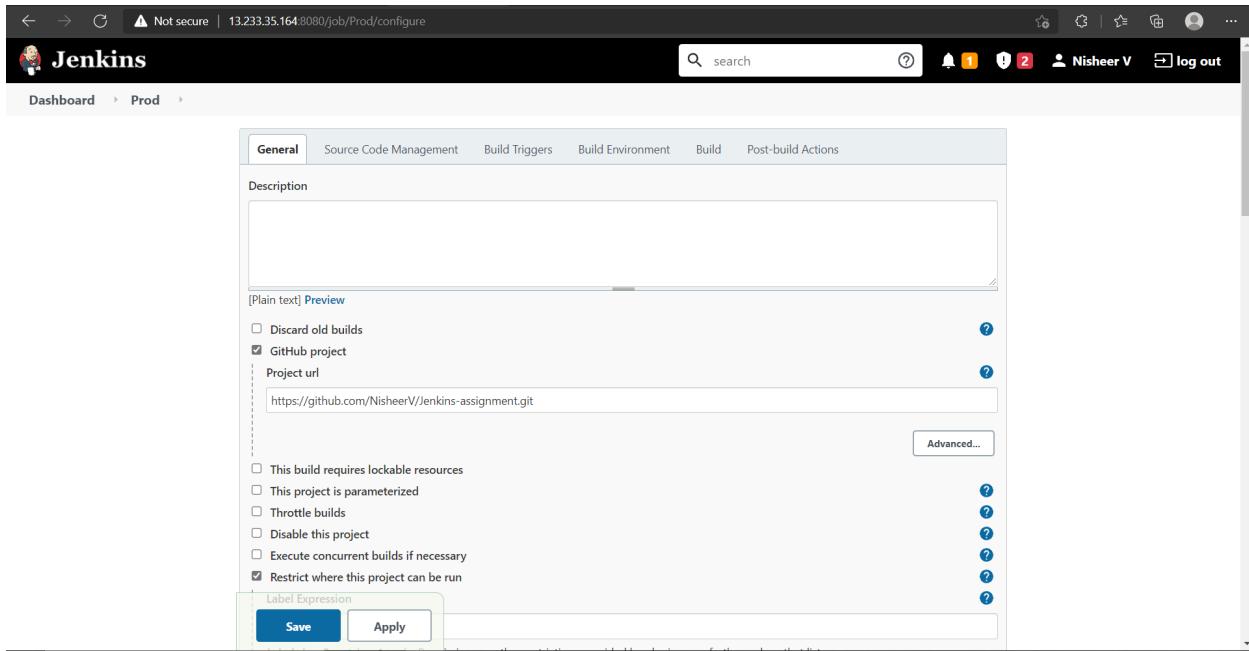
Icon: S M L

Legend: Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Queue
No builds in the queue.

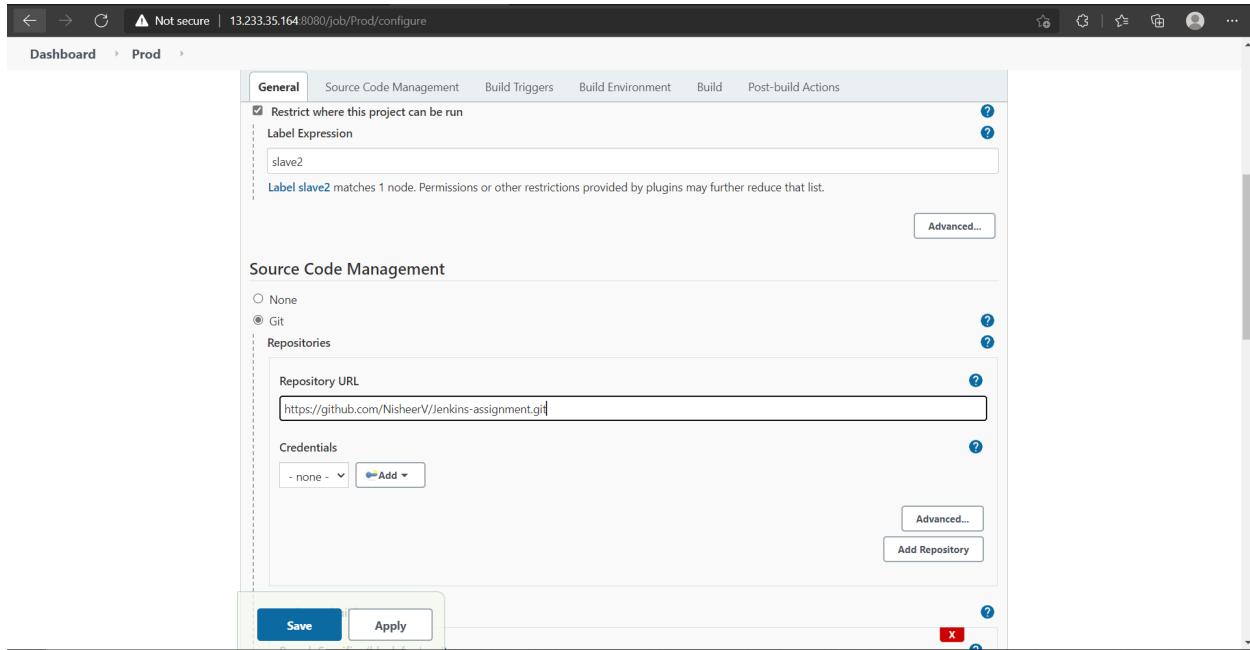
Build Executor Status
master
1 Idle
slave1
1 Idle

21.Configuring the production server by first adding Github project link



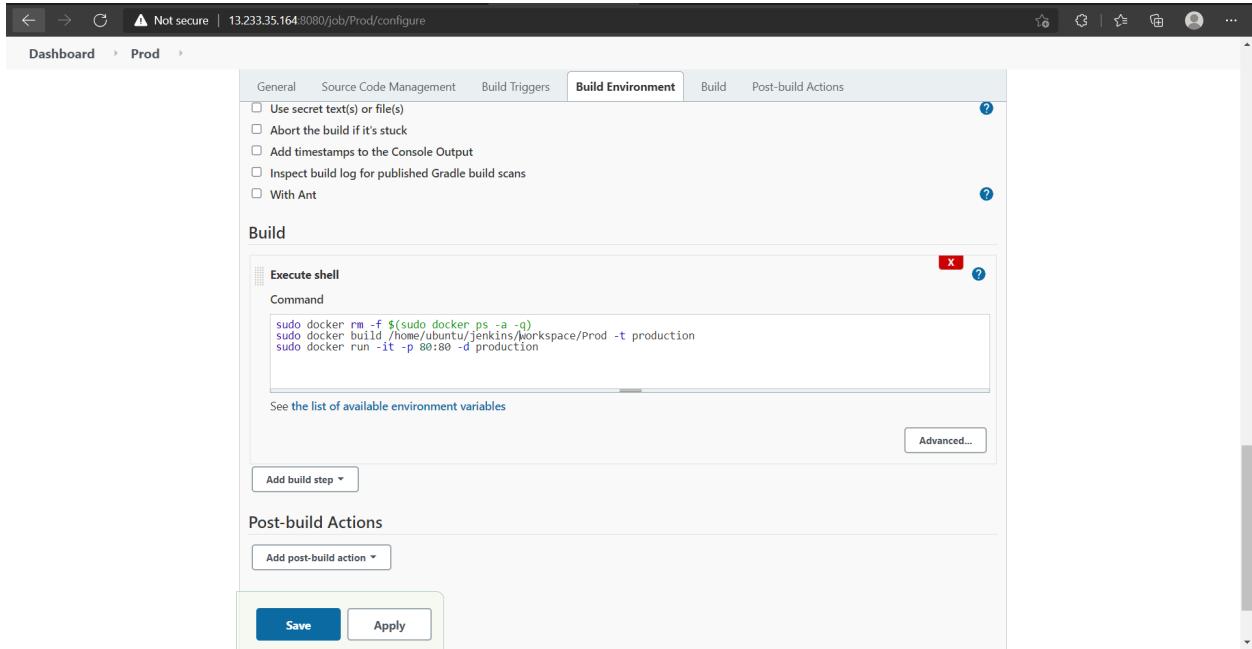
The screenshot shows the Jenkins configuration interface for a job named 'Prod'. The 'General' tab is selected. In the 'Source Code Management' section, the 'GitHub project' checkbox is checked, and the 'Project url' field contains the value 'https://github.com/NisheerV/Jenkins-assignment.git'. There are several other configuration options available in the 'Advanced...' section, such as 'Discard old builds', 'Label Expression', and checkboxes for 'This build requires lockable resources', 'This project is parameterized', 'Throttle builds', 'Disable this project', 'Execute concurrent builds if necessary', and 'Restrict where this project can be run'. At the bottom of the page are 'Save' and 'Apply' buttons.

22.Restricting project to slave 2 and Adding Source code management as Git when configuring for the production server.



The screenshot shows the Jenkins configuration page for a project named 'Prod'. The 'General' tab is selected. Under 'Restrict where this project can be run', the 'Label Expression' is set to 'slave2'. A note below states: 'Label slave2 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.' The 'Source Code Management' section is expanded, showing 'Git' selected as the provider. The 'Repository URL' is set to 'https://github.com/NisheerV/Jenkins-assignment.git'. The 'Credentials' dropdown is set to 'none'. At the bottom, there are 'Save' and 'Apply' buttons.

23.Adding build steps to the production server



Not secure | 13.233.35.164:8080/job/Prod/configure

Dashboard > Prod >

General Source Code Management Build Triggers **Build Environment** Build Post-build Actions

Use secret text(s) or file(s) Abort the build if it's stuck Add timestamps to the Console Output Inspect build log for published Gradle build scans With Ant

Build

Execute shell x ?

Command

```
sudo docker rm -f $(sudo docker ps -a -q)
sudo docker build /home/ubuntu/jenkins/workspace/Prod -t production
sudo docker run -it -p 80:80 -d production
```

See [the list of available environment variables](#) Advanced...

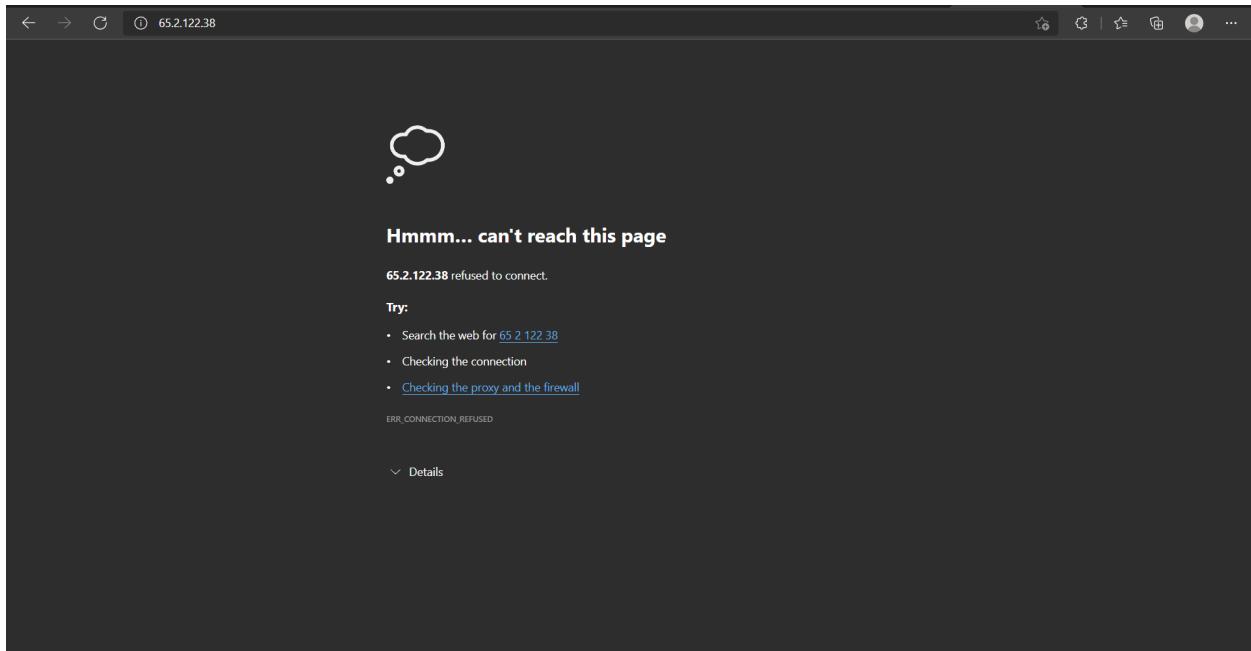
Add build step ▾

Post-build Actions

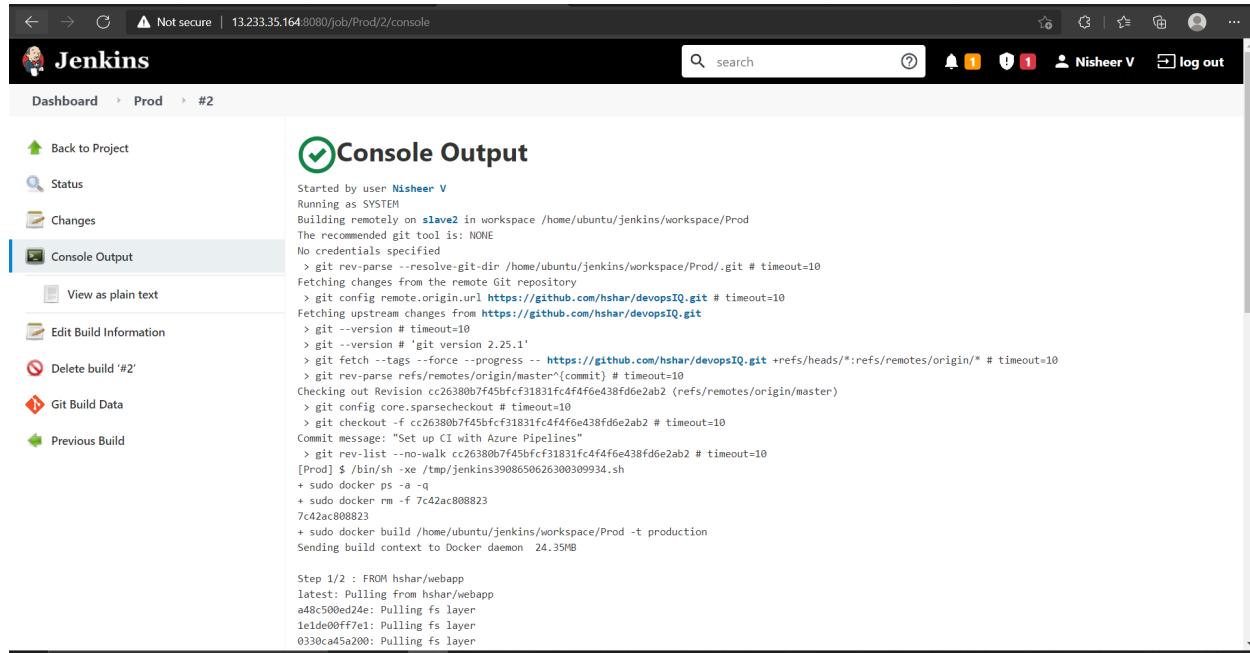
Add post-build action ▾

Save **Apply**

24.Checking the ip address before production build



25. Production build success output 1

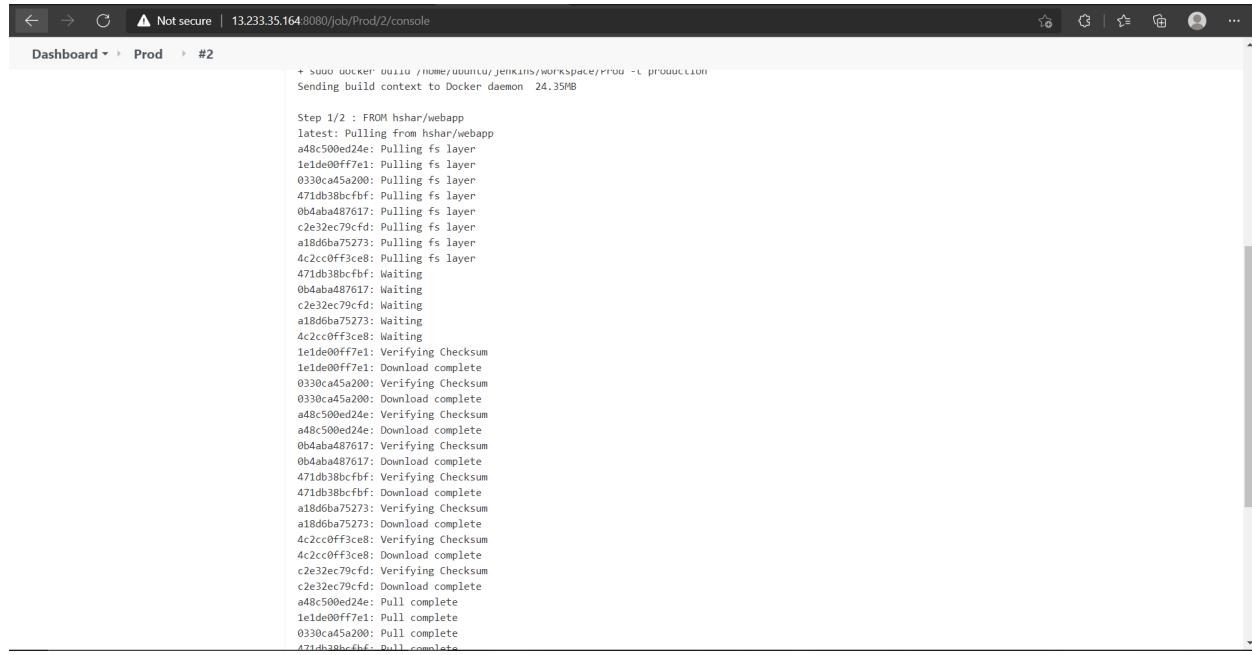


The screenshot shows the Jenkins interface for a successful build of a project named 'Prod'. The build number is #2. The 'Console Output' tab is selected, displaying the command-line logs of the build process. The logs show the cloning of the repository from GitHub, the checkout of the specific commit, and the execution of a Docker build command. The output indicates a successful build with a size of 24.35MB.

Started by user **Nisheer V**
Running as SYSTEM
Building remotely on **slave2** in workspace /home/ubuntu/jenkins/workspace/Prod
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/Prod/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/hshar/devopsIQ.git # timeout=10
Fetching upstream changes from https://github.com/hshar/devopsIQ.git
> git --version # timeout=10
> git --version # 'git' version 2.25.1'
> git fetch --tags --force --progress -- https://github.com/hshar/devopsIQ.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision cc26380b7f45bfcf31831fc4f4f6e438fd6e2ab2 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f cc26380b7f45bfcf31831fc4f4f6e438fd6e2ab2 # timeout=10
Commit message: "Set up CI with Azure Pipelines"
> git rev-list --no-walk cc26380b7f45bfcf31831fc4f4f6e438fd6e2ab2 # timeout=10
[Prod] \$ /bin/sh -xe /tmp/jenkins3908650626300309934.sh
+ sudo docker ps -a -q
+ sudo docker rm -f 7c42ac808823
7c42ac808823
+ sudo docker build /home/ubuntu/jenkins/workspace/Prod -t production
Sending build context to Docker daemon 24.35MB

Step 1/2 : FROM hshar/webapp
latest: Pulling from hshar/webapp
a48c500ed24e: Pulling fs layer
1e1de00ff7e1: Pulling fs layer
0330ca45a200: Pulling fs layer

26. Production build success output 2



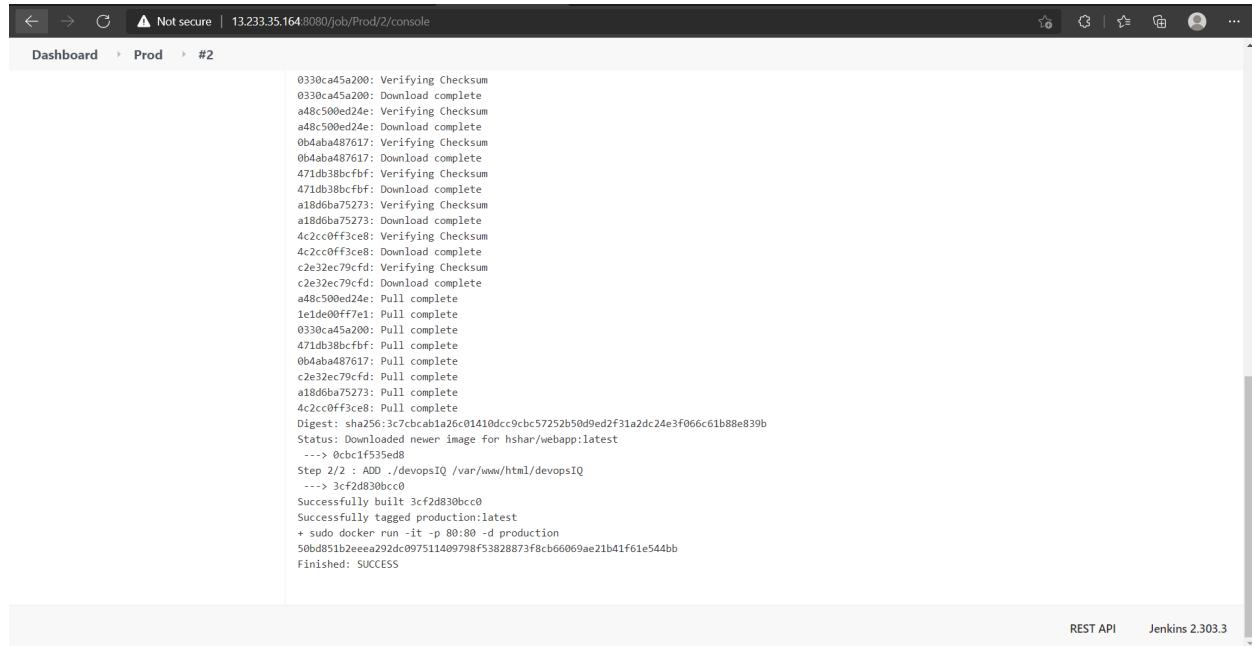
← → ⌂ Not secure | 13.233.35.164:8080/job/Prod/2/console

Dashboard ➔ Prod ➔ #2

```
+ sudo docker build /home/ubuntu/jenkins/workspace/Prod -t production
Sending build context to Docker daemon 24.35MB

Step 1/2 : FROM hshar/webapp
latest: Pulling from hshar/webapp
a48c500ed24e: Pulling fs layer
1e1de00ff7e1: Pulling fs layer
0330ca45a200: Pulling fs layer
471db38bcfbf: Pulling fs layer
0b4aba487617: Pulling fs layer
c2e32ec79cf9: Pulling fs layer
a18d6ba75273: Pulling fs layer
4c2c0ff3ce8: Pulling fs layer
471db38bcfbf: Waiting
0b4aba487617: Waiting
c2e32ec79cf9: Waiting
a18d6ba75273: Waiting
4c2c0ff3ce8: Waiting
1e1de00ff7e1: Verifying Checksum
1e1de00ff7e1: Download complete
0330ca45a200: Verifying Checksum
0330ca45a200: Download complete
a48c500ed24e: Verifying Checksum
a48c500ed24e: Download complete
0b4aba487617: Verifying Checksum
0b4aba487617: Download complete
471db38bcfbf: Verifying Checksum
471db38bcfbf: Download complete
a18d6ba75273: Verifying Checksum
a18d6ba75273: Download complete
4c2c0ff3ce8: Verifying Checksum
4c2c0ff3ce8: Download complete
c2e32ec79cf9: Verifying Checksum
c2e32ec79cf9: Download complete
a48c500ed24e: Pull complete
1e1de00ff7e1: Pull complete
0330ca45a200: Pull complete
471db38bcfbf: Pull complete
```

27. Production build success output 3



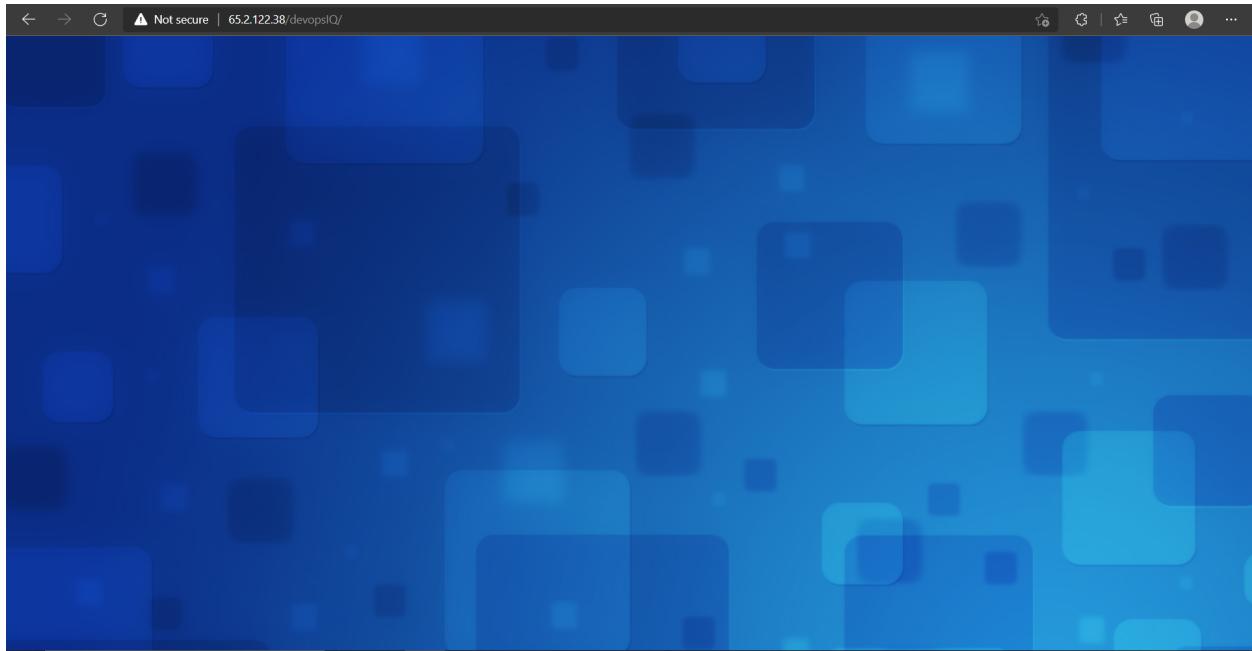
Not secure | 13.233.35.164:8080/job/Prod/2/console

Dashboard > Prod > #2

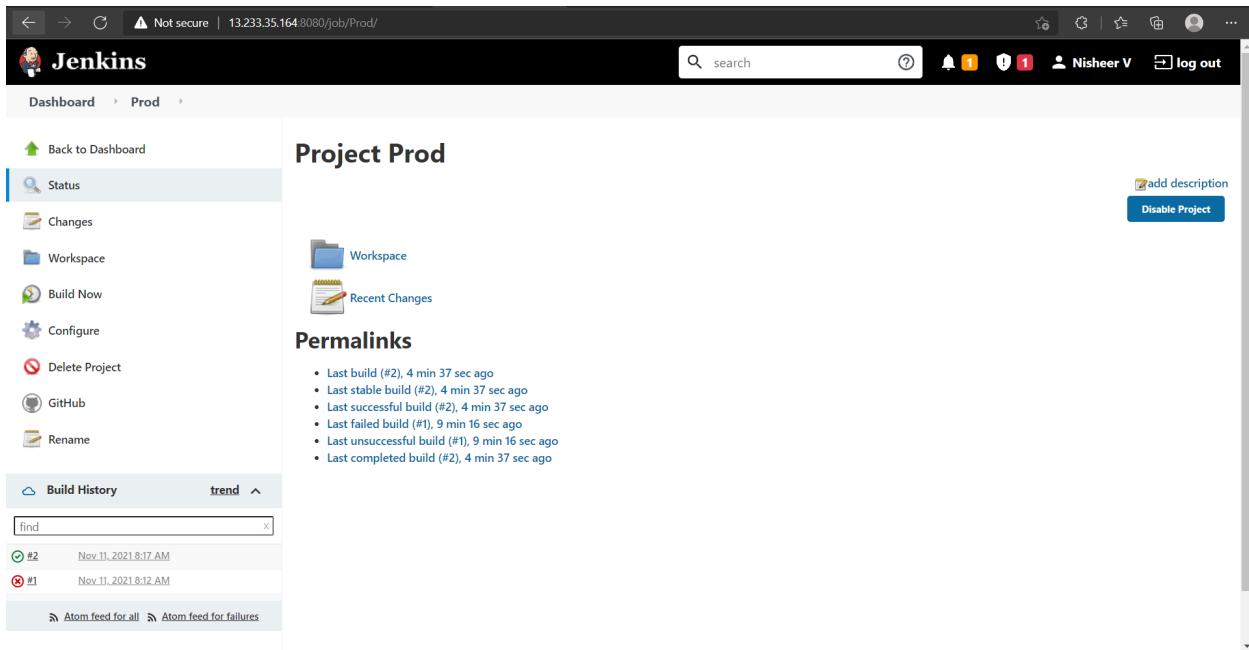
```
0330ca45a200: Verifying Checksum
0330ca45a200: Download complete
a48c500ed24e: Verifying Checksum
a48c500ed24e: Download complete
0b4aba487617: Verifying Checksum
0b4aba487617: Download complete
471db38cfcfb: Verifying Checksum
471db38cfcfb: Download complete
a18d6ba75273: Verifying Checksum
a18d6ba75273: Download complete
4c2cc0ff3ce8: Verifying Checksum
4c2cc0ff3ce8: Download complete
c2e32ec79cfcd: Verifying Checksum
c2e32ec79cfcd: Download complete
a48c500ed24e: Pull complete
1e1de0ff7e1: Pull complete
0330ca45a200: Pull complete
471db38cfcfb: Pull complete
0b4aba487617: Pull complete
c2e32ec79cfcd: Pull complete
a18d6ba75273: Pull complete
4c2cc0ff3ce8: Pull complete
Digest: sha256:3c7cbcab1a26c01410dcc9cbc5725b50d9ed2f31a2dc24e3f066c61b88e839b
Status: Downloaded newer image for hshare/webapp:latest
-> 0cbc1f535e8
Step 2/2 : ADD ./devopsIQ /var/www/html/devopsIQ
-> 3cf2d830bc0c0
Successfully built 3cf2d830bcc0
Successfully tagged production:latest
+ sudo docker run -it -p 80:80 -d production
50bd851b2eeaa292dc097511409798f53828873f8cb66069ae21b41f61e544bb
Finished: SUCCESS
```

REST API Jenkins 2.303.3

28.After production build working website on Production server

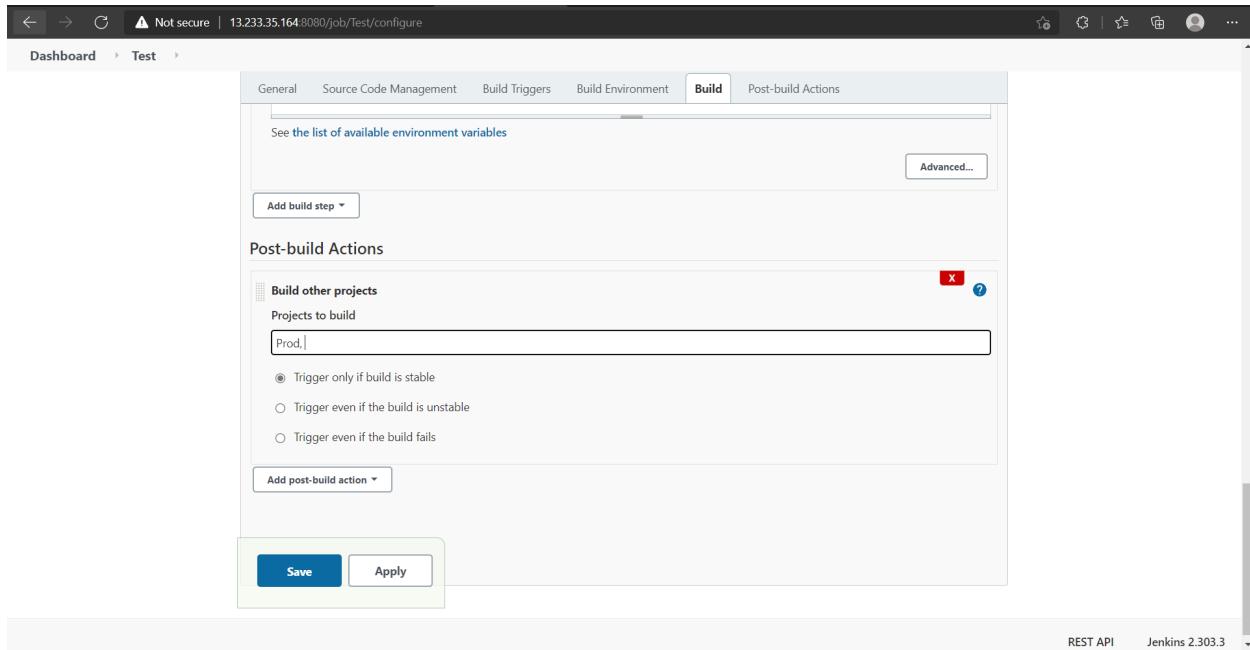


29.This is the production server build status



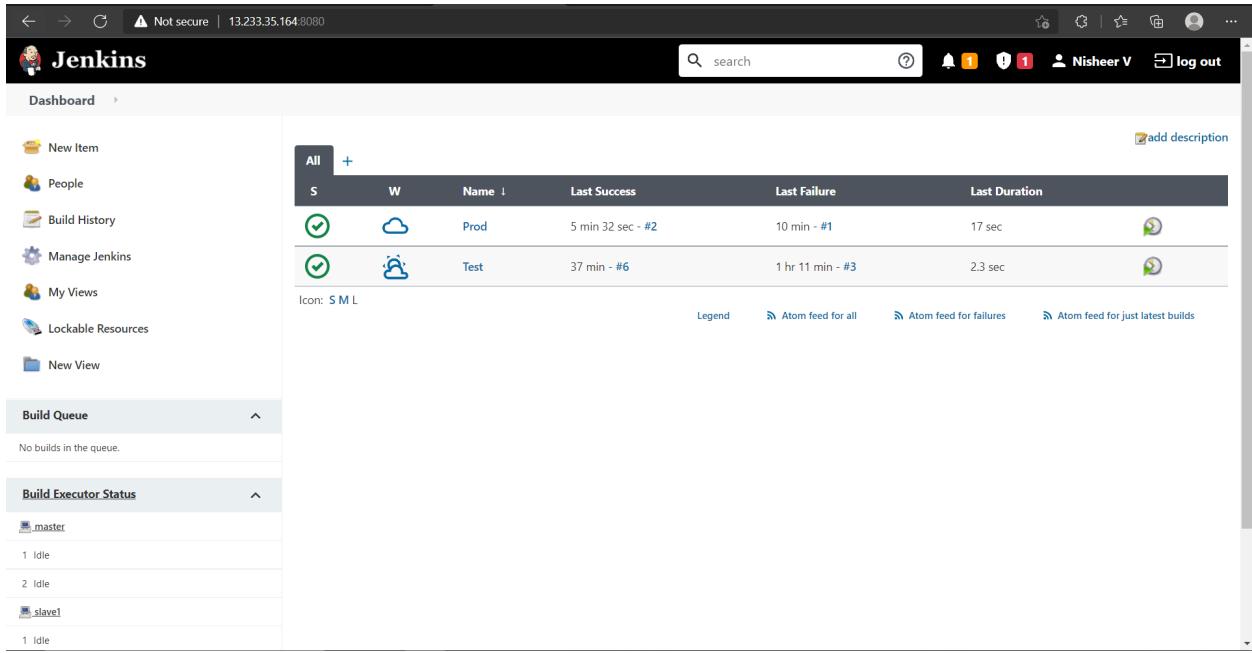
The screenshot shows the Jenkins interface for a project named 'Prod'. The top navigation bar includes links for 'Dashboard', 'Prod', 'Back to Dashboard', and 'Jenkins'. The right side of the header shows a search bar, a help icon, a bell icon with a '1' notification, a shield icon with a '1' notification, a user icon for 'Nisheer V', and a 'log out' button. The main content area is titled 'Project Prod'. On the left, a sidebar lists project management options: 'Status', 'Changes', 'Workspace', 'Build Now', 'Configure', 'Delete Project', 'GitHub', and 'Rename'. The 'Status' section is currently selected. The main content area displays the 'Recent Changes' and 'Permalinks' sections. The 'Recent Changes' section lists the last seven builds: 'Last build (#2), 4 min 37 sec ago', 'Last stable build (#2), 4 min 37 sec ago', 'Last successful build (#2), 4 min 37 sec ago', 'Last failed build (#1), 9 min 16 sec ago', 'Last unsuccessful build (#1), 9 min 16 sec ago', 'Last completed build (#2), 4 min 37 sec ago'. The 'Permalinks' section includes links for 'Atom feed for all' and 'Atom feed for failures'. At the bottom of the sidebar, there is a 'Build History' section with a 'trend' dropdown and a search bar containing 'find'. Below the search bar, two build entries are listed: '#2 Nov 11, 2021 8:17 AM' (green checkmark) and '#1 Nov 11, 2021 8:12 AM' (red X). At the very bottom of the sidebar, there are links for 'Atom feed for all' and 'Atom feed for failures'.

30.Configuring the test server to trigger the production build only if the test build is stable



The screenshot shows the Jenkins configuration interface for a job named 'Test'. The 'Build' tab is selected. Under 'Post-build Actions', a 'Build other projects' step is configured to trigger a build for the project 'Prod.' only if the current build is stable. There are three radio button options: 'Trigger only if build is stable' (selected), 'Trigger even if the build is unstable', and 'Trigger even if the build fails'. At the bottom of the configuration panel are 'Save' and 'Apply' buttons.

31. This is the running test server and production server project dashboard



The screenshot shows the Jenkins dashboard with the following details:

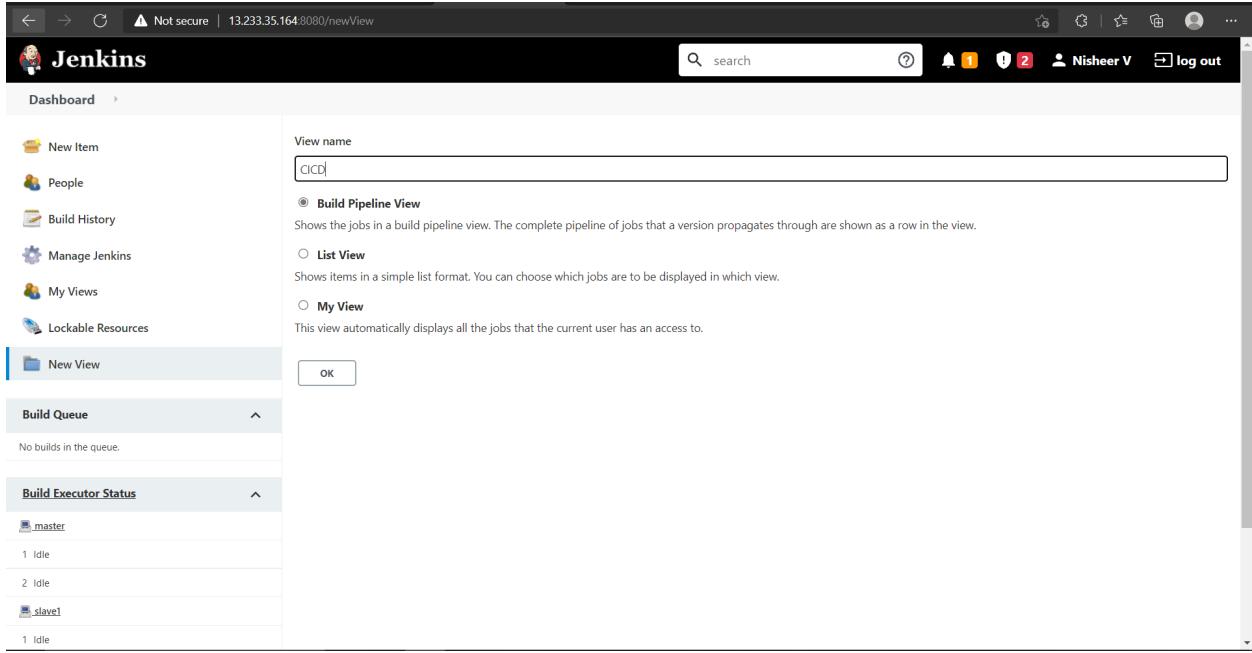
- Project List:**

S	W	Name	Last Success	Last Failure	Last Duration
✓	Cloud	Prod	5 min 32 sec - #2	10 min - #1	17 sec
✓	Cloud	Test	37 min - #6	1 hr 11 min - #3	2.3 sec
- Build Queue:** No builds in the queue.
- Build Executor Status:**

master
1 Idle
2 Idle

slave1
1 Idle

32.Adding CICD pipeline to connect the test and production server



The screenshot shows the Jenkins dashboard with a search bar containing 'CICD'. The 'Build Pipeline View' option is selected, and the 'OK' button is visible. The left sidebar shows 'New View' is selected. The 'Build Queue' and 'Build Executor Status' sections are also visible.

View name: CICD

Build Pipeline View
Shows the jobs in a build pipeline view. The complete pipeline of jobs that a version propagates through are shown as a row in the view.

List View
Shows items in a simple list format. You can choose which jobs are to be displayed in which view.

My View
This view automatically displays all the jobs that the current user has an access to.

OK

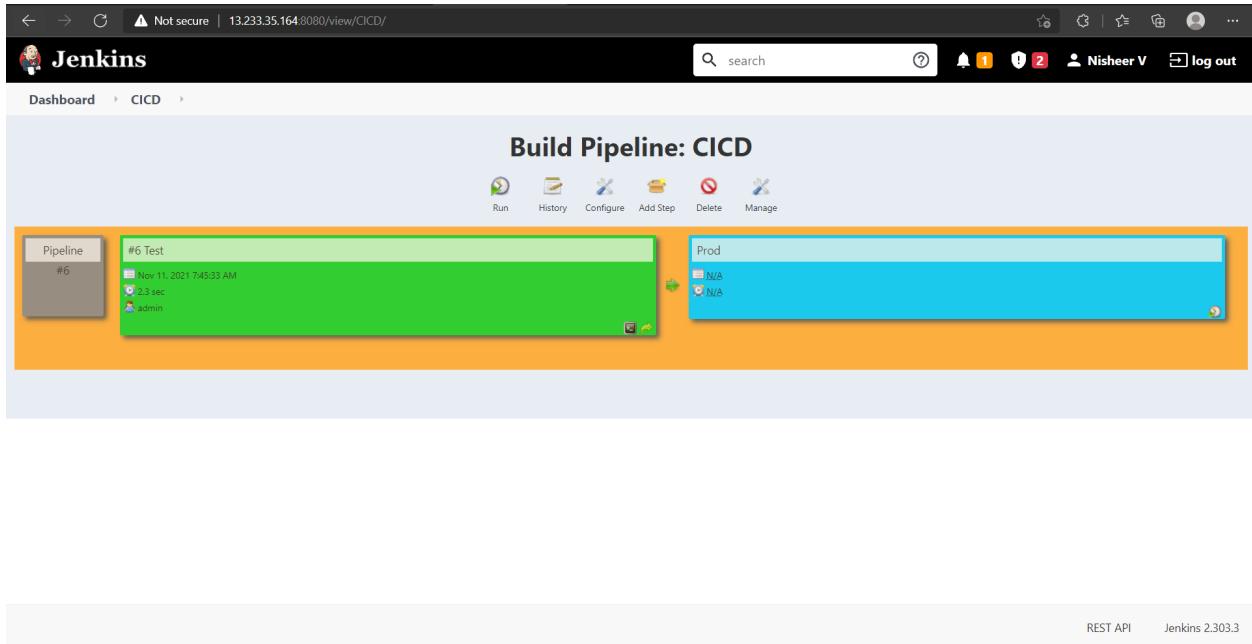
Build Queue
No builds in the queue.

Build Executor Status

master
1 Idle
2 Idle

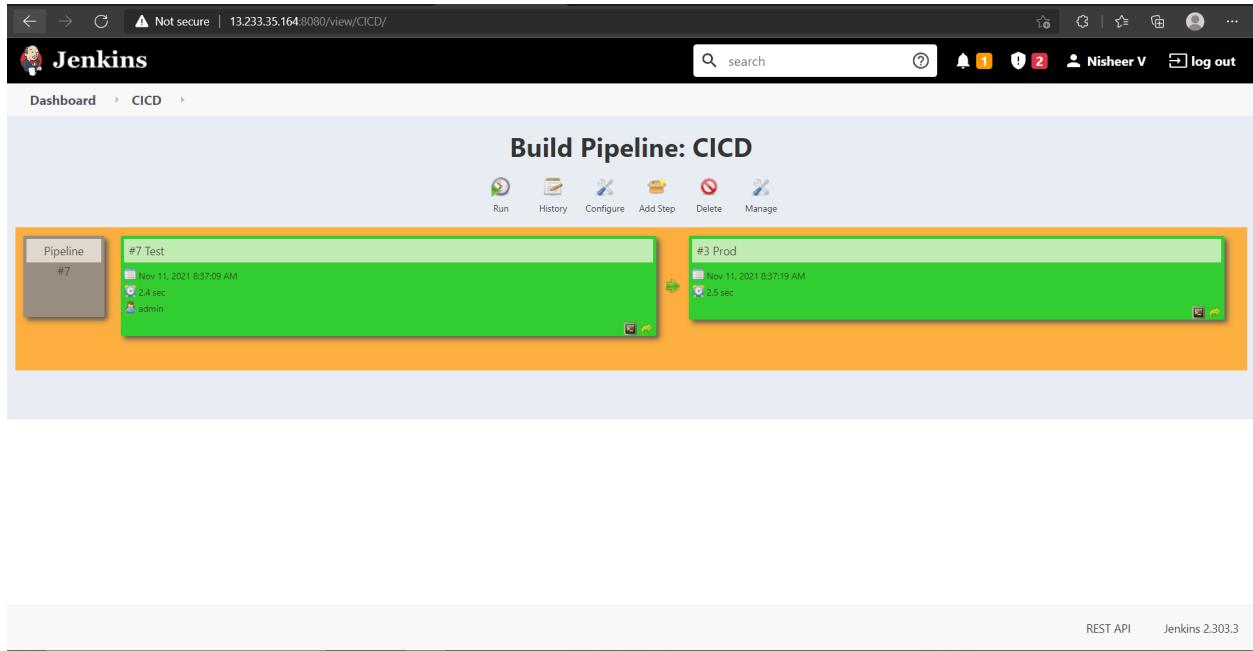
slave1
1 Idle

33. Running initial build on the CICD pipeline



The screenshot shows the Jenkins interface for a 'Build Pipeline: CICD' project. At the top, there is a navigation bar with links for 'Run', 'History', 'Configure', 'Add Step', 'Delete', and 'Manage'. Below the navigation bar, the main content area is titled 'Build Pipeline: CICD'. On the left, there is a sidebar with a 'Pipeline' section showing '#6' and a 'Test' section. The 'Test' section is highlighted in green and contains the following information: 'Nov 11, 2021 7:45:33 AM', '2.3 sec', and 'admin'. To the right of the 'Test' section is a 'Prod' section, which is highlighted in blue and shows 'N/A' for both build time and duration. At the bottom right of the interface, there are links for 'REST API' and 'Jenkins 2.303.3'.

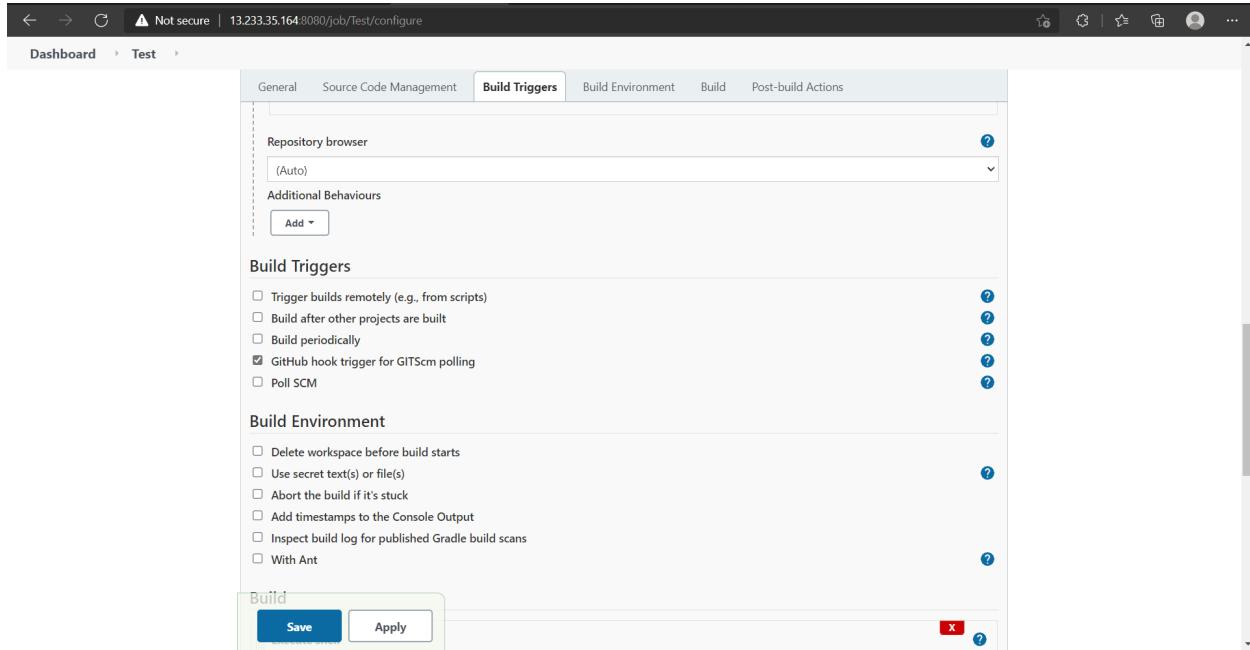
34.Successful build after running the CICD pipeline



The screenshot shows the Jenkins interface for a 'Build Pipeline: CICD' project. The pipeline consists of two stages: 'Test' and 'Prod'. The 'Test' stage (Pipeline #7) was run on Nov 11, 2021, at 8:37:09 AM, took 2.4 sec, and was performed by admin. The 'Prod' stage (Pipeline #3) was run on Nov 11, 2021, at 8:37:19 AM, took 2.5 sec, and was performed by admin. The Jenkins version is 2.303.3.

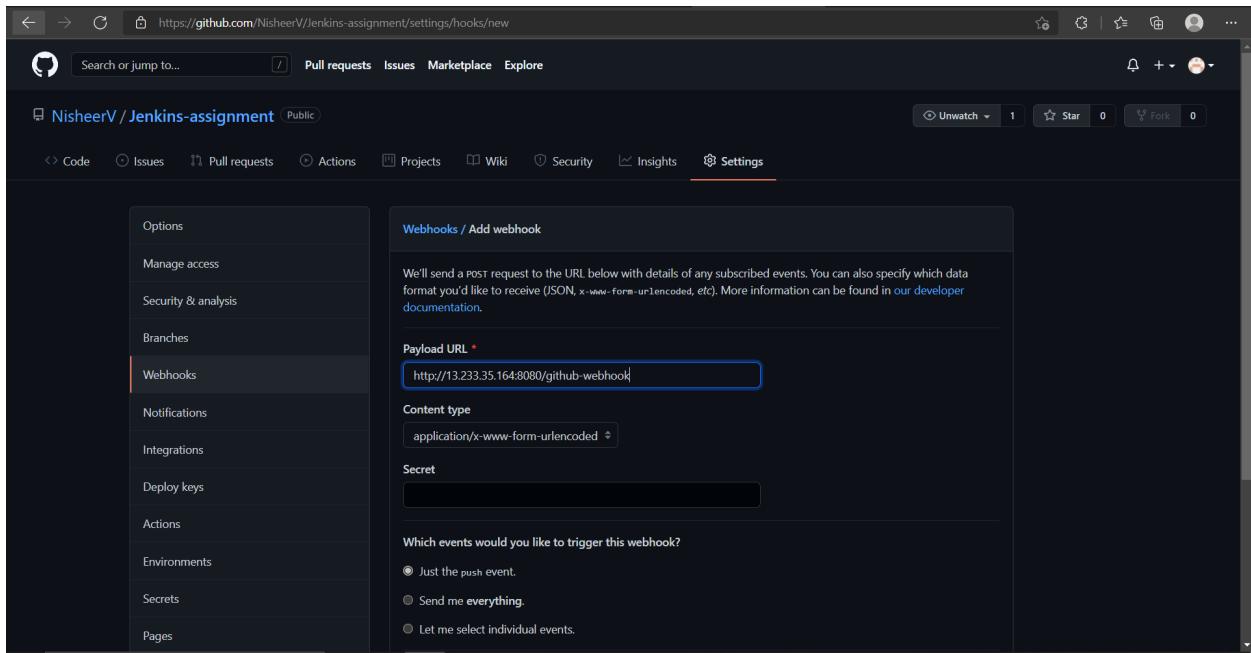
REST API Jenkins 2.303.3

35.Configuring github webhook on the test server by adding github hook build trigger



The screenshot shows the Jenkins job configuration interface for a job named 'Test'. The 'Build Triggers' tab is selected. Under 'Build Triggers', the 'GitHub hook trigger for GitSCM polling' option is checked, while the other triggers (Trigger builds remotely, Build after other projects are built, Build periodically, and Poll SCM) are unchecked. The 'Build Environment' section is also visible, containing several build environment options. At the bottom, there are 'Save' and 'Apply' buttons.

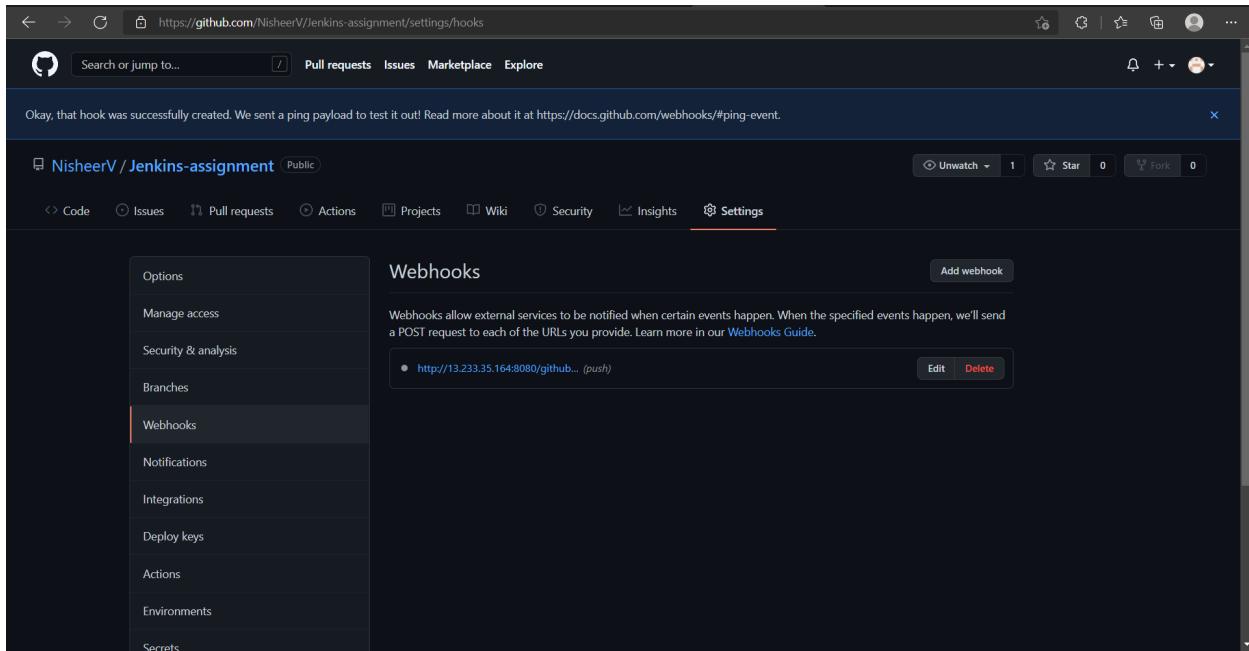
36.Adding github webhook link on github settings



The screenshot shows a GitHub repository settings page for 'NisheerV/Jenkins-assignment'. The 'Webhooks' section is active in the sidebar. The main content area is titled 'Webhooks / Add webhook' and contains the following fields:

- Payload URL ***: `http://13.233.35.164:8080/github-webhook`
- Content type**: `application/x-www-form-urlencoded`
- Secret**: (empty field)
- Which events would you like to trigger this webhook?**
 - Just the push event.
 - Send me everything.
 - Let me select individual events.

37. Github webhook successfully added



The screenshot shows a GitHub settings page for the repository 'NisheerV / Jenkins-assignment'. The 'Webhooks' section is active, displaying a single webhook entry. The entry shows the URL 'http://13.233.35.164:8080/github... (push)'. There are 'Edit' and 'Delete' buttons next to the URL. The GitHub interface includes a sidebar with options like Options, Manage access, Security & analysis, Branches, Webhooks (which is selected), Notifications, Integrations, Deploy keys, Actions, Environments, and Secrets. The top navigation bar shows 'Pull requests', 'Issues', 'Marketplace', and 'Explore'.