

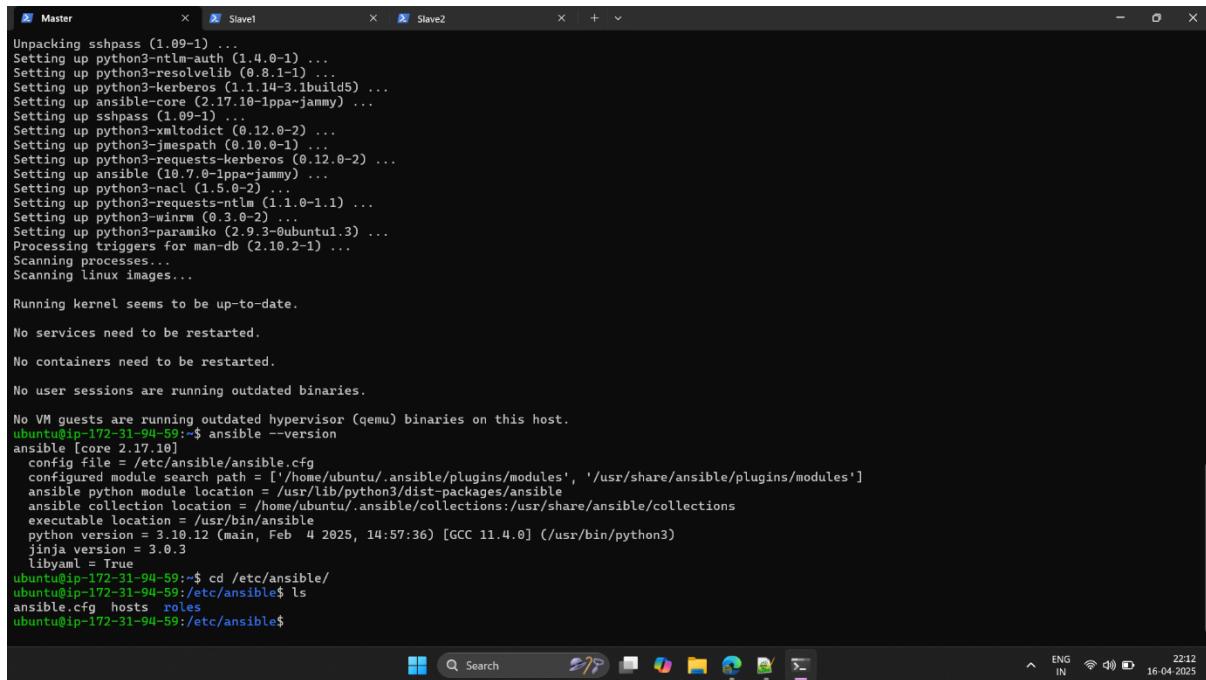
## Creating 3 instance

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed. The main area displays a table titled "Instances (3) Info" with the following data:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Put
Master	i-0deee50997050310c	Running	t2.micro	Initializing	<a href="#">View alarms +</a>	us-east-1b	ec2
Slave1	i-0501b8decc7250187	Running	t2.micro	Initializing	<a href="#">View alarms +</a>	us-east-1b	ec2
Slave2	i-0a09f8572819653c3	Running	t2.micro	Initializing	<a href="#">View alarms +</a>	us-east-1b	ec2

Below the table, there is a section titled "Select an instance". At the bottom of the page, there are three terminal windows labeled "Master", "Slave1", and "Slave2". The "Master" window shows the command "ubuntu@ip-172-31-94-59:~\$".

install ansible



```

Master          Slave1          Slave2
Unpacking sshpass (1.09-1) ...
Setting up python3-ntlm-auth (1.4.0-1) ...
Setting up python3-resolvelib (0.8.1-1) ...
Setting up python3-kerberos (1.1.14-3.1ubuntu5) ...
Setting up ansible-core (2.17.10-1ppa-jammy) ...
Setting up sshpass (1.09-1) ...
Setting up python3-xmldict (0.12.0-2) ...
Setting up python3-jmespath (0.10.0-1) ...
Setting up python3-requests-kerberos (0.12.0-2) ...
Setting up ansible (1.8.7-1ppa-jammy) ...
Setting up python3-nacl (1.5.0-2) ...
Setting up python3-requests-ntlm (1.1.0-1.1) ...
Setting up python3-winrm (0.3.0-2) ...
Setting up python3-paramiko (2.9.3-0ubuntu1.3) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

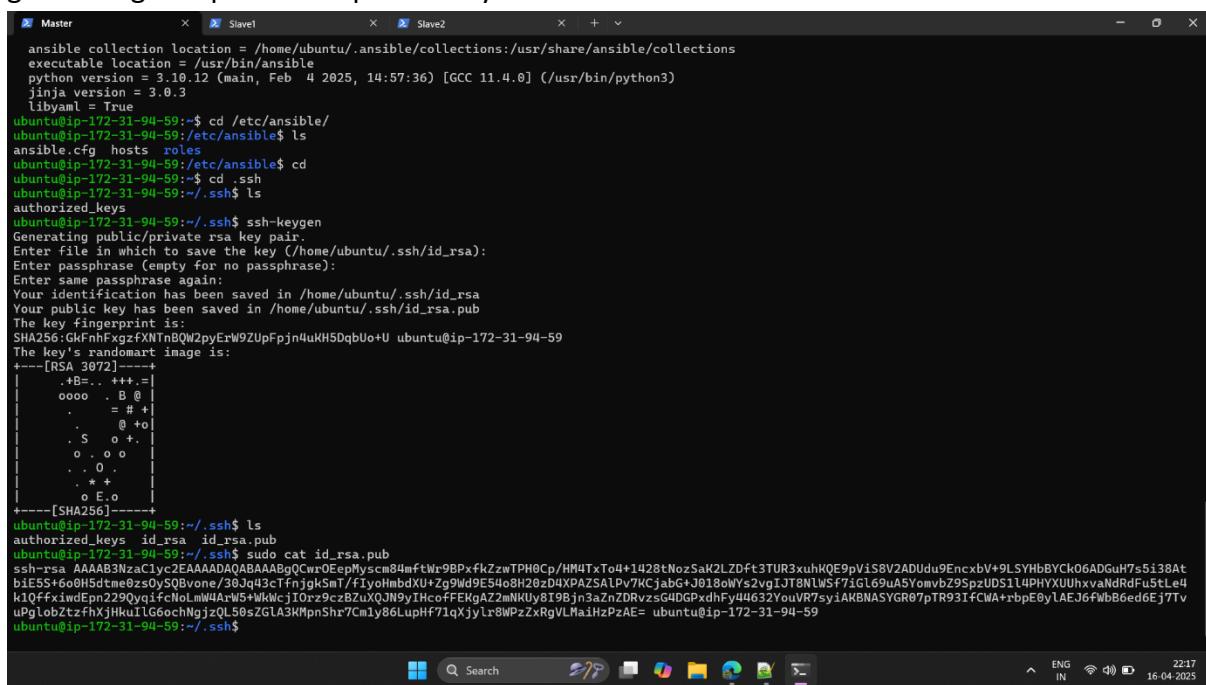
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

ubuntu@ip-172-31-94-59:~$ ansible --version
ansible [core 2.17.10]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.10.12 (main, Feb 4 2025, 14:57:36) [GCC 11.4.0] (/usr/bin/python3)
  jinja version = 3.0.3
  libyaml = True
ubuntu@ip-172-31-94-59:~$ cd /etc/ansible/
ubuntu@ip-172-31-94-59:~/etc/ansible$ ls
ansible.cfg  hosts  roles
ubuntu@ip-172-31-94-59:~/etc/ansible$
```

generating .ssh public and private key to connect to ansible slave machines



```

Master          Slave1
ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
executable location = /usr/bin/ansible
python version = 3.10.12 (main, Feb 4 2025, 14:57:36) [GCC 11.4.0] (/usr/bin/python3)
jinja version = 3.0.3
libyaml = True
ubuntu@ip-172-31-94-59:~$ cd /etc/ansible/
ubuntu@ip-172-31-94-59:~/etc/ansible$ ls
ansible.cfg  hosts  roles
ubuntu@ip-172-31-94-59:~/etc/ansible$ cd ..ssh
ubuntu@ip-172-31-94-59:~/..ssh$ ls
authorized_keys
ubuntu@ip-172-31-94-59:~/..ssh$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key's randomart image is:
+---[RSA 3072]---+
| .B=.. ++++= |
| oooo . B @ |
| . = # + |
| . @ +o |
| . S o + |
| o . o o |
| . . O |
| . . *+ |
| o E.o |
+---[SHA256]---+
ubuntu@ip-172-31-94-59:~/..ssh$ ls
authorized_keys  id_rsa  id_rsa.pub
ubuntu@ip-172-31-94-59:~/..ssh$ sudo cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAQABAAQcWxOEpHyscm84mfMtMz9BPxfkZzwTPH0Cp/HM4TxTo4+1428tNoz5aK2LZDft3TUR3xuhKQE9pVi58V2ADUdu9EncxbV+9LSYhbBYCk06ADGuH7s5i38At
b1E55f600H5dtme0zs0ySQBvone/303q43cTfnjkRSmT/fYvolmbdXU+zg9Wd9E54o8H26zD4XPAXZALPv7KCjabG+j018owYs2vgIjt8NUwsf1gl69u5YomvbZ9SpzUDs1l4PHYXUUhxvaNdrdfu5tLe4
k1QffxiwdEpn229Qyq1fchNolmw4Arw5#WkwCj1Orz9czBzUxQJN9yIHcoffEKgAZ2mNK0Uy8198j3AzndRvzs40GpxdhFy44632YouVR7syiAKBNASyGR07pTR93IfCWA+rpb4E0ylAEJ6fwB6ed6Ej7Tv
uPgJlobztztfhXjHkuILG6ochHmjzQL5szZGLA3KMpzShr7Cm1y86LupHf71qXjylr8WPzXrzgVLMAiHzPzAE= ubuntu@ip-172-31-94-59
ubuntu@ip-172-31-94-59:~/..ssh$
```

```

ubuntu@ip-172-31-83-77:~/.ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAADQAQABAAQcIGQIiz9fUPw5ihJ4+tEMuuRjJ3RWkpoOjj+gt+06qDWP2vyXBx7+j+7ECpkHVGISGUJvTii681d/ivg/igjmdlyJTrMHAmo06shA7BqCJ0zaAUycWLM7
QbhjhdtvBqPQzWVzBbrpKexJLpdQGkx7A92+dij+kg9spzQzf9/NBrqQBALAwofOLngBcqJHj5bngfu3En3+te2QuwkaGu5fne72MyzntM/S9eKMXAjMbChqizaSu8wSd3Hgm1er15tg1/nS3
il8aaGWQuX9C+etkglejuPejtalayfW1e+GgOfFv/MwtTpDSuLxS6F1lw9Ynnm1 NV-Keypair
ubuntu@ip-172-31-83-77:~/.ssh$ 

ubuntu@ip-172-31-88-170:~/.ssh$ cd .ssh
ubuntu@ip-172-31-88-170:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-88-170:~/.ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAADQAQABAAQcIGQIiz9fUPw5ihJ4+tEMuuRjJ3RWkpoOjj+gt+06qDWP2vyXBx7+j+7ECpkHVGISGUJvTii681d/ivg/igjmdlyJTrMHAmo06shA7BqCJ0zaAUycWLM7
QbhjhdtvBqPQzWVzBbrpKexJLpdQGkx7A92+dij+kg9spzQzf9/NBrqQBALAwofOLngBcqJHj5bngfu3En3+te2QuwkaGu5fne72MyzntM/S9eKMXAjMbChqizaSu8wSd3Hgm1er15tg1/nS3
il8aaGWQuX9C+etkglejuPejtalayfW1e+GgOfFv/MwtTpDSuLxS6F1lw9Ynnm1 NV-Keypair
ssh-rsa AAAAB3NzaC1yc2EAAADQAQABAAQcIGQIiz9fUPw5ihJ4+tEMuuRjJ3RWkpoOjj+gt+06qDWP2vyXBx7+j+7ECpkHVGISGUJvTii681d/ivg/igjmdlyJTrMHAmo06shA7BqCJ0zaAUycWLM7
QbhjhdtvBqPQzWVzBbrpKexJLpdQGkx7A92+dij+kg9spzQzf9/NBrqQBALAwofOLngBcqJHj5bngfu3En3+te2QuwkaGu5fne72MyzntM/S9eKMXAjMbChqizaSu8wSd3Hgm1er15tg1/nS3
il8aaGWQuX9C+etkglejuPejtalayfW1e+GgOfFv/MwtTpDSuLxS6F1lw9Ynnm1 NV-Keypair
ssh-rsa AAAAB3NzaC1yc2EAAADQAQABAAQcIGQIiz9fUPw5ihJ4+tEMuuRjJ3RWkpoOjj+gt+06qDWP2vyXBx7+j+7ECpkHVGISGUJvTii681d/ivg/igjmdlyJTrMHAmo06shA7BqCJ0zaAUycWLM7
QbhjhdtvBqPQzWVzBbrpKexJLpdQGkx7A92+dij+kg9spzQzf9/NBrqQBALAwofOLngBcqJHj5bngfu3En3+te2QuwkaGu5fne72MyzntM/S9eKMXAjMbChqizaSu8wSd3Hgm1er15tg1/nS3
il8aaGWQuX9C+etkglejuPejtalayfW1e+GgOfFv/MwtTpDSuLxS6F1lw9Ynnm1 NV-Keypair
ubuntu@ip-172-31-88-170:~/.ssh$ |
```

```
Master          Slave1          Slave2          + -+ 
ubuntu@ip-172-31-94-59:/etc/ansible$ sudo nano hosts
ubuntu@ip-172-31-94-59:/etc/ansible$ ansible -m ping all
[WARNING]: Platform linux on host 172.31.83.77 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.83.77 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.10"
    },
    "changed": false,
    "ping": "pong"
}
[WARNING]: Platform linux on host 172.31.80.170 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
172.31.80.170 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.10"
    },
    "changed": false,
    "ping": "pong"
}
ubuntu@ip-172-31-94-59:/etc/ansible$ |
```

creating a ansible playbook to install java, jenkins on master machine and java, docker on slave machines

```
Master          Slave1          Slave2          + -+ 
ubuntu@ip-172-31-94-59:/etc/ansible$ cat play.yaml
---
- name: master tasks
  hosts: localhost
  become: true
  tasks:
    - name: tasks for my master machine
      script: master.sh

- name: slave tasks
  hosts: all
  become: true
  tasks:
    - name: tasks for my slave machine
      script: slave.sh
ubuntu@ip-172-31-94-59:/etc/ansible$ cat master.sh
sudo apt update
sudo apt install openjdk-17-jdk -y

sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
https://pkg.jenkins.io/debian-stable binary/" | sudo tee \
/etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install fontconfig openjdk-17-jre
sudo apt-get install jenkins -y
ubuntu@ip-172-31-94-59:/etc/ansible$ cat slave.sh
sudo apt update
sudo apt install openjdk-17-jdk -y
sudo apt install docker.io -y
ubuntu@ip-172-31-94-59:/etc/ansible$ |
```

```

Master          Slave1          Slave2
ubuntu@ip-172-31-94-59:/etc/ansible$ sudo ansible-playbook play.yaml --syntax-check
[WARNING]: Could not match supplied host pattern, ignoring: localhosts

playbook: play.yaml
ubuntu@ip-172-31-94-59:/etc/ansible$ sudo nano play.yaml
ubuntu@ip-172-31-94-59:/etc/ansible$ sudo ansible-playbook play.yaml --syntax-check

playbook: play.yaml
ubuntu@ip-172-31-94-59:/etc/ansible$ sudo ansible-playbook play.yaml -check

PLAY [master tasks] ****
TASK [Gathering Facts] ****
ok: [localhost]

TASK [tasks for my master machine] ****
| 
```

```

Master          Slave1          Slave2
PLAY [slave tasks] ****
TASK [Gathering Facts] ****
The authenticity of host '172.31.80.170 (172.31.80.170)' can't be established.
ED25519 key fingerprint is SHA256:z/LMwflvJfgJ7tklhFce0Z+fpzDfCMkhs/EIcnhS4g.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? fatal: [172.31.83.77]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: ubuntu@172.31.83.77: Permission denied (publickey).", "unreachable": true}
^C [ERROR]: User interrupted execution
ubuntu@ip-172-31-94-59:/etc/ansible$ ansible-playbook play.yaml -u ubuntu

PLAY [master tasks] ****
TASK [Gathering Facts] ****
ok: [localhost]

TASK [tasks for my master machine] ****
changed: [localhost]

PLAY [slave tasks] ****
TASK [Gathering Facts] ****
[WARNING]: Platform linux on host 172.31.83.77 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.83.77]
[WARNING]: Platform linux on host 172.31.80.170 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.80.170]

TASK [tasks for my slave machine] ****
changed: [172.31.83.77]
changed: [172.31.80.170]

PLAY RECAP ****
172.31.80.170      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.83.77      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
localhost          : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-94-59:/etc/ansible$ | 
```

```

PLAY [slave tasks] *****
TASK [Gathering Facts] *****
The authenticity of host '172.31.80.170 (172.31.80.170)' can't be established.
ED25519 key fingerprint is SHA256:Z/LMVflvjfgJ7tklhFce0Z+fpzDfMkhs/ELcnH54g.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? fatal: [172.31.83.77]: UNREACHABLE! => {"changed": false, "msg": "Failed to connect to the host via ssh: ubuntu@172.31.83.77: Permission denied (publickey).", "unreachable": true}
^C [ERROR]: User interrupted execution
ubuntu@ip-172-31-94-59:/etc/ansible$ ansible-playbook play.yaml -u ubuntu

PLAY [master tasks] *****
TASK [Gathering Facts] *****
ok: [localhost]

TASK [tasks for my master machine] *****
changed: [localhost]

PLAY [slave tasks] *****
TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.83.77 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.83.77]
[WARNING]: Platform linux on host 172.31.80.170 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.80.170]

TASK [tasks for my slave machine] *****
changed: [172.31.83.77]
changed: [172.31.80.170]

PLAY RECAP *****
172.31.80.170      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.83.77      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
localhost          : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-94-59:/etc/ansible$ |
```

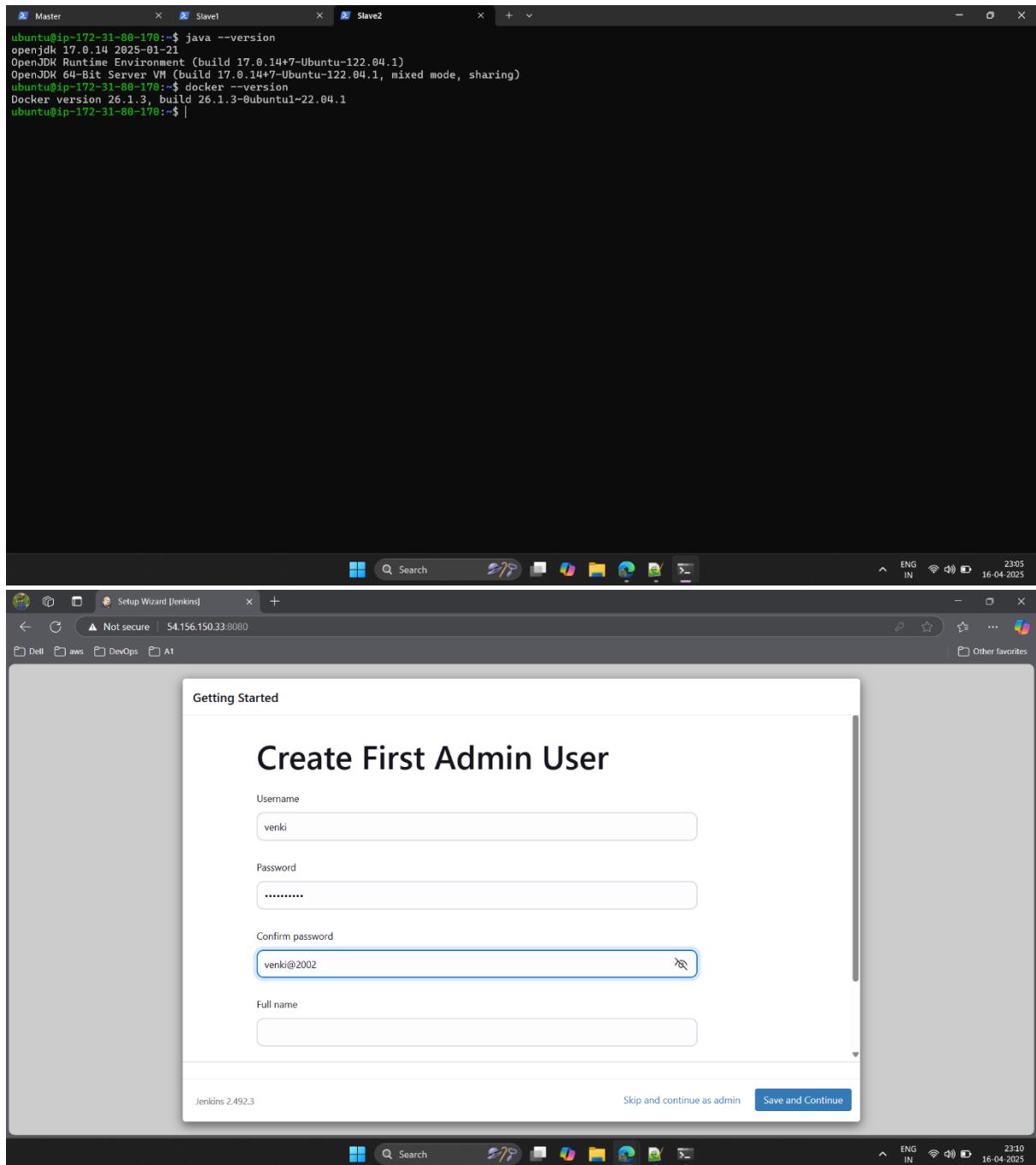
```

ubntu@ip-172-31-94-59:/etc/ansible$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubntu@ip-172-31-94-59:/etc/ansible$ jenkins --version
2.492.3
ubntu@ip-172-31-94-59:/etc/ansible$ |
```

```
Master Slave1 Slave2
ubuntu@ip-172-31-94-59:/etc/ansible$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-94-59:/etc/ansible$ jenkins --version
2.492.3
ubuntu@ip-172-31-94-59:/etc/ansible$ |
```

```
Master Slave1 Slave2
ubuntu@ip-172-31-83-77:$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-83-77:$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~22.04.1
ubuntu@ip-172-31-83-77:$ |
```



Jenkins Nodes Page Screenshot

The screenshot shows the Jenkins 'Nodes' page. On the left, there's a sidebar with 'Build Queue' (empty) and 'Build Executor Status' (three entries: 'Built-In Node' (0/2), 'slave1' (0/1), and 'slave2' (0/1)). The main area is titled 'Nodes' and contains a table with columns: S, Name, Architecture, Clock Difference, Free Disk Space, Free Swap Space, Free Temp Space, and Response Time. The table data is as follows:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	4.27 GiB	0 B	4.27 GiB	0ms
	slave1	Linux (amd64)	In sync	4.87 GiB	0 B	4.87 GiB	28ms
	slave2	Linux (amd64)	In sync	4.88 GiB	0 B	4.88 GiB	225ms
	Data obtained	0.31 sec	0.32 sec	0.25 sec	0.27 sec	0.24 sec	0.24 sec

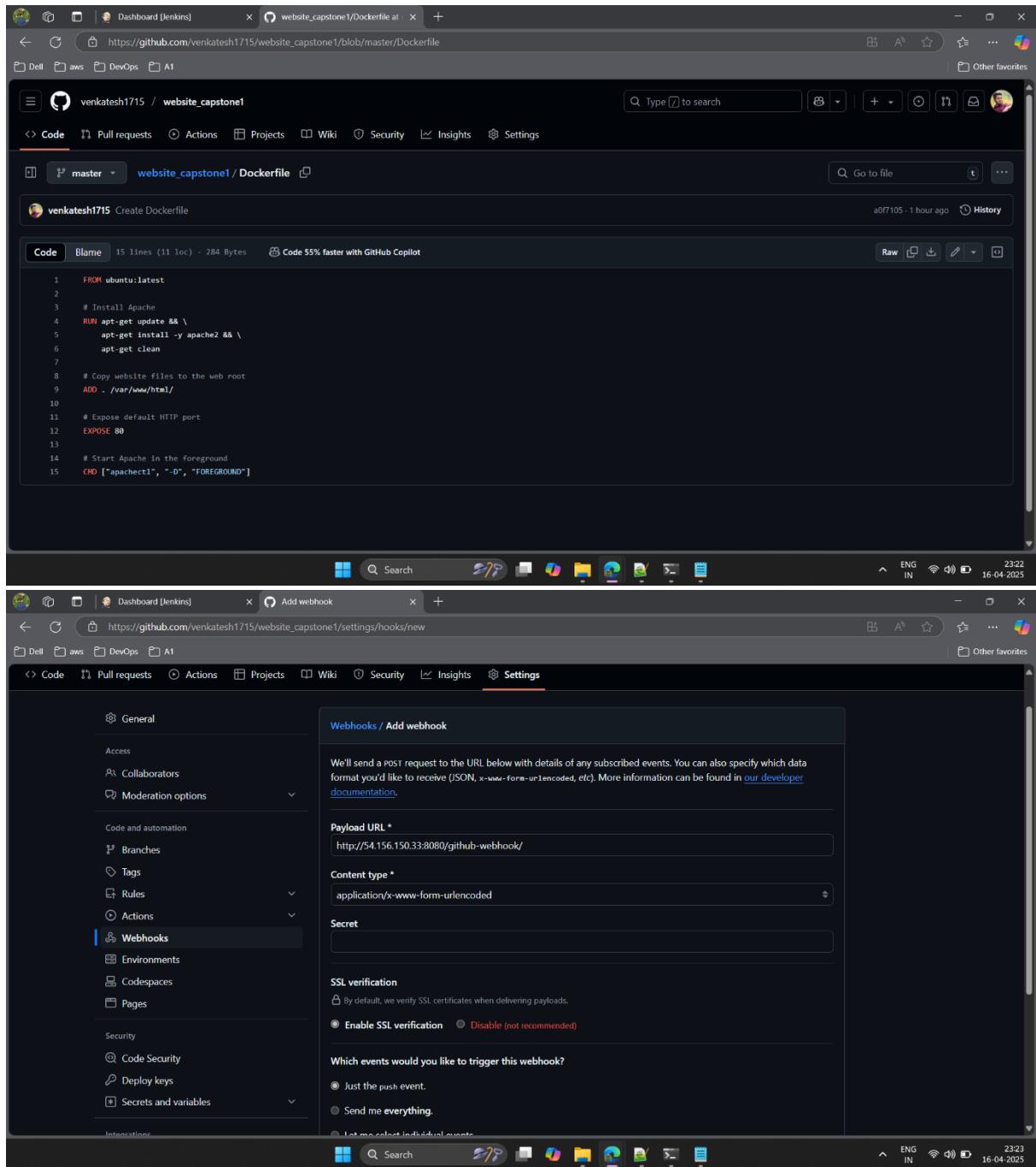
Icon: S M L Legend REST API Jenkins 2.492.3

forking github repo, and creating webhook for jenkins

Github Repository Screenshot

The screenshot shows a GitHub repository named 'venkatesh1715/website\_capstone1'. The repository is public and was forked from 'hshar/website'. It has 1 branch ('master') and 0 tags. The latest commit, by 'venkatesh1715', created a Dockerfile 1 hour ago. The repository also contains 'index.html' which was modified 6 years ago. The README file is currently empty. The repository has 3 commits, 0 stars, 0 forks, and 0 releases. It also has 0 packages published.

## creating Dockerfile to run the website on a correct path as given



The screenshot displays a Windows desktop environment with two browser windows open.

The top browser window shows a GitHub repository page for "venkatesh1715/website\_capstone1". The "Dockerfile" file is displayed, containing the following code:

```
FROM ubuntu:latest
# Install Apache
RUN apt-get update && \
    apt-get install -y apache2 && \
    apt-get clean
# Copy website files to the web root
ADD . /var/www/html/
# Expose default HTTP port
EXPOSE 80
# Start Apache in the foreground
CMD ["apache2ctl", "-D", "FOREGROUND"]
```

The bottom browser window shows the "Settings" page for the same GitHub repository, specifically the "Webhooks" section. The "Webhooks / Add webhook" form is filled out with the following details:

- Payload URL \***: <http://54.156.150.33:8080/github-webhook/>
- Content type \***: application/x-www-form-urlencoded
- Secret**: (empty field)
- SSL verification**:  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

The image shows two screenshots of a GitHub interface. The top screenshot displays the 'Branches' page for the repository 'venkatesh1715/website\_capstone1'. It lists three branches: 'master' (updated 1 hour ago), 'develop' (updated now), and another unnamed branch (updated now). The bottom screenshot shows the main repository page for 'website\_capstone1', which is public and forked from 'hshar/website'. It features a 'Switch branches/tags' dropdown showing 'master' and 'develop', a commit history with one commit by 'a0f7105' (1 hour ago), and sections for 'About', 'Releases', 'Packages', and 'Languages'.

## Job 1

The screenshot shows a web browser window with two tabs: "job1 #1 Console [Jenkins]" and "venkatesh1715/website\_capstone". The main content is the Jenkins "Console Output" page for job #1. The left sidebar has links for Status, Changes, Console Output (which is selected), Edit Build Information, Delete build '#1', Timings, and Git Build Data. The right sidebar has Download, Copy, and View as plain text buttons. The console output text area shows the build process starting with user "Venkatesh", running as SYSTEM, building on slave1, cloning a Git repository from https://github.com/venkatesh1715/website\_capstone1.git, and performing a git pull operation. It also shows the creation of a Dockerfile and navigating through workspace directories. Below this is a terminal window titled "Master" showing a Java version check and a Docker version check. The terminal also lists Jenkins configuration files like Dockerfile, remoting.jar, and workspace/index.html. The status bar at the bottom of both windows shows the date as 16-04-2025.

```
Started by user Venkatesh
Running as SYSTEM
Building remotely on slave1 in workspace /home/ubuntu/jenkins/workspace/job1
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
   Cloning repository https://github.com/venkatesh1715/website_capstone1.git
      > git init /home/ubuntu/jenkins/workspace/job1 # timeout=10
      > git --version # timeout=10
      > git --version # 'git' version 2.34.1'
      > git fetch --tags --force --progress -- https://github.com/venkatesh1715/website_capstone1.git +refs/heads/*:refs/remotes/origin/*
      > git config remote.origin.url https://github.com/venkatesh1715/website_capstone1.git # timeout=10
      > git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
      Avoid second fetch
      > git rev-parse refs/remotes/origin/develop^(commit) # timeout=10
      Checking out Revision a0f7105a8fa576e8869cd9fec46839a9c3a282583 (refs/remotes/origin/develop)
      > git config core.sparsecheckout # timeout=10
      > git checkout -f a0f7105a8fa576e8869cd9fec46839a9c3a282583 # timeout=10
Commit message: "Create Dockerfile"
ubuntu@ip-172-31-83-77:~$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-83-77:~$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1-22.04.1
ubuntu@ip-172-31-83-77:~$ cd /home/ubuntu/jenkins
ubuntu@ip-172-31-83-77:~/jenkins$ ls
remoting  remoting.jar  workspace
ubuntu@ip-172-31-83-77:~/jenkins$ cd workspace/
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ ls
job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ cd job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ |
```

Master x Slave1 x Slave2 x + v

```

ubuntu@ip-172-31-83-77:~$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-83-77:~$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1-22.04.1
ubuntu@ip-172-31-83-77:~$ cd /home/ubuntu/jenkins
ubuntu@ip-172-31-83-77:~/jenkins$ ls
remoting remoting.jar workspace
ubuntu@ip-172-31-83-77:~/jenkins$ cd workspace/
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ ls
job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ cd job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ ls
Dockefile images index.html
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
bcf8eafa524 job1 "apachectl -D FOREGR..." 2 minutes ago Up 2 minutes 0.0.0.0:81->80/tcp, :::81->80/tcp c1
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ |

```

ENG IN 23:34 16-04-2025

job1 Config [Jenkins] venkatesh175/website\_capstone x +

Dashboard > job1 > Configuration

### Configure

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

#### Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

**Execute shell**

Command

See the list of available environment variables

```

sudo docker rm -f $(sudo docker ps -aq)
sudo docker build /home/ubuntu/jenkins/workspace/job1 -t job1
sudo docker run -itd -p 81:80 --name=c1 job1

```

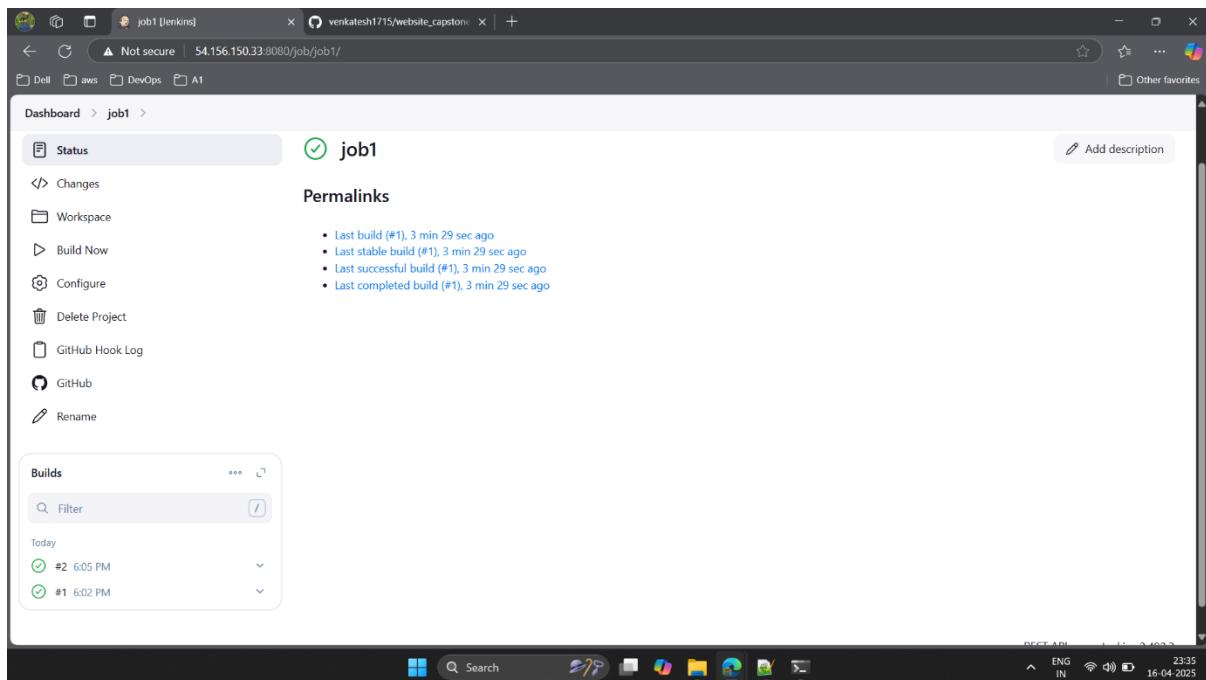
Advanced ▾

Add build step ▾

#### Post-build Actions

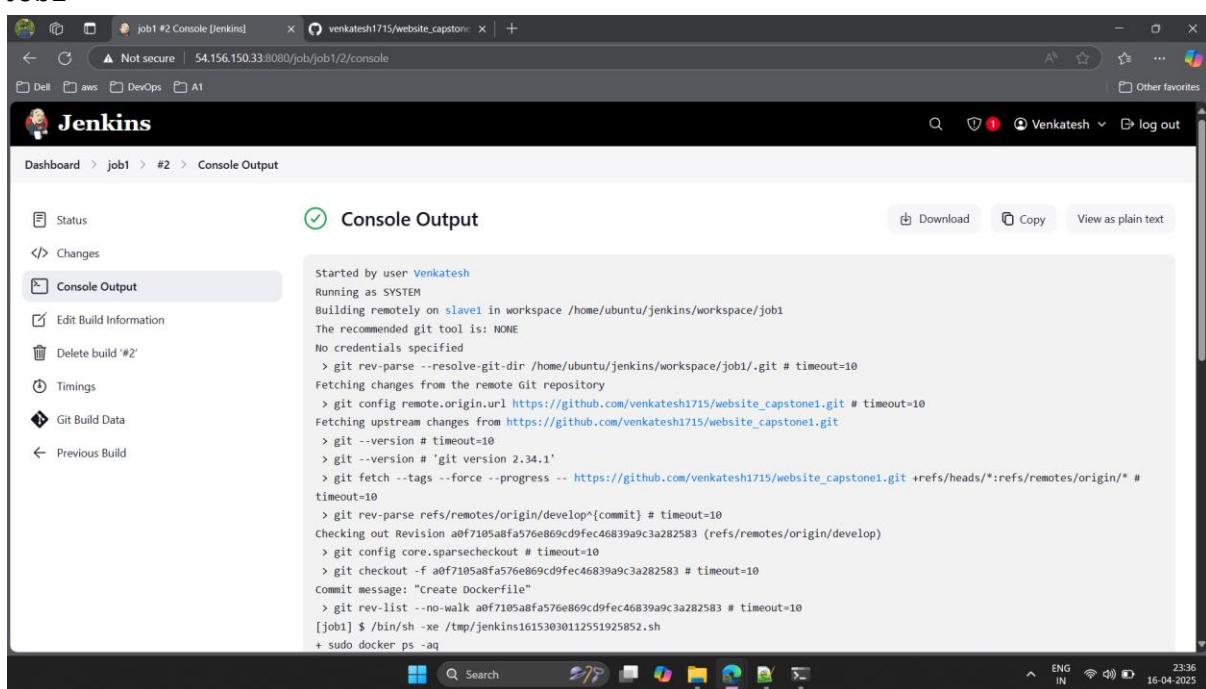
Save Apply

ENG IN 23:35 16-04-2025

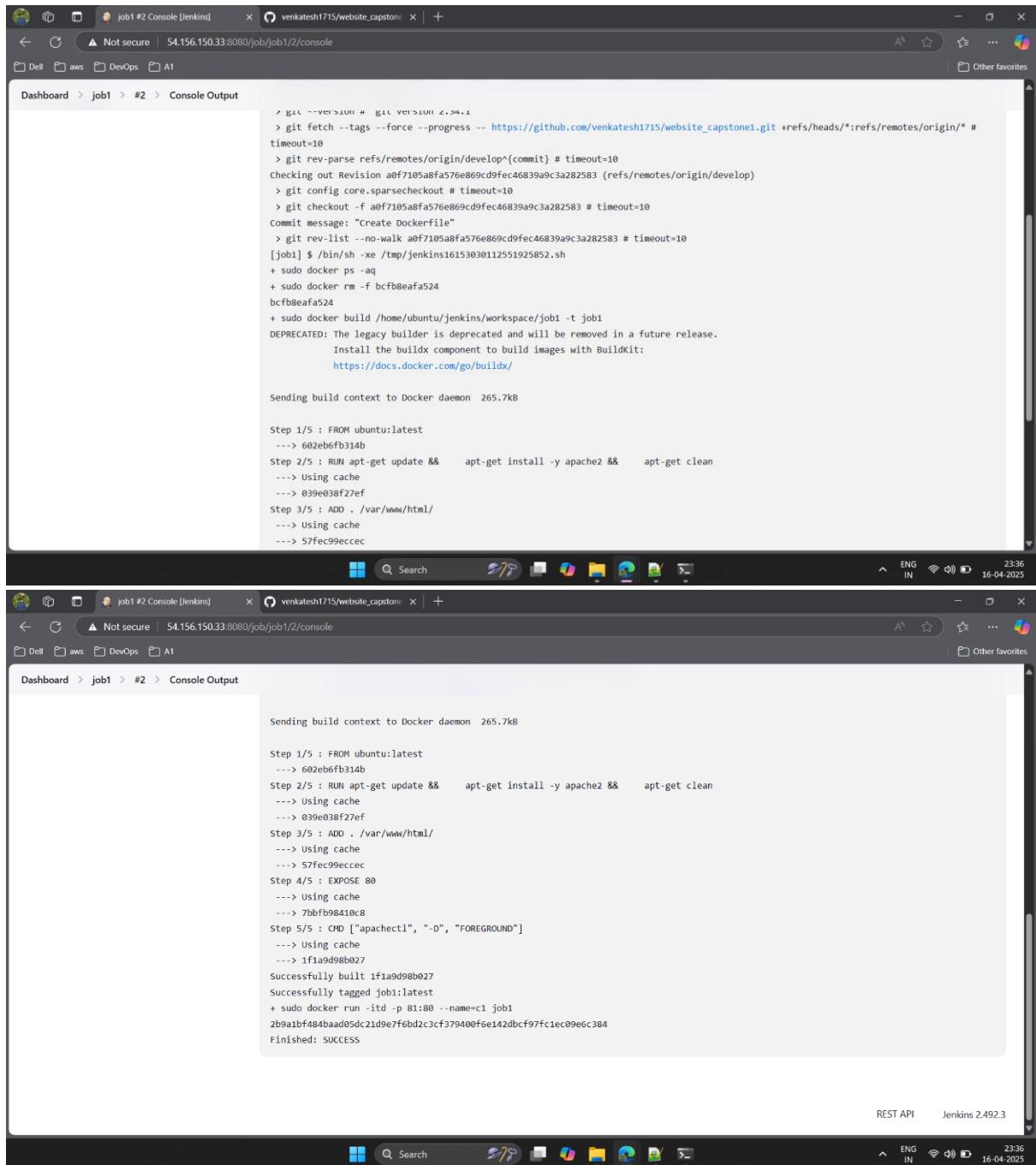


The screenshot shows the Jenkins Job1 dashboard. The left sidebar contains links for Status, Changes, Workspace, Build Now, Configure, Delete Project, GitHub Hook Log, GitHub, and Rename. The main content area is titled "job1" with a green checkmark icon. It includes a "Permalinks" section with a bulleted list of build history: Last build (#1), Last stable build (#1), Last successful build (#1), and Last completed build (#1), all from 3 min 29 sec ago. Below this is a "Builds" section with a "Filter" input and a table showing two builds: #2 at 6:05 PM and #1 at 6:02 PM. The status of both builds is green. The bottom of the screen shows a Windows taskbar with various icons and system status.

## Job2



The screenshot shows the Jenkins Job2 Console Output page. The left sidebar includes links for Status, Changes, Console Output (which is selected and highlighted in blue), Edit Build Information, Delete build '#2', Timings, Git Build Data, and Previous Build. The main content area is titled "Console Output" with a green checkmark icon. It displays the command-line output of the build process, starting with "Started by user Venkatesh". The output details the cloning of the repository from GitHub, the fetching of upstream changes, and the execution of a Dockerfile creation script. The bottom of the screen shows a Windows taskbar with various icons and system status.



```
> git --version # git version 2.34.1
> git fetch --tags --force --progress -- https://github.com/venkatesh1715/website_capstone1.git +refs/heads/*:refs/remotes/origin/*
timeout=10
> git rev-parse refs/remotes/origin/develop^{commit} # timeout=10
Checking out Revision a0f7105a8fa576e869cd9fec46839a9c3a282583 (refs/remotes/origin/develop)
> git config core.sparsecheckout # timeout=10
> git checkout -f a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
Commit message: "Create Dockerfile"
> git rev-list --no-walk a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
[job1] $ /bin/sh -xe /tmp/jenkins1615303011255192582.sh
+ sudo docker ps -aq
+ sudo docker rm -f bcfb8ea5a524
bcfb8ea5a524
+ sudo docker build /home/ubuntu/jenkins/workspace/job1 -t job1
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
    Install the buildx component to build images with BuildKit:
    https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 265.7kB

Step 1/5 : FROM ubuntu:latest
--> 602ebefbf314b
Step 2/5 : RUN apt-get update &&     apt-get install -y apache2 &&     apt-get clean
--> Using cache
--> 039e038f27ef
Step 3/5 : ADD . /var/www/html/
--> Using cache
--> 57fec99ecce
--> 57fec99ecce

-----
```

```
Sending build context to Docker daemon 265.7kB

Step 1/5 : FROM ubuntu:latest
--> 602ebefbf314b
Step 2/5 : RUN apt-get update &&     apt-get install -y apache2 &&     apt-get clean
--> Using cache
--> 039e038f27ef
Step 3/5 : ADD . /var/www/html/
--> Using cache
--> 57fec99ecce
Step 4/5 : EXPOSE 80
--> Using cache
--> 7bbfb98a10c8
Step 5/5 : CMD ["apachectl", "-D", "FOREGROUND"]
--> Using cache
--> 1f1a9d98b027
Successfully built 1f1a9d98b027
Successfully tagged job1:latest
+ sudo docker run -itd -p 81:80 --name=c1 job1
2b9a1bf484baad05dc21d9e7f6bd2c3cf379400f6e142dbcf97fc1ec09e6c384
Finished: SUCCESS
```

The screenshot shows a Windows desktop environment with a browser window and a terminal window.

**Browser Window:**

- Title bar: job2 [jenkins] - venkatesh1715/website\_capstone
- Address bar: Not secure | 54.156.150.33:8080/job/job2/
- Toolbar: Dell, aws, DevOps, A1, Other favorites
- User: Venkatesh
- Log out button
- Content:
  - Job title: job2
  - Status: Failed
  - Permalinks:
    - Last build (#2), 44 sec ago
    - Last failed build (#2), 44 sec ago
    - Last unsuccessful build (#2), 44 sec ago
    - Last completed build (#2), 44 sec ago
  - Builds table:

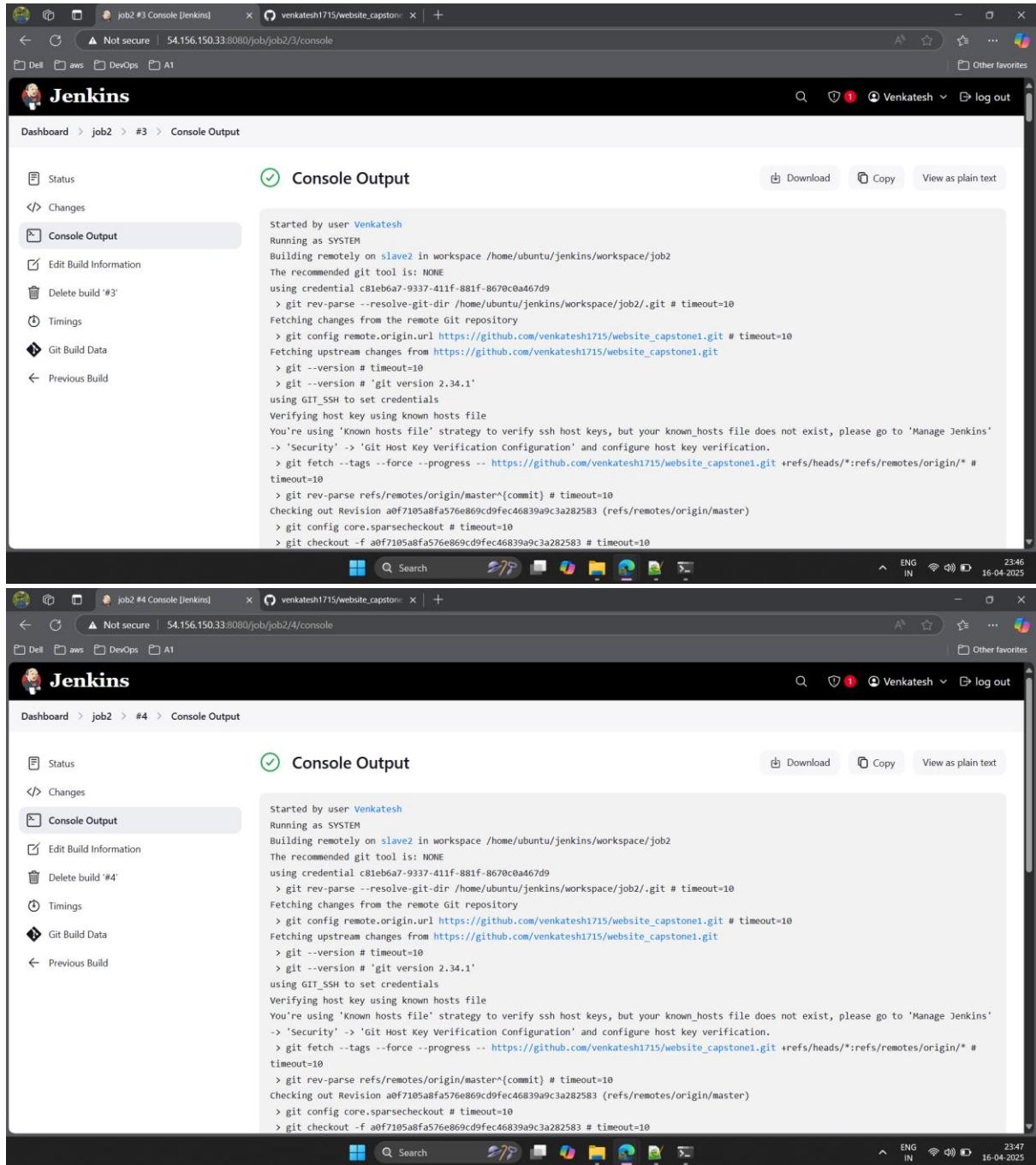
Build	Result	Timestamp
#3	Success	6:14 PM
#2	Failure	5:54 PM

**Terminal Window:**

- Titles: Master, Slave1, Slave2
- Content:

```
ubuntu@ip-172-31-80-170:~$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-80-170:~$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~22.04.1
ubuntu@ip-172-31-80-170:~$ cd /home/ubuntu/jenkins/workspace/
ubuntu@ip-172-31-80-170:~/jenkins/workspace$ ls
job2  job2tmp
ubuntu@ip-172-31-80-170:~/jenkins/workspace$ job2
Command 'job2' not found, did you mean:
  command 'gob2' from deb gob2 (2.0.20-2)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-80-170:~/jenkins/workspace$ cd job2
ubuntu@ip-172-31-80-170:~/jenkins/workspace/job2$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-80-170:~/jenkins/workspace/job2$ |
```

## Job3



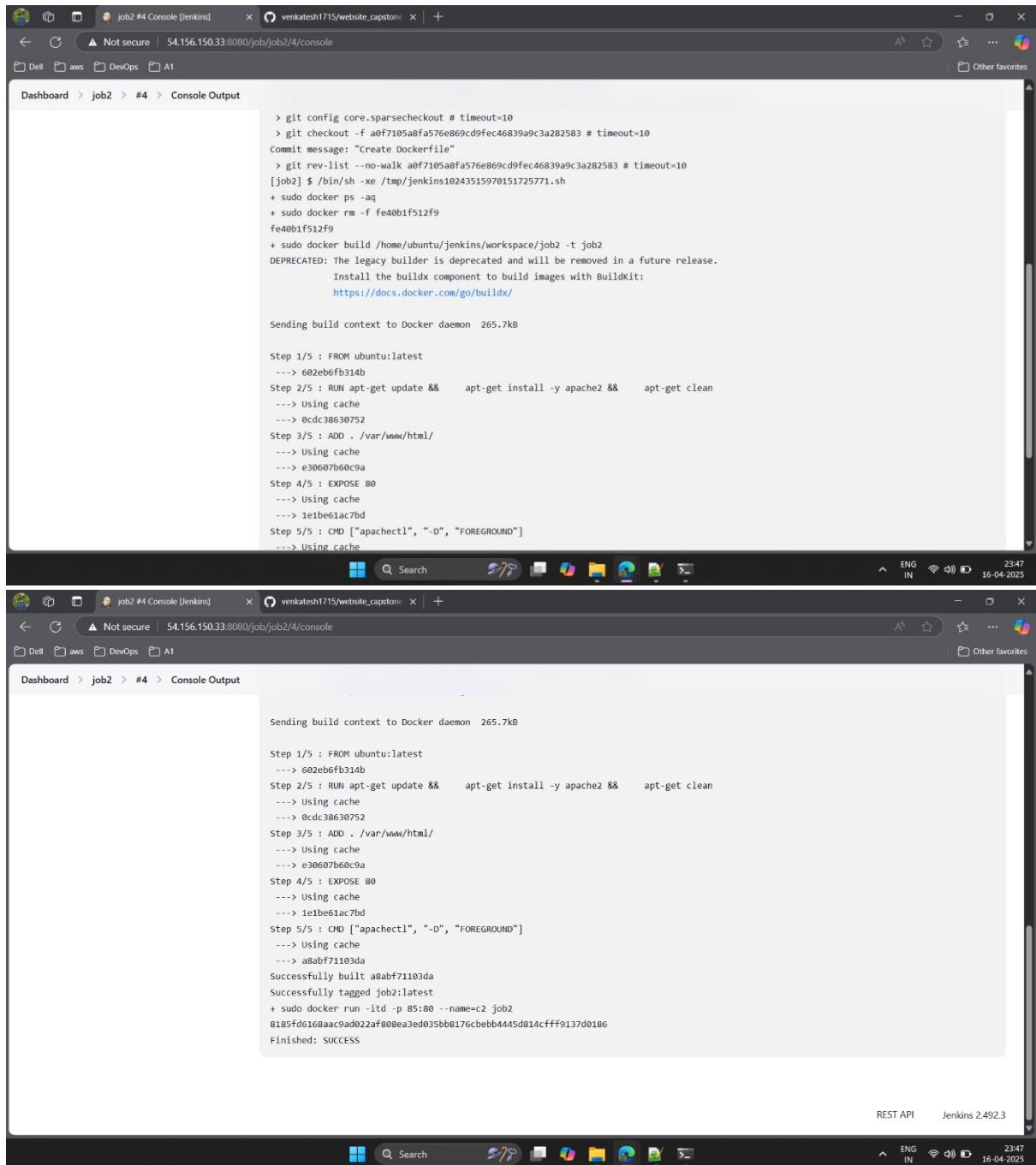
The screenshot shows two identical Jenkins console output pages side-by-side, both titled "Console Output" for build #3 and #4 respectively. The left page is for build #3 and the right page is for build #4. Both pages show the same command-line log output.

**Build #3 Log Output:**

```
Started by user Venkatesh
Running as SYSTEM
Building remotely on slave2 in workspace /home/ubuntu/jenkins/workspace/job2
The recommended git tool is: NONE
using credential c81eb6a7-9337-411f-881f-8670c0a467d9
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/job2/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/venkatesh1715/website_capstone1.git # timeout=10
Fetching upstream changes from https://github.com/venkatesh1715/website_capstone1.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_SSH to set credentials
Verifying host key using known hosts file
You're using 'Known hosts file' strategy to verify ssh host keys, but your known_hosts file does not exist, please go to 'Manage Jenkins' -> 'Security' -> 'Git Host Key Verification Configuration' and configure host key verification.
> git fetch --tags --force --progress -- https://github.com/venkatesh1715/website_capstone1.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision a0f7105a8fa576e869cd9fec46839a9c3a282583 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
```

**Build #4 Log Output:**

```
Started by user Venkatesh
Running as SYSTEM
Building remotely on slave2 in workspace /home/ubuntu/jenkins/workspace/job2
The recommended git tool is: NONE
using credential c81eb6a7-9337-411f-881f-8670c0a467d9
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/job2/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/venkatesh1715/website_capstone1.git # timeout=10
Fetching upstream changes from https://github.com/venkatesh1715/website_capstone1.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_SSH to set credentials
Verifying host key using known hosts file
You're using 'Known hosts file' strategy to verify ssh host keys, but your known_hosts file does not exist, please go to 'Manage Jenkins' -> 'Security' -> 'Git Host Key Verification Configuration' and configure host key verification.
> git fetch --tags --force --progress -- https://github.com/venkatesh1715/website_capstone1.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision a0f7105a8fa576e869cd9fec46839a9c3a282583 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
```



```
> git config core.sparseCheckout # timeout=10
> git checkout -f a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
Commit message: "Create Dockerfile"
> git rev-list --no-walk a0f7105a8fa576e869cd9fec46839a9c3a282583 # timeout=10
[job2] $ /bin/sh -xe /tmp/jenkins10243515970151725771.sh
+ sudo docker ps -aq
+ sudo docker rm -f fe40b1f512f9
fe40b1f512f9
+ sudo docker build /home/ubuntu/jenkins/workspace/job2 -t job2
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 265.7kB

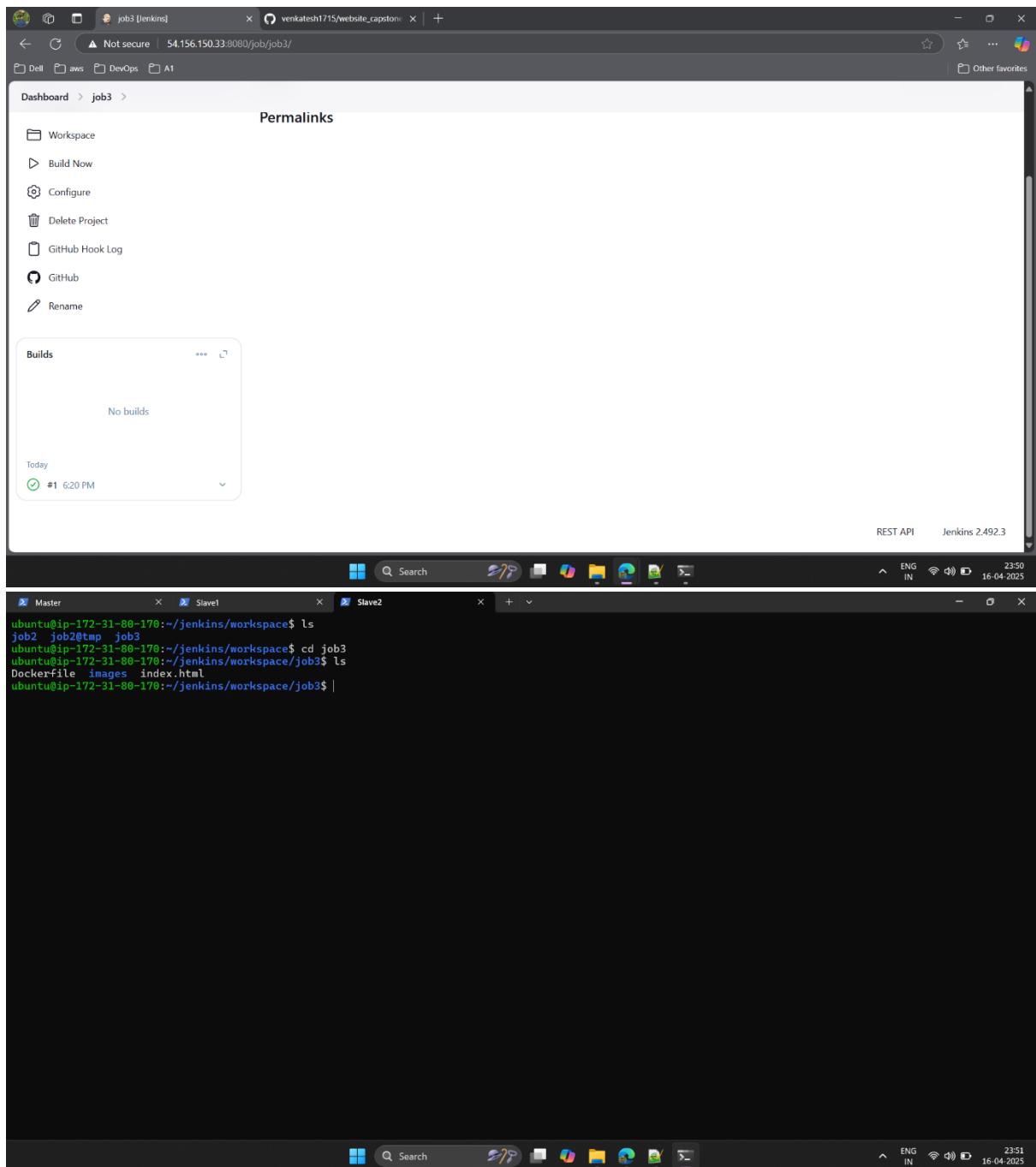
Step 1/5 : FROM ubuntu:latest
--> 602eb6fb314b
Step 2/5 : RUN apt-get update &&     apt-get install -y apache2 &&     apt-get clean
--> Using cache
--> 0xcdc38630752
Step 3/5 : ADD . /var/www/html/
--> Using cache
--> e30607b60c9a
Step 4/5 : EXPOSE 80
--> Using cache
--> 1e1be61ac7bd
Step 5/5 : CMD ["apachectl", "-D", "FOREGROUND"]
--> Using cache

Sending build context to Docker daemon 265.7kB

Step 1/5 : FROM ubuntu:latest
--> 602eb6fb314b
Step 2/5 : RUN apt-get update &&     apt-get install -y apache2 &&     apt-get clean
--> Using cache
--> 0xcdc38630752
Step 3/5 : ADD . /var/www/html/
--> Using cache
--> e30607b60c9a
Step 4/5 : EXPOSE 80
--> Using cache
--> 1e1be61ac7bd
Step 5/5 : CMD ["apachectl", "-D", "FOREGROUND"]
--> Using cache
--> a8abf71103da
Successfully built a8abf71103da
Successfully tagged job2:latest
+ sudo docker run -itd -p 85:80 --name=c2 job2
8185fdd168aac9ad022af800ea3ed035bb8176cbebb445d814cff9137d0186
Finished: SUCCESS
```

REST API Jenkins 2.492.3

ENG IN 23:47 16-04-2025



Dashboard > job3 >

Permalinks

- Last build (#1), 1 min 29 sec ago
- Last stable build (#1), 1 min 29 sec ago
- Last successful build (#1), 1 min 29 sec ago
- Last completed build (#1), 1 min 29 sec ago

Builds

Filter

Today

#2 6:22 PM

#1 6:20 PM

REST API Jenkins 2.492.3

Dashboard >

+ New Item

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

Built-In Node 0/2

slave1 0/1

slave2 0/1

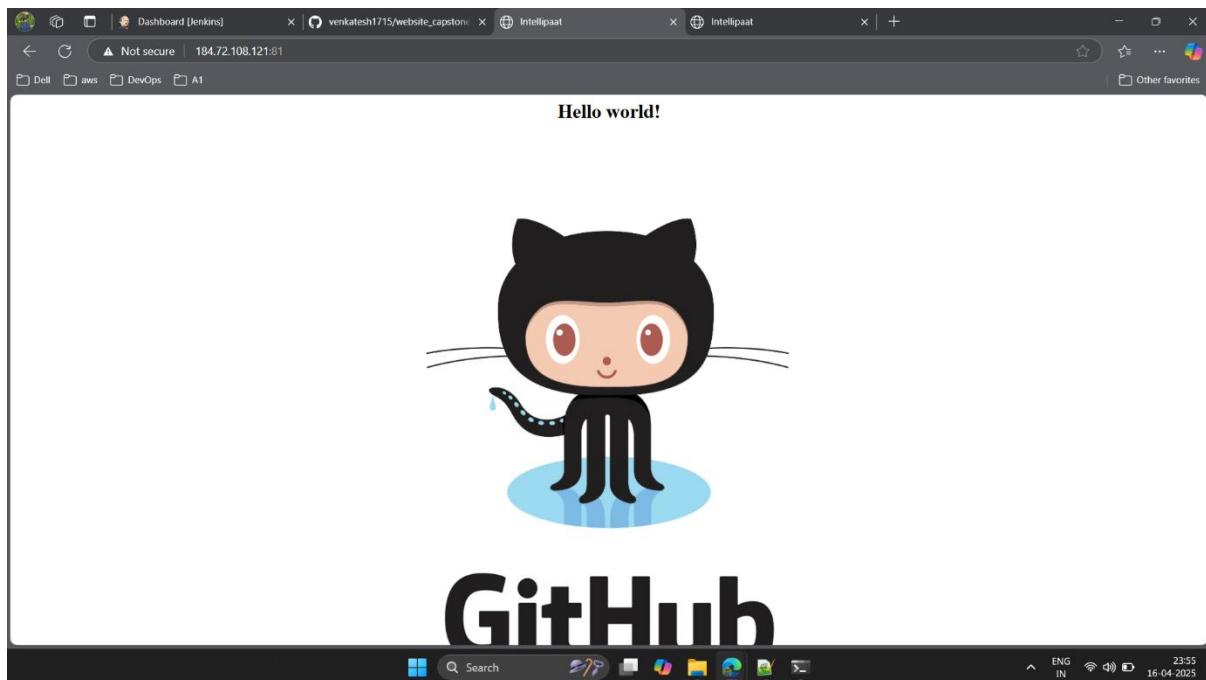
All

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	job1	16 min #2	N/A	1.2 sec
✓	☁	job2	5 min 15 sec #4	9 min 18 sec #2	1.2 sec
✓	☀	job3	13 sec #2	N/A	1 sec

Icon: S M L

REST API Jenkins 2.492.3

### Job1 webpage



### Job2 webpage



Now I am changing index.html in develop branch and commit the changes then my webhook gets triggered and it refex in terminal and in webpage

The screenshot displays two instances of a GitHub code editor window on a Windows operating system. Both windows are for the repository 'venkatesh1715 / website\_capstone1'. The top window shows the code being edited:

```
1 <html>
2 <head>
3 <title> Intellipaat_Venki </title>
4 </head>
5 <body style = "background-image:url('images/github3.jpg'); background-size: 100%">
6 <h2 ALIGN= CENTER>Hello Byddy</h2>
7 </body>
8 </html>
```

The bottom window shows the committed code with a commit message:

venkatesh1715 Update index.html

```
1 <html>
2 <head>
3 <title> Intellipaat_Venki </title>
4 </head>
5 <body style = "background-image:url('images/github3.jpg'); background-size: 100%">
6 <h2 ALIGN= CENTER>Hello Byddy</h2>
7 </body>
8 </html>
```

The system tray at the bottom of the screen shows the date as 16-04-2025 and the time as 23:57.

The screenshot displays two browser windows side-by-side.

**Top Window (GitHub Webhooks Settings):**

- URL: [https://github.com/venkatesh1715/website\\_capstone1/settings/hooks](https://github.com/venkatesh1715/website_capstone1/settings/hooks)
- Section: **Webhooks**
- Description: "Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).  
Last delivery was successful."
- Configuration: A single webhook entry for <http://54.156.150.33:8080/github-webhook/push> (push) with status "Last delivery was successful". Buttons for **Edit** and **Delete**.
- Left sidebar: General, Access, Collaborators, Moderation options, Code and automation (Branches, Tags, Rules, Actions), **Webhooks** (selected), Environments, Codespaces, Pages, Security (Code Security, Deploy keys).

**Bottom Window (Jenkins job1 Dashboard):**

- URL: <http://54.156.150.33:8080/job/job1/>
- Section: **Permalinks**
- Description: "Dashboard > job1 > Permalinks  
Changes  
Workspace  
Build Now  
Configure  
Delete Project  
GitHub Hook Log  
GitHub  
Rename"
- Build History:
  - Last build (#3), 1 min 6 sec ago
  - Last stable build (#3), 1 min 6 sec ago
  - Last successful build (#3), 1 min 6 sec ago
  - Last completed build (#3), 1 min 6 sec ago
- Builds Table:

Build	Timestamp
#3	6:28 PM
#2	6:05 PM
#1	6:02 PM
- Log Link: [54.156.150.33:8080/job/job1/3/console](http://54.156.150.33:8080/job/job1/3/console)
- Footer: REST API, Jenkins 2.492.3, ENG IN, 23:59, 16-04-2025

job1 #3 Console [Jenkins] | Webhooks · Settings - venkatesh1715 | Intellipaat | +

Not secure | 54.156.150.33:8080/job/job1/3/console

Dashboard > job1 > #3 > Console Output

Console Output

Started by GitHub push by venkatesh1715  
Running as SYSTEM  
Building remotely on slave1 in workspace /home/ubuntu/jenkins/workspace/job1  
The recommended git tool is: NONE  
No credentials specified  
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/job1/.git # timeout=10  
Fetching changes from the remote Git repository  
> git config remote.origin.url https://github.com/venkatesh1715/website\_capstone1.git # timeout=10  
Fetching upstream changes from https://github.com/venkatesh1715/website\_capstone1.git  
> git --version # timeout=10  
> git --version # 'git' version 2.34.1  
> git fetch --tags --force --progress -- https://github.com/venkatesh1715/website\_capstone1.git +refs/heads/\*:refs/remotes/origin/\* # timeout=10  
> git rev-parse refs/remotes/origin/develop^{commit} # timeout=10  
Checking out Revision e2693d6939f2f02eabb4374923fd4a489e6f1e5b (refs/remotes/origin/develop)  
> git config core.sparsecheckout # timeout=10  
> git checkout -f e2693d6939f2f02eabb4374923fd4a489e6f1e5b # timeout=10  
Commit message: "Update index.html"  
> git rev-list --no-walk a0f7105a0fa576e869cd9fec46839a9c3a282583 # timeout=10  
[job1]\$ /bin/sh -xe /tmp/jenkins17653792905205325454.sh  
+ sudo docker ps -aq  
+ sudo docker rm -f 2b9a1bf484ba  
2b9a1bf484ba  
+ sudo docker build /home/ubuntu/jenkins/workspace/job1 -t job1  
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.

Master Slave Slave2

```
ubuntu@ip-172-31-83-77:~$ java --version
openjdk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-83-77:~$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~22.04.1
ubuntu@ip-172-31-83-77:~/jenkins$ ls
remoting remoting.jar workspace
ubuntu@ip-172-31-83-77:~/jenkins$ cd workspace/
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ ls
job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ cd job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ ls
Dockerfile images index.html
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
bcf8beafa524 job1 "apachectl -D FOREGR..." 2 minutes ago Up 2 minutes 0.0.0.0:81->80/tcp, :::81->80/tcp c1
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ cd ..
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ ls
job1
ubuntu@ip-172-31-83-77:~/jenkins/workspace$ cd job1/
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ ls
Dockerfile images index.html
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ cat index.html
<html>
<head>
<title> Intellipaat_Venki </title>
</head>
<body style = "background-image:url('images/github3.jpg'); background-size: 100%">
<h2> ALIGN= CENTER>Hello Byddy</h2>
</body>
</html>
ubuntu@ip-172-31-83-77:~/jenkins/workspace/job1$ |
```

