

# Assignment2- Jenkins Master Slave pipeline.

## Team 11

The screenshot displays the AWS Management Console interface. On the left, the navigation pane shows 'Instances' selected. The main content area shows a list of instances with the following details:

Name	Instance ID
jenkins-master	i-01b7a8202666f0fd2
slave1	i-0eb14d7b6b09b0b0b
slave2	i-00f431272fac89b

Below the list, the 'Instance: i-01b7a8202666f0fd2 (jenkins-master)' details are shown. The 'Instance summary' tab is active, displaying the Instance ID, IPv6 address, and Instance state (Running). A terminal window is open on the right, showing the following commands and output:

```
ubuntu@ip-172-31-20-32:~$ https://ubuntu.com/aws/pro
11 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Last login: Sat Nov 13 12:14:56 2021 from 113.21.78.217
ubuntu@ip-172-31-20-32:~$ sudo apt install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
openjdk-8-jdk is already the newest version (8u292-b10-0ubuntu1~20.04).
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
ubuntu@ip-172-31-20-32:~$ sudo apt-key add
^C
gpg: signal interrupt caught ... exiting
ubuntu@ip-172-31-20-32:~$ wget -q -O - https://pkg.jenkins.io/debian-stable/jen
ins.io.key | sudo apt-key add
OK
ubuntu@ip-172-31-20-32:~$ sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stab
le binary/ > /etc/apt/sources.list.d/jenkins.list'
-bash: /etc/apt/sources.list.d/jenkins.list: Permission denied
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ echo 'deb http://www.duinsoft.nl/pkg deb all' | sudo
tee -a /etc/apt/sources.list
deb http://www.duinsoft.nl/pkg deb all
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ echo deb https://pkg.jenkins.io/debian-stable binary/
| su^C
ubuntu@ip-172-31-20-32:~$ echo deb https://pkg.jenkins.io/debian-stable binary/
```

This screenshot is identical to the one above, showing the AWS Management Console with the Jenkins Master instance details and the terminal output. The terminal output is as follows:

```
ubuntu@ip-172-31-20-32:~$ https://ubuntu.com/aws/pro
11 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Last login: Sat Nov 13 12:14:56 2021 from 113.21.78.217
ubuntu@ip-172-31-20-32:~$ sudo apt install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
openjdk-8-jdk is already the newest version (8u292-b10-0ubuntu1~20.04).
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
ubuntu@ip-172-31-20-32:~$ sudo apt-key add
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gpg: signal interrupt caught ... exiting
ubuntu@ip-172-31-20-32:~$ wget -q -O - https://pkg.jenkins.io/debian-stable/jen
ins.io.key | sudo apt-key add
OK
ubuntu@ip-172-31-20-32:~$ sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stab
le binary/ > /etc/apt/sources.list.d/jenkins.list'
-bash: /etc/apt/sources.list.d/jenkins.list: Permission denied
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ echo 'deb http://www.duinsoft.nl/pkg deb all' | sudo
tee -a /etc/apt/sources.list
deb http://www.duinsoft.nl/pkg deb all
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ ^C
ubuntu@ip-172-31-20-32:~$ echo deb https://pkg.jenkins.io/debian-stable binary/
| su^C
ubuntu@ip-172-31-20-32:~$ echo deb https://pkg.jenkins.io/debian-stable binary/
```

Browser tabs: Untitled document - Google Doc, Instances | EC2 Management Console, Jenkins Tutorial for Beginners, dpkg - "cannot create /etc/apt/...", GitHub - sahana-n-h/sahana-n-h, +

Address bar: us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#Instances

Search bar: Search for services, features, blogs, docs, and more [Alt+S]

Left sidebar: AWS Services, New EC2 Experience, EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, Elastic Block Store, Volumes, Snapshots.

Instances table:

Name	Instance ID
jenkins-master	i-01b7a8202666f0fd2
slave1	i-0eb14d7b6b09b...
slave2	i-00f431272fac89...

Instance: i-01b7a8202666f0fd2 (jenkins-master)

Details | Security | Networking

Instance summary

Instance ID: i-01b7a8202666f0fd2 (jenkins-master)

IPv6 address: -

Instance state: Running

Public IPv4 DNS: ec2-52-14-30-52.us-east-2.compute.amazonaws.com | open address

Terminal output (ubuntu@ip-172-31-20-32):

```
Reading package lists... Done
W: GPG error: https://www.dunsoft.nl/pkg/debs InRelease: The following signatures couldn't be verified because the public key is not available: NO_PUBKEY E18CE6625CB26B26
E: The repository 'http://www.dunsoft.nl/pkg/debs InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
M: See apt-secure(8) manpage for repository creation and user configuration details.
ubuntu@ip-172-31-20-32:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree
Reading state information... Done
jenkins is already the newest version (2.303.3).
0 upgraded, 0 newly installed, 0 to remove and 13 not upgraded.
ubuntu@ip-172-31-20-32:~$ service jenkins status
jenkins.service - LSB: Start Jenkins at boot time
Loaded: loaded (/etc/units.d/jenkins; generated)
Active: active (exited) since Sun 2021-11-14 13:42:29 UTC; 10min ago
Docs: man:systemd-sysv-generator(8)
Process: 437 ExecStart=/etc/init.d/jenkins start (code=exited, status=0/SUCCESS)
Nov 14 13:42:26 ip-172-31-20-32 systemd[1]: Starting LSB: Start Jenkins at boot time.
Nov 14 13:42:27 ip-172-31-20-32 jenkins[437]: Correct java version found
Nov 14 13:42:27 ip-172-31-20-32 jenkins[437]: * Starting Jenkins Automation Se
Nov 14 13:42:27 ip-172-31-20-32 su[636]: (to jenkins) root on none
Nov 14 13:42:27 ip-172-31-20-32 su[636]: pam_unix(su-l:session): session opened
Nov 14 13:42:28 ip-172-31-20-32 su[636]: pam_unix(su-l:session): session closed
Nov 14 13:42:29 ip-172-31-20-32 jenkins[437]: ...done.
Nov 14 13:42:29 ip-172-31-20-32 systemd[1]: Started LSB: Start Jenkins at boot time.
lines 1-14/14 (END)
jenkins.service - LSB: Start Jenkins at boot time
Loaded: loaded (/etc/units.d/jenkins; generated)
Active: active (exited) since Sun 2021-11-14 13:42:29 UTC; 10min ago
```

Browser tabs: Untitled document - Google Doc, Instances | EC2 Management Console, Jenkins Tutorial for Beginners, dpkg - "cannot create /etc/...", GitHub - sahana-n-h/sahana-n-h, Sign in [Jenkins]

Address bar: Not secure | 52.14.30.52:8080/login?from=%2F

Left sidebar: https://ssp.postmat..., 16 Candlestick Patt..., CSE Time Table Aug..., Classes, DevOps - TechBytes, Reading list

Welcome to Jenkins!

Username:

Password:

☐ Keep me signed in

Browser tabs: Untitled document - Google, Instances | EC2 Management, Jenkins Tutorial for Beginners, dpkg - "cannot create /etc/...", GitHub - sahana-n-h/sahana, Configure Global Security [Jenkins]

Address bar: https://52.14.30.52:8080/configureSecurity/

Jenkins Dashboard > Configure Global Security

## Configure Global Security

### Authentication

☐ Disable remember me

### Security Realm

☐ Delegate to servlet container  
☒ Jenkins' own user database  
  ☐ Allow users to sign up  
☐ LDAP  
☐ Unix user/group database  
☐ None

### Authorization

☐ Anyone can do anything  
☐ Legacy mode  
☒ Logged-in users can do anything  
  ☐ Allow anonymous read access  
☐ Matrix-based security

[Save](#) [Apply](#)

Browser tabs: Untitled document - Google, Instances | EC2 Management, Jenkins Tutorial for Beginners, dpkg - "cannot create /etc/...", GitHub - sahana-n-h/sahana, Configure Global Security [Jenkins]

Address bar: https://52.14.30.52:8080/configureSecurity/

Jenkins Dashboard > Configure Global Security

☐ Enable proxy compatibility

### Hidden security warnings

[Security warnings...](#)

### API Token

☐ Generate a legacy API token for each newly created user (Not recommended)  
☐ Allow users to manually create a legacy API token (Not recommended)  
☒ Enable API Token usage statistics

### Agent → Controller Security

☒ Enable Agent → Controller Access Control  
Rules can be tweaked [here](#)

### SSH Server

SSHD Port  
☐ Fixed:  ☒ Random ☐ Disable

[Save](#) [Apply](#)

Jenkins 2.303.3

Book reportInstances | EC2 ManagDevOps-Jenkins - TechHow to install JenkinsJenkins Tutorial for Begslave1 ConfigurationUntitled document - G+Not secure52.14.30.52:8080/computer/slave1/configurehttps://ssp.postmat...16 Candlestick Patt...CSE Time Table Aug...ClassesDevOps - TechBytesReading list

Jenkins

search

12sahana-n-hlog out

DashboardNodesslave1

Back to List

Status

Delete Agent

Configure

Build History

Load Statistics

Log

Build Executor Status

Name

slave1

Description

Number of executors

1

Remote root directory

Remote directory is mandatory

Labels

Usage

Use this node as much as possible

Launch method

Launch agent by connecting it to the master

Save

Book reportInstances | EC2 ManagDevOps-Jenkins - TechHow to install JenkinsJenkins Tutorial for Begslave1 ConfigurationUntitled document - G+Not secure52.14.30.52:8080/computer/slave1/configurehttps://ssp.postmat...16 Candlestick Patt...CSE Time Table Aug...ClassesDevOps - TechBytesReading list

DashboardNodesslave1

Launch method

Launch agent by connecting it to the master

Disable WorkDir

Custom WorkDir path

/home/ubuntu/jenkins

Internal data directory

remoting

Fail if workspace is missing

Use WebSocket

Advanced...

Availability

Keep this agent online as much as possible

Node Properties

Disable deferred wipeout on this node

Environment variables

Tool Locations

Save

Book reportInstances | EC2 ManagDevOps-Jenkins - TechHow to install JenkinsJenkins Tutorial for Be...slave2 Configuration [Un...Untitled document - G...+--X

←→↻Not secure | 52.14.30.52:8080/computer/slave2/configure

https://ssp.postmat...16 Candlestick Patt...CSE Time Table Aug...ClassesDevOps - TechBytes

Reading list

Jenkins

search

🔔1🔔2👤sahana-n-h🚪log out

DashboardNodesslave2

🏠Back to List

🔍Status

🗑Delete Agent

⚙Configure

📊Build History

📈Load Statistics

📄Log

Build Executor Status

Name

slave2

Description

Number of executors

1

Remote root directory

/home/ubuntu/jenkins

Labels

Usage

Use this node as much as possible

Launch method

Launch agent by connecting it to the master

Save

Book reportInstances | EC2 ManagDevOps-Jenkins - TechHow to install JenkinsJenkins Tutorial for Be...slave2 Configuration [Un...Untitled document - G...+--X

←→↻Not secure | 52.14.30.52:8080/computer/slave2/configure

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Reading list

Jenkins

search

🔔1🔔2👤sahana-n-h🚪log out

DashboardNodesslave2

📈Load Statistics

📄Log

Build Executor Status

Remote root directory

/home/ubuntu/jenkins

Labels

Usage

Use this node as much as possible

Launch method

Launch agent by connecting it to the master

☐ Disable WorkDir

Custom WorkDir path

Internal data directory

remoting

☐ Fail if workspace is missing

☐ Use WebSocket

Advanced...

Save

← → ↻ ⚠ Not secure | 52.14.30.52:8080/computer/

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Reading list

Jenkins

search

1 2 sahana-n-h log out

Dashboard > Nodes >

Back to Dashboard

Manage Jenkins

New Node

Configure Clouds

Node Monitoring

Build Queue >

No builds in the queue.

Build Executor Status >

master

1 idle

2 idle

slave1 (offline)

slave2 (offline)

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	master	Linux (amd64)	In sync	4.84 GB	0 B	4.84 GB	0ms
	slave1		N/A	N/A	N/A	N/A	N/A
	slave2		N/A	N/A	N/A	N/A	N/A
Data obtained		0.33 sec	0.33 sec	0.33 sec	0.33 sec	0.33 sec	0.33 sec

Refresh status

REST API Jenkins 2.303.3

← → ↻ ⚠ Not secure | 52.14.30.52:8080/computer/slave1/

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Reading list

Jenkins

search

1 2 sahana-n-h log out

Dashboard > Nodes > slave1

Back to List

Status

Delete Agent

Configure

Build History

Load Statistics

Log

Build Executor Status >

Agent slave1

Mark this node temporarily offline

Connect agent to Jenkins one of these ways:

Launch

Launch agent from browser

Run from agent command line:

```
java -jar agent.jar -jnlpUrl http://3.140.243.81:8080/computer/slave1/jenkins-agent.jnlp -secret e6a1e4b1ed1a28580b859eaceaf91606c325c5afb64af000bf37943d243e539 -workDir "/home/ubuntu/jenkins"
```

Run from agent command line, with the secret stored in a file:

```
echo e6a1e4b1ed1a28580b859eaceaf91606c325c5afb64af000bf37943d243e539 > secret-file
java -jar agent.jar -jnlpUrl http://3.140.243.81:8080/computer/slave1/jenkins-agent.jnlp -secret @secret-file -workDir "/home/ubuntu/jenkins"
```

Projects tied to slave1

S	W	Name ↓	Last Success	Last Failure	Last Duration
		Test	1 day 2 hr - #27	1 day 2 hr - #22	2.4 sec

Icon: S M L

Legend

Atom feed for all

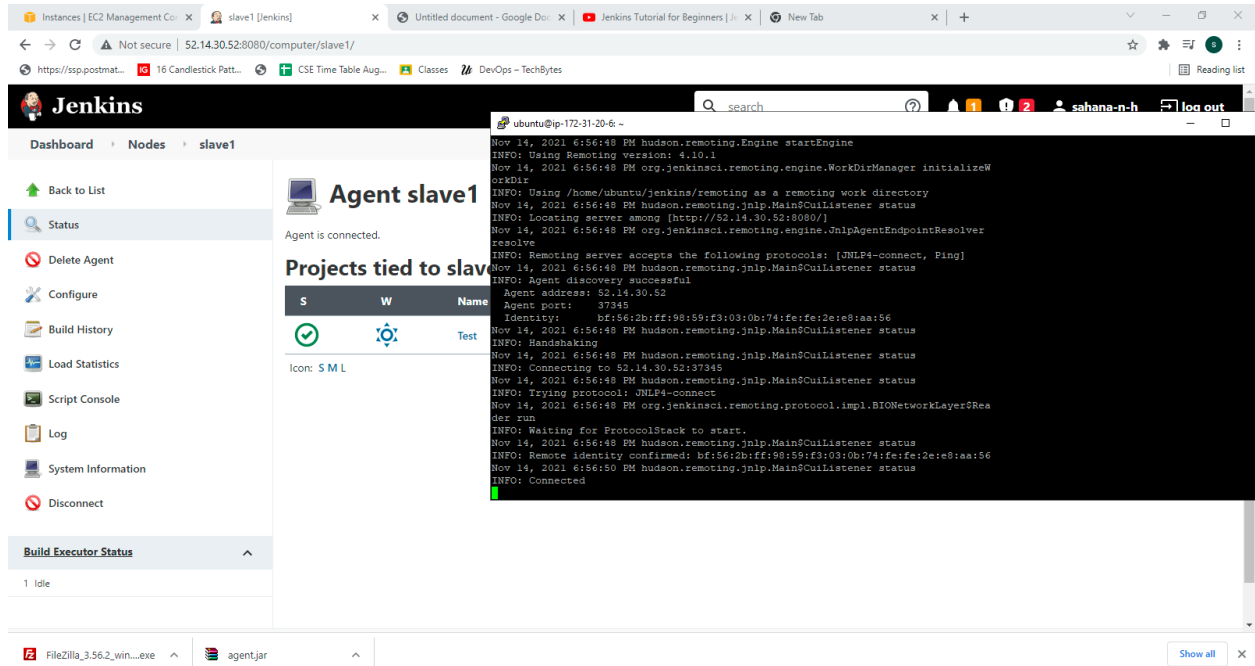
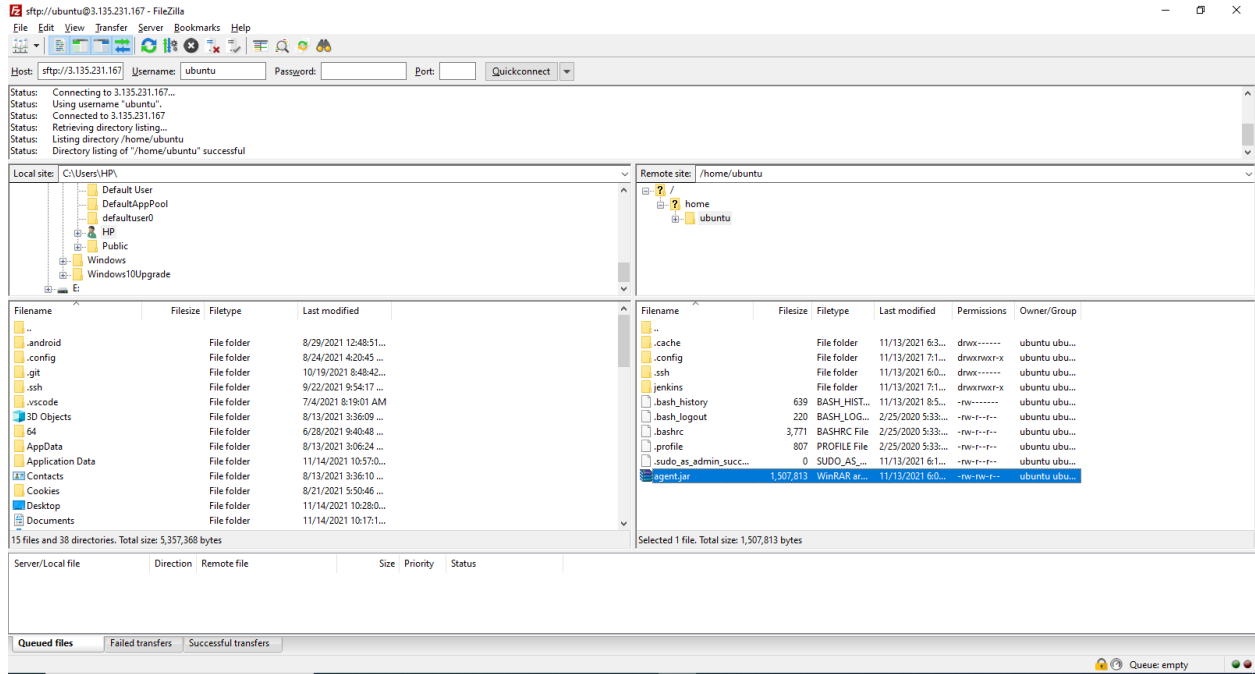
Atom feed for failures

Atom feed for just latest builds

agent.jar > 

Show all

REST API Jenkins 2.303.3



Jenkins Dashboard - Nodes - slave2

Agent slave2  
Agent is connected.

Projects tied to slave2

S	W	Name	Last
		Prod	1 d

Icon: SML

Build Executor Status

1 idle

FileZilla\_3.56.2\_win...exe agent.jar

```
Nov 14, 2021 7:00:31 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Locating server among [http://52.14.30.52:8080/]
Nov 14, 2021 7:00:31 PM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver
resolve
INFO: Remoting server accepts the following protocols: [JNLP4-connect, Ping]
Nov 14, 2021 7:00:31 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Agent discovery successful
Agent address: 52.14.30.52
Agent port: 37345
Identity: bf:56:2b:ff:98:59:f3:03:0b:74:fe:fe:2e:e8:aa:56
Nov 14, 2021 7:00:31 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Nov 14, 2021 7:00:31 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to 52.14.30.52:37345
Nov 14, 2021 7:00:31 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Nov 14, 2021 7:00:31 PM org.jenkinsci.remoting.protocol.impl.BIONetworkLayer$Rea
des run
INFO: Waiting for ProtocolStack to start.
Nov 14, 2021 7:00:32 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: bf:56:2b:ff:98:59:f3:03:0b:74:fe:fe:2e:e8:aa:56
Nov 14, 2021 7:00:33 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

Jenkins Dashboard - Test

General

[Plain text] Preview

☐ Discard old builds

☒ GitHub project

Project url

https://github.com/sahana-n-h/jenkinsTest.git/

Advanced...

☐ This build requires lockable resources

☐ This project is parameterized

☐ Throttle builds

☐ Disable this project

☐ Execute concurrent builds if necessary

☒ Restrict where this project can be run

Label Expression

slave1

Label slave1 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.

Advanced...

Save Apply



Instances | EC2 Manag... x Prod Config [Jenkins] x Jenkins Tutorial for Beg... x Add webhook x souvikdas2411/jenkins? x UPDATED SAHANA x Untitled document - G... x + -

Not secure | 52.14.30.52:8080/job/Prod/configure

https://ssp.postmat... 16 Candlestick Patt... CSE Time Table Aug... Classes DevOps - TechBytes

Dashboard > Prod >

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

### Build Environment

- ☐ Delete workspace before build starts
- ☐ 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**

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

Save Apply

Instances | EC2 Manag... x Test Config [Jenkins] x Jenkins Tutorial for Beg... x Add webhook x souvikdas2411/jenkins? x UPDATED SAHANA x Untitled document - G... x + -

Not secure | 52.14.30.52:8080/job/Test/configure

https://ssp.postmat... 16 Candlestick Patt... CSE Time Table Aug... Classes DevOps - TechBytes

Dashboard > Test >

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

### Build Environment

- ☐ Add timestamps to the Console Output
- ☐ Inspect build log for published Gradle build scans
- ☐ With Ant

### Build

**Execute shell**

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 +

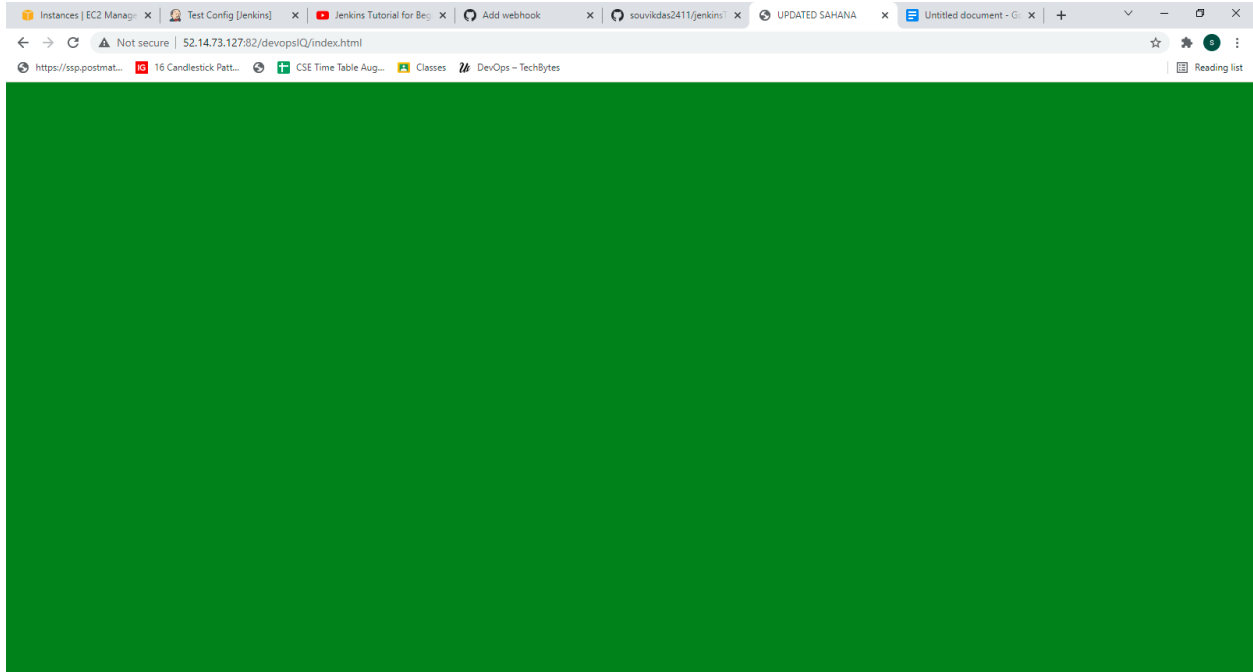
### Post-build Actions

**Build other projects**

Projects to build

Prod

Save Apply



Jenkins

Dashboard > CICD2 >

### Build Pipeline: CICD2

Run History Configure Add Step Delete Manage

Pipeline	#31 Test	#38 Prod
#31	<div>Nov 14, 2021 7:31:50 PM</div> <div>3.4 sec</div>	<div>Nov 14, 2021 7:32:00 PM</div> <div>1.7 sec</div>







