

You have been hired as a Sr. DevOps Engineer in Abode Software. They want to implement DevOps Lifecycle in their company. You have been asked to implement this lifecycle as fast as possible. Abode Software is a product-based company and their product is available on this GitHub link.

<https://github.com/hshar/website.git>

Following are the specifications of the lifecycle:

1. Install the necessary software on the machines using a configuration management tool
2. Git workflow has to be implemented
3. CodeBuild should automatically be triggered once a commit is made to master branch or develop branch.
 - a. If a commit is made to master branch, test and push to prod
 - b. If a commit is made to develop branch, just test the product, do not push to prod
4. The code should be containerized with the help of a Dockerfile. The Dockerfile should be built every time there is a push to GitHub. Use the following pre-built container for your application: hshar/webapp
The code should reside in '/var/www/html'
5. The above tasks should be defined in a Jenkins Pipeline with the following jobs:
 - a. Job1 : build
 - b. Job2 : test
 - c. Job3 : prod

The screenshot shows the AWS CloudFormation console with a stack named 'IntelliPaaS' in the 'Creating' state. The 'Template' tab is selected, displaying the CloudFormation template. The 'Outputs' tab shows the output 'IntelliPaaS' with the value 'https://intelli-paa.ssm.us-east-1.amazonaws.com'. The 'Logs' tab shows the log for the stack creation process.

NOTE-I have installed Ansible in the master node.

```

ubuntu@ip-172-31-90-248:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa): Press enter
Enter passphrase (empty for no passphrase): Press enter
Enter same passphrase again: Press enter
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
The key fingerprint is:
SHA256:02800d5r1f1GACTQDw/gxrv4kV4cHSSz7X9Moom+Mc ubuntu@ip-172-31-90-248
The key's randomart image is:
+---[RSA 3072]---+
|          .       |
|          o *      |
|          = o .     |
|          = o .     |
|          . S .    |
|          . . .    |
|          . . .    |
|          . . .    |
|          . . .    |
|          . . .    |
+---[SHA256]-----+
ubuntu@ip-172-31-90-248:~$ 

```

i-0262d5029be2c8ef (Project - 1 Master)
PublicIP: 54.208.49.128 PrivateIP: 172.31.90.248

```
Get:25 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [4768 B]
Get:26 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:27 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [592 B]
Get:28 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [392.9 kB]
Get:29 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main Translation-en [8767 B]
Get:30 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [272 B]
Get:31 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [272 B]
Get:32 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [27.1 kB]
Get:33 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [16.5 kB]
Get:34 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [16.5 kB]
Get:35 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1304 B]
Get:36 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:37 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:38 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 https://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-security/main amd64 Components [212 B]
Get:40 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:41 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [846 kB]
Get:42 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [185 kB]
Get:43 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [17.0 kB]
Get:44 https://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [17.0 kB]
Get:45 https://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [208 B]
Get:46 https://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [17.7 kB]
Get:47 https://security.ubuntu.com/ubuntu noble-security/universe Translation-en [307 B]
Get:48 https://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [307 B]
Get:49 https://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:50 https://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [380 B]
Fetched 32.8 MB in 6s (5395 kB/s)
Reading package lists...
ubuntu@ip-172-31-89-215:~$ sudo nano .ssh/authorized_keys
ubuntu@ip-172-31-89-215:~$ sudo nano .ssh/authorized_keys
ubuntu@ip-172-31-89-215:~$ sudo nano .ssh/authorized_keys
ubuntu@ip-172-31-89-215:~$ sudo nano .ssh/authorized_keys
ubuntu@ip-172-31-89-215:~$ i-0db18534bf41716ca (Project -1 Test)
```

```
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [243 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [21.7 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [4788 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse Metadata [592 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [39.2 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main Translation-en [1679 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7088 B]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main c-n-f Metadata [1024 B]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [21.4 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [16.5 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [16.4 kB]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1304 B]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [104 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:40 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:41 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [846 kB]
Get:42 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [185 kB]
Get:43 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [2 kB]
Get:44 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [17.0 kB]
Get:45 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [208 B]
Get:46 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [17.7 kB]
Get:47 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [3792 B]
Get:48 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [300 B]
Fetched 32.8 MB in 6s (5402 kB/s)
Reading package lists... done
ubuntu@ip-172-31-89-113:~$ sudo nano .ssh/authorized_keys
ubuntu@ip-172-31-89-113:~$ i-091bc7a7b152d88c6 [Project -1 Prod]
[Project -1 Prod]
Public IP: 54.239.113.128 Private IP: 172.31.89.113
```

A screenshot of a terminal window titled "aws" on a Windows desktop. The terminal is running on an EC2 instance. The command "cat > .ssh/authorized_keys" has been entered, and a red arrow points down to the command line where the key is being pasted from the clipboard. The terminal also shows the public IP address of the EC2 instance.

The screenshot shows a terminal window with the following details:

- AWS CloudShell** interface with tabs: Search, Home, Help, and Feedback.
- Region:** us-east-1
- Instance ID:** i-0262d5...
- Public IP:** 3.85.160.2
- Private IP:** 172.31.90.248
- Hosts File Content:**

```
GNU nano 7.2
172.31.90.248
172.31.90.215
172.31.90.113
```
- Bottom Bar:** Includes icons for Help, Write out, Read File, Where Is, Cut, Paste, Justify, Execute, Location, Go To Line, Undo, Redo, Set Mark, To Bracket, Where Was, Previous, Next, Back, Exit, CloudShell, and Feedback.
- System Tray:** Shows battery level, signal strength, and system status.
- Bottom Status Bar:** © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

```
172.31.89.113 | UNREACHABLE! => {
    "changed": false,
    "msg": "Failed to connect to the host via ssh: Host key verification failed.",
    "unreachable": true
}

ubuntu@ip-172-31-90-248:~/etc/ansible$ ansible -m ping all
The authenticity of host '172.31.89.113' can't be established.
RSA key fingerprint is SHA256:cv4XkLmChxZgUhjwH63Cmny9KwAgJmBnlynxRk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? [WARNING]: Platform linux on host 172.31.89.215 is using the discovered Python interpreter at /usr/bin/python3.12.
Are you sure you want to continue connecting (yes/no/[fingerprint])? [WARNING]: Platform linux on host 172.31.89.215 is using the discovered Python interpreter at /usr/bin/python3.12.
The meaning of that path see https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
172.31.89.215 | SUCCESS => {
    "changed": false,
    "discovered_interpreter_python": "/usr/bin/python3.12"
}
{
    "changed": false,
    "since": "done"
}

[WARNING]: Platform linux on host 172.31.89.113 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.

172.31.89.113 | UNREACHABLE! => {
    "changed": false,
    "msg": "discovered interpreter python", "unreachable": true
}
{
    "changed": false,
    "since": "done"
}

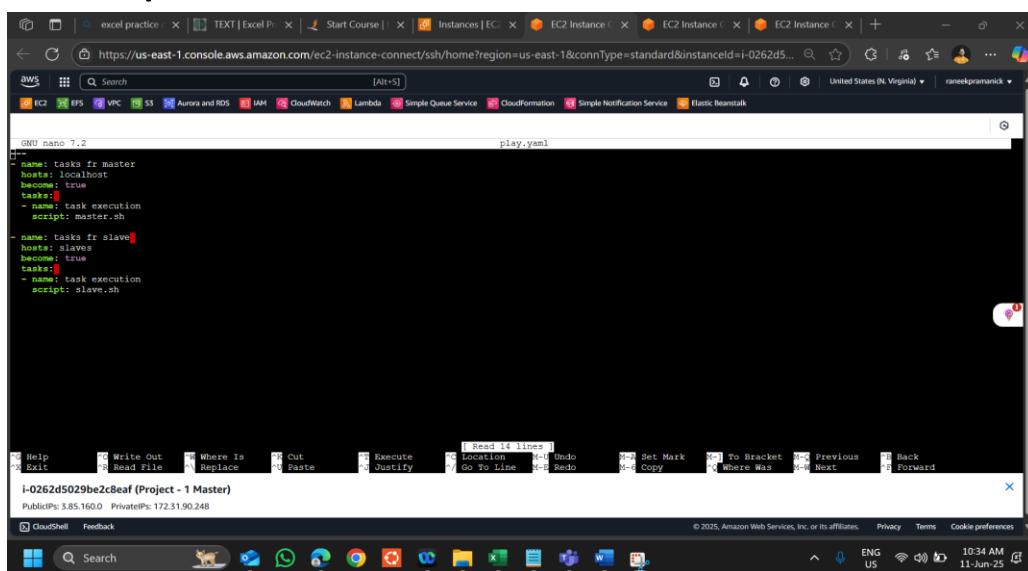
ubuntu@ip-172-31-90-248:~/etc/ansible$ sudo nano play.yaml
ubuntu@ip-172-31-90-248:~/etc/ansible$ [Project - 1 Master]
I-0262d5029be2c2ear [Project - 1 Master]
Public IP: 54.208.49.128 Private IPs: 172.31.90.248

CloudShell Feedback
Search
ENGLISH
ENGLISH
9:23 AM Jun 2, 2024
```

Yaml file-----

```
- name: tasks fr master  
hosts: localhost  
become: true  
tasks:  
- name: task execution  
  script: master.sh
```

```
- name: tasks fr slave  
hosts: Slave  
become: true  
  
tasks:  
- name: task execution  
  script: slave.sh
```



```

172.31.89.113 | UNREACHABLE! => {
    "changed": false,
    "msg": "Failed to connect to the host via ssh: Most key verification failed."
    "unreachable": true
}

ubuntu@ip-172-31-90-248:~/etc/ansible$ ansible -m ping all
The authenticity of host '172.31.89.113 (172.31.89.113)' can't be established.
ED25519 key fingerprint is SHA256:74E8E8eWnKz2QQtzMB1csgyNkWqAqM80ilyMIE.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? [WARNING]: Platform linux on host 172.31.89.215 is using the discovered Python interpreter at /usr/bin/python3.12,
but future installation of another Python interpreter could change
the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
172.31.89.215 | SUCCESS > [
    {
        "discovered_interpreter_python": "/usr/bin/python3.12"
    }
]
ubuntu@ip-172-31-90-248:~/etc/ansible$ ansible_facts
ubuntu@ip-172-31-90-248:~/etc/ansible$ sudo nano play.yaml
ubuntu@ip-172-31-90-248:~/etc/ansible$ sudo nano master.sh
ubuntu@ip-172-31-90-248:~/etc/ansible$ [red arrow] Now create master.sh and slave.sh file 1 by 1

```

ANSWER: Platform linux on host 172.31.89.113 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.

master.sh

sudo apt update

sudo apt install openjdk-17-jre -y

sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \

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 jenkins -y
```

```
[Changed]: false,
"msg": "Failed to connect to the host via ssh. Host key verification failed.",
"unreachable": true

ubuntu@ip-172-31-90-248:/etc/ansible$ ansible -m ping all
[WARNING]: Platform linux on host 172.31.90.215 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
172.31.90.215 | SUCCESS >-
  {
    "ansible_facts": {
      "discovered_interpreter_python": "/usr/bin/python3.12"
    },
    "changed": false,
    "ping": "pong"
  }

[WARNING]: Platform linux on host 172.31.99.113 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.

ubuntu@ip-172-31-99-113: ~
  {
    "ansible_facts": {
      "discovered_interpreter_python": "/usr/bin/python3.12"
    },
    "changed": false,
    "ping": "pong"
  }

ubuntu@ip-172-31-90-248:/etc/ansible$ sudo nano play.yaml
ubuntu@ip-172-31-90-248:/etc/ansible$ sudo nano master.sh
ubuntu@ip-172-31-90-248:/etc/ansible$ sudo nano slave.sh
ubuntu@ip-172-31-90-248:/etc/ansible$ 

I-0262d5029be2cbea [Project - 1 Master]
Public IPs 54.208.49.128 Private IPs 172.31.90.248

CloudWatch Feedback

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ENG US 9:30 AM 8 Jun 25
```

slave.sh

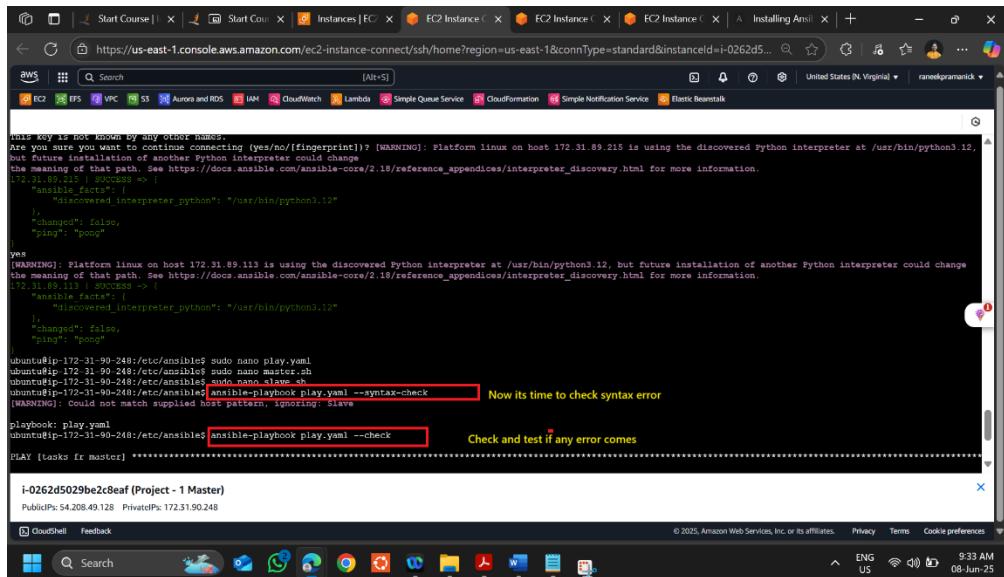
```
sudo apt update  
sudo apt install openjdk-17-jre -y
```

```
sudo apt install docker.io -y
```

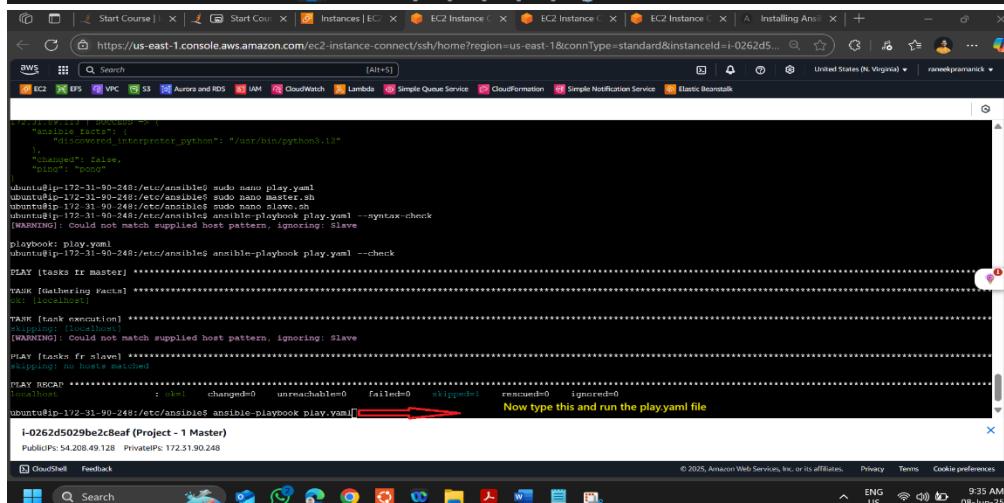
The screenshot shows a terminal window within an AWS CloudShell interface. The URL in the address bar is <https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssl/home?region=us-east-1&connType=standard&instanceId=i-0262d5...>. The terminal window has a title bar 'slave.sh *'. Inside the window, the following text is visible:

```
GNU nano 7.2
sudo apt update
sudo apt install openjdk-17-jre -y
sudo apt install docker.io -y
```

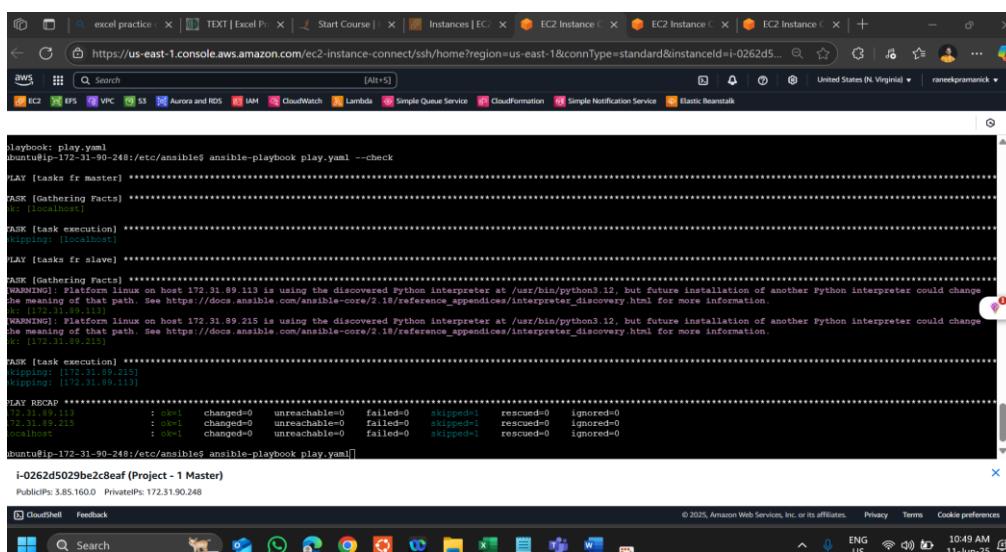
The terminal window includes a standard Linux-style menu bar at the top with options like Help, Exit, Write Out, Read File, Where Is, Replace, Cut, Paste, Execute, Justify, Location, Undo, Redo, Set Mark, To Bracket, Previous, Next, Back, and Forward. Below the menu bar, there is a status bar showing the session ID 'i-0262d5029be2c8eaf (Project - 1 Master)' and public IP 'PublicIPs: 5.85.160.0 PrivateIPs: 172.31.90.248'. At the bottom of the terminal window, there is a toolbar with icons for various AWS services like CloudWatch, Lambda, Simple Queue Service, CloudFormation, Simple Notification Service, and Elastic Beanstalk.



```
PLAY [Tasks fr master] *****
  TASK [Gathering Facts] *****
    ok: [localhost]
  PLAY [Tasks fr slave] *****
    skipping: [localhost]
  PLAY RECAP *****
    localhost : ok=1  changed=0  unreachable=0  failed=0  skipped=1  rescued=0  ignored=0
ubuntu@ip-172-31-90-248:/etc/ansible$ ansible-playbook play.yaml
```



```
PLAY [Tasks fr master] *****
  TASK [Gathering Facts] *****
    ok: [localhost]
  PLAY [Tasks fr slave] *****
    skipping: [localhost]
  PLAY RECAP *****
    localhost : ok=1  changed=0  unreachable=0  failed=0  skipped=1  rescued=0  ignored=0
ubuntu@ip-172-31-90-248:/etc/ansible$ ansible-playbook play.yaml
```



```
PLAY [Tasks fr master] *****
  TASK [Gathering Facts] *****
    ok: [localhost]
  PLAY [Tasks fr slave] *****
    skipping: [localhost]
  PLAY RECAP *****
    localhost : ok=1  changed=0  unreachable=0  failed=0  skipped=1  rescued=0  ignored=0
ubuntu@ip-172-31-90-248:/etc/ansible$ ansible-playbook play.yaml
```

excel practice X TEXT | Excel Pr X Start Course X Instances | EC2 X EC2 Instance X EC2 Instance X EC2 Instance X +

https://us-east-1.console.aws.amazon.com/ec2-instance-connect/shell/home?region=us-east-1&connType=standard&instanceId=i-0262d5... [Alt+S] Search United States (N. Virginia) raneekpramack

```

TASK [block execution]
skipping: [localhost]

PLAY [Tasks fr slave]
[WARNING]: Platform linux on host 172.31.89.113 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.

[WARNING]: Platform linux on host 172.31.89.215 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
See https://docs.ansible.com/ansible/2.18/reference_appendices/interpreter_discovery.html for more information.

TASK [Task execution]
skipping: [localhost]
EXCLUDES: [172.31.89.113]

PLAY RECAP
172.31.89.113 : ok=1    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
172.31.89.215 : ok=1    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
localhost   : ok=1    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-90-248:/etc/ansible$ ansible-playbook play.yml
PLAY [Tasks fr master]
[WARNING]: Platform linux on host 172.31.89.113 is using the discovered Python interpreter at /usr/bin/python3.12, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.

TASK [Gathering Facts]
ok: [localhost]
TASK [Task execution]

```

i-0262d5029be2cbeaf (Project - 1 Master)
PublicIPs: 3.85.16.0 PrivateIPs: 172.31.90.248

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences ENG US 10:50 AM 11-Jun-25

excel practice X TEXT | Excel Pr X Start Course X Instances | EC2 X EC2 Instance X EC2 Instance X EC2 Instance X +

https://us-east-1.console.aws.amazon.com/ec2-instance-connect/shell/home?region=us-east-1&connType=standard&instanceId=i-0db185... [Alt+S] Search United States (N. Virginia) raneekpramack

```

AWS VPC S3 Aurora and RDS IAM CloudWatch Lambda Simple Queue Service CloudFormation Simple Notification Service Elastic Beanstalk

Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro

System information as of Wed Jun 11 05:14:30 UTC 2025

system load: 0.0      Processes:          105
Usage of /: 104448 of 6.71GB  Users logged in: 0
Memory usage: 134     IPv4 address for enx0: 172.31.89.215
Swap usage:  0% 

Expanded Security Maintenance for Applications is not enabled.

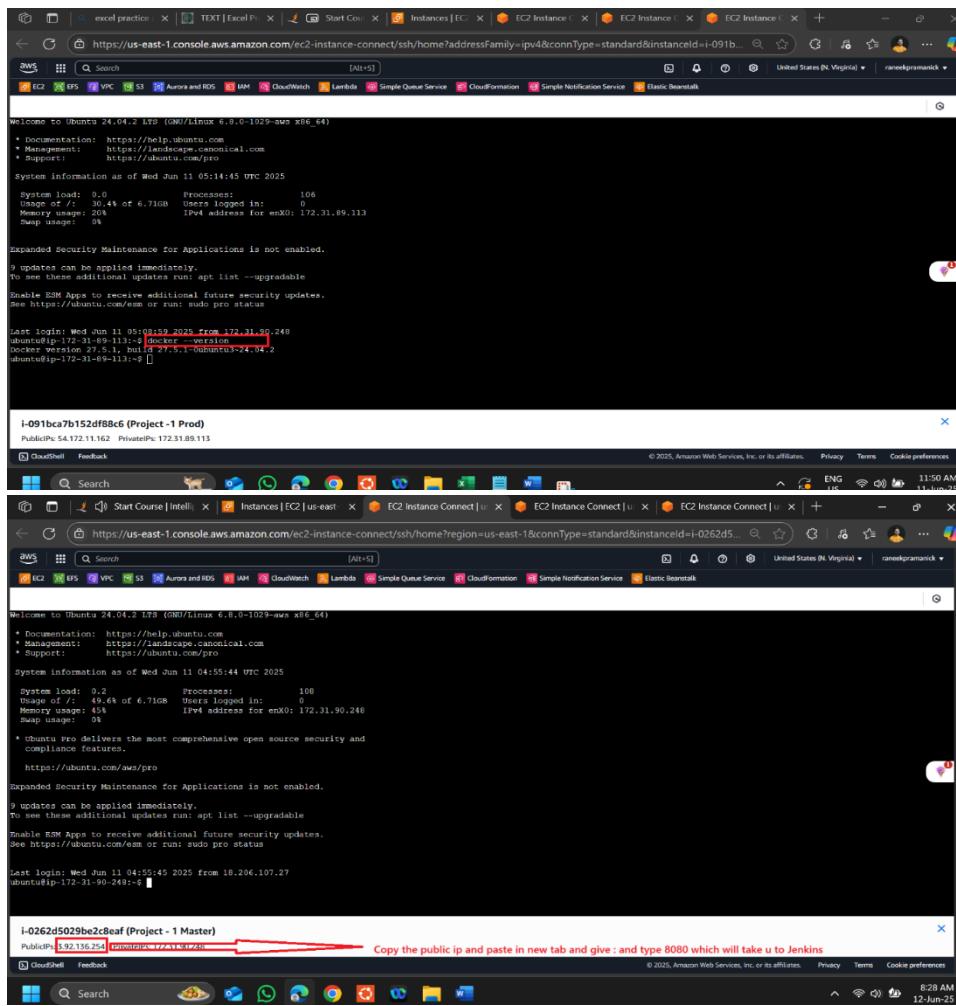
4 updates can be applied immediately.
To see these additional updates run: apt list --upgradeable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Wed Jun 11 05:14:53 2025 from 172.31.90.248
ubuntu@ip-172-31-90-248:~$ java --version
openjdk 17.0.15 2025-04-18
OpenJDK Runtime Environment (build 17.0.15+6-Ubuntu-Ubuntu124.04)
OpenJDK 64-Bit Server VM (build 17.0.15+6-Ubuntu-Ubuntu124.04, mixed mode, sharing)
ubuntu@ip-172-31-90-248:~$ 
```

i-0db18534bf41716c (Project - 1 Test)
PublicIPs: 3.83.167.155 PrivateIPs: 172.31.89.215

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Getting Started

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

```
/var/lib/jenkins/secrets/initialAdminPassword
```

Copy this and go back to master node and type sudo cat and paste the link to get the Jenkins passwords

Please copy the password from either location and paste it below.

Administrator password

Continue

8:31 AM 12-Jun-25

https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=us-east-1&connType=standard&instanceId=i-0262d5...

Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.6.0-1029-aws x86_64)

- Documentation: <https://help.ubuntu.com>
- Management: <https://landscape.canonical.com>
- Support: <https://ubuntu.com/ubuntu>

System information as of Wed Jun 11 04:55:44 UTC 2025

```
system load: 0.2 Processes: 106
Usage of /: 49.6% of 6.71GB Users logged in: 1
IPv4 address for enx0: 172.31.90.248
Swap usage: 0%
```

* Ubuntu Pro delivers the most comprehensive open source security and compliance features.

<https://ubuntu.com/ubuntu/pro>

Expanded Security Maintenance for Applications is not enabled.

9 updates can be applied immediately.

To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.

See <https://ubuntu.com/esm> or run: sudo pro status

```
Last login: Wed Jun 11 04:54:45 2025 from 19.206.107.27
ubuntu@ip-172-31-90-248:~$ cd /etc/ansible
ubuntu@ip-172-31-90-248:/etc/ansible$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
d1d34fb1-172-31-90-248:/etc/ansible$ [REDACTED]
```

i-0262d5029be2cbeaf (Project - 1 Master)

PublicIP: 3.92.136.254 PrivateIP: 172.31.90.246

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The screenshot shows the Jenkins Dashboard. At the top, there is a red box around the 'Manage Jenkins' link. Below it, the main content area features a heading 'Welcome to Jenkins!' and a sub-section 'Start building your software project'. There are three buttons: 'Create a job', 'Set up an agent', and 'Configure a cloud'. A sidebar on the left includes sections for 'Build Queue' (No builds in the queue), 'Build Executor Status' (0/2), and 'Manage Jenkins'.

The screenshot shows the 'Manage Jenkins > Plugins' page. A red box highlights the 'Available plugins' tab. In the search bar, 'ssh' is typed, and the 'Install' button is highlighted with a red box. A specific plugin entry for 'SSH' is shown, with a checked checkbox next to it. A warning message is displayed below the plugin details:

This plugin executes shell commands remotely using SSH protocol.
Warning: This plugin version may not be safe to use. Please review the following security notices:

- CSRF vulnerability and missing permission checks allow capturing credentials
- Missing permission check allows enumerating credentials IDs

The screenshot shows the Jenkins plugin management interface. A search bar at the top contains the text "ssh a". Below it, a list of available plugins includes "SSH Agent" which is highlighted with a blue checkmark and labeled "Released 29 days ago".

Plugins

- Updates
- Available plugins (selected)
- Installed plugins
- Advanced settings
- Download progress

SSH Agent

Install Name: SSH Agent Version: 386.v36cc0c7582f0 Released: 29 days ago

This plugin allows you to provide SSH credentials to builds via a ssh-agent in Jenkins.

Nodes

Nodes

New Node

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.36 GiB	0 B	3.36 GiB	0ms
	Data obtained	15 min	15 min	15 min	15 min	15 min	15 min

Icon: S M L

Legend:

REST API Jenkins 2.504.2

The screenshot shows the Jenkins 'New node' configuration page. The 'Node name' field contains 'Slave1'. The 'Type' section is expanded, showing the 'Permanent Agent' option selected. A red box highlights the 'Create' button at the bottom of the page.

New node

Node name

Slave1

Type

Permanent Agent
Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.

Create

REST API Jenkins 2.504.2

The screenshot shows the Jenkins 'createItem' configuration page. The 'Remote root directory' field contains '/home/ubuntu/jenkins'. A red box highlights this field.

Dashboard > Nodes >

Description ?

Plain text Preview

Number of executors ?
1

Remote root directory ?
/home/ubuntu/jenkins

Labels ?

Save

9:41 PM 14-Jun-25

The screenshot shows the Jenkins 'Nodes' configuration page. A new node is being created with the following details:

- Usage:** Use this node as much as possible
- Launch method:** Launch agents via SSH (highlighted with a red box)
- Host:** 172.31.89.215 (with placeholder text: Paste the Private IP of the test Machine)
- Credentials:** - none - (with a red box around the '+ Add' button)

A 'Save' button is at the bottom left.

The screenshot shows the 'Jenkins Credentials Provider: Jenkins' dialog for creating a new credential:

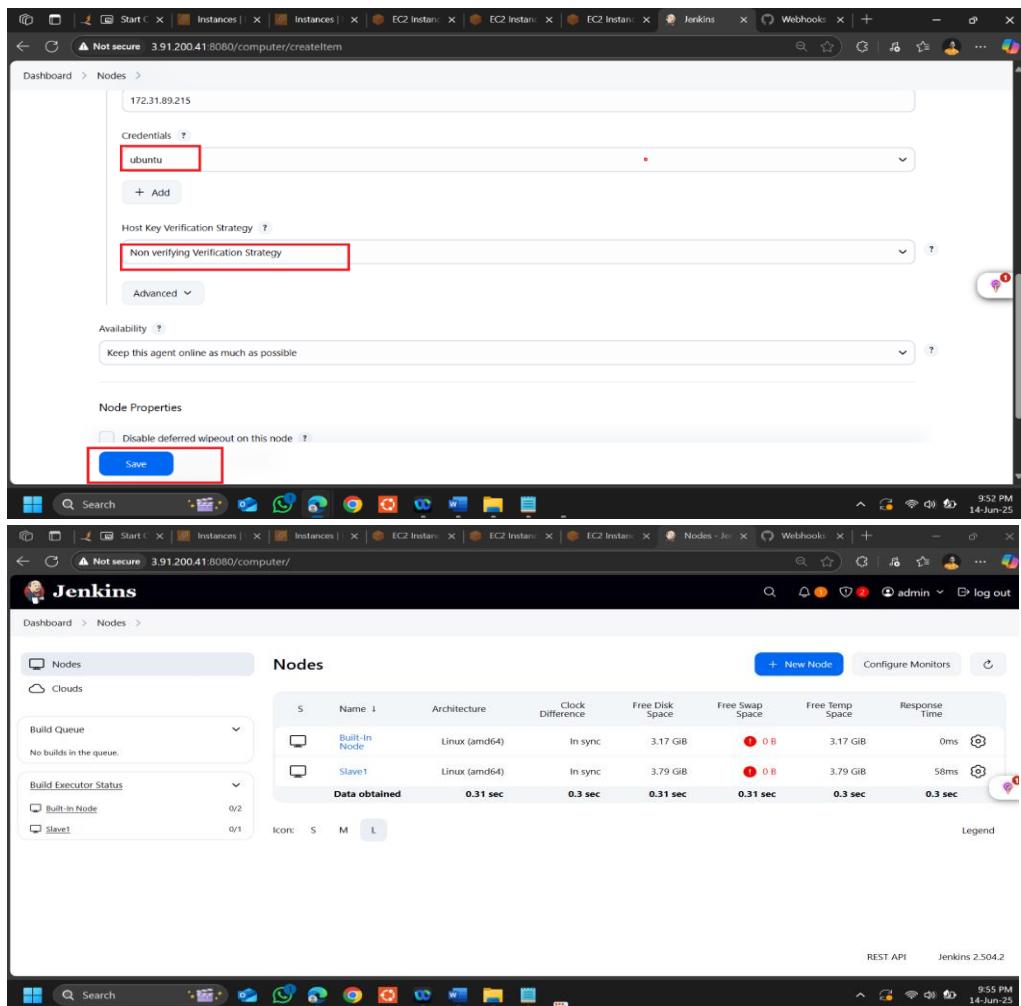
- Kind:** SSH Username with private key (highlighted with a red box)
- Scope:** Global (Jenkins, nodes, items, all child items, etc)
- ID:** (empty field)
- Description:** (empty field)

At the bottom, there are 'Available' and 'Save' buttons.

The screenshot shows the Jenkins Credentials Provider dialog box. In the 'Username' field, 'ubuntu' is entered. The 'Treat username as secret' checkbox is unchecked. In the 'Private Key' section, the 'Enter directly' radio button is selected. A large text area labeled 'Key' contains the RSA private key. The key text is as follows:

```
-----BEGIN RSA PRIVATE KEY-----  
MIIEowIBAAKCAQEAQGQnCIPHYT6SD2UQGLE3FLt+SB0C9QHRI8B1P0N4K9F+X1Ec8OY3Z  
3TSQ9z2BhCReLA7z37D1VwMh+F7wvDDEg57fsLGHc1Q3Xc6wNMyIu{jwvK2sYeT  
Huqzgt7c2h2Mf21Dh+ARTZ/H9qcnpGT8wRed0NxRgs1F/X85@eH  
-----END RSA PRIVATE KEY-----
```

The 'Passphrase' field is empty. The 'Add' button at the bottom right is highlighted with a red box.



The image shows two screenshots of a Jenkins interface. The top screenshot is a 'Nodes' configuration page where a new node is being created. It includes fields for IP address (172.31.89.215), credentials (ubuntu), host key verification strategy (Non verifying Verification Strategy), and availability (Keep this agent online as much as possible). The bottom screenshot shows the 'Nodes' page listing existing nodes: Built-In Node (Architecture: Linux (amd64), Clock Difference: In sync, Free Disk Space: 3.17 GB, Free Swap Space: 0 B, Free Temp Space: 3.17 GB, Response Time: 0ms) and Slave1 (Architecture: Linux (amd64), Clock Difference: In sync, Free Disk Space: 3.79 GB, Free Swap Space: 0 B, Free Temp Space: 3.79 GB, Response Time: 58ms). A legend at the bottom indicates icons for Status (S), Master (M), and Label (L).

Nodes

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.17 GB	0 B	3.17 GB	0ms
	Slave1	Linux (amd64)	In sync	3.79 GB	0 B	3.79 GB	58ms

Legend: S M L

The image shows two screenshots of the Jenkins web interface, illustrating the process of creating a new slave node and configuring it.

New node screen:

- Node name:** Slave2
- Type:** Copy Existing Node (selected), Q_Slave1
- Create button:** A blue "Create" button at the bottom.

Configure screen for Slave2:

- Remote root directory:** /home/ubuntu/jenkins
- Labels:** (empty)
- Usage:** Use this node as much as possible
- Launch method:** Launch agents via SSH
- Host:** 172.31.89.113 (IP address pasted from another machine)
- Credentials:** (empty)
- Save and Apply buttons:** Buttons at the bottom of the configuration form.

The screenshot shows the Jenkins 'Nodes' page. At the top, there are two dropdown menus: 'Build Queue' (No builds in the queue) and 'Build Executor Status' (Built-In Node 0/2, Slave1 0/1, Slave2 0/1). The main table lists three nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
1	Built-In Node	Linux (amd64)	In sync	3.17 GiB	0 B	3.17 GiB	0ms
2	Slave1	Linux (amd64)	In sync	3.79 GiB	0 B	3.79 GiB	38ms
3	Slave2	Linux (amd64)	In sync	3.80 GiB	0 B	3.80 GiB	31ms

Icons at the bottom left indicate S (Status), M (Metrics), and L (Logs). A 'Legend' link is at the bottom right.

The screenshot shows a Microsoft Edge browser window. The address bar shows 'Copstone-Project.pdf'. The page content is from Intellipaat, featuring a sidebar with various icons and the text: 'Contact us: support@intellipaat.com / © Copyright Intellipaat / All rights reserved'. The main content area is titled 'DevOps Certification Training' and contains the following text:

You have been hired as a Sr. DevOps Engineer in Adobe Software. They want to implement DevOps Lifecycle in their company. You have been asked to implement this lifecycle as fast as possible. Adobe Software is a product-based company and their product is available on this GitHub link.

<https://github.com/hshar/website.git> Opened the repository and forked it first

Following are the specifications of the lifecycle:

1. Install the necessary software on the machines using a configuration management tool
2. Git workflow has to be implemented
3. CodeBuild should automatically be triggered once a commit is made to master branch or develop branch.
 - a. If a commit is made to master branch, test and push to prod
 - b. If a commit is made to develop branch, just test the product, do not

The screenshot shows a Microsoft Edge browser window with the URL 'https://github.com/raneekpramanick/website'. The page displays a GitHub repository for 'website'. The repository details include:

- Branches**: master (2 branches), develop (1 branch). A dropdown menu shows 'Created develop branch'.
- Activity**: 2 commits, 6 years ago.
- 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 100.0%

The main content area features a 'README' section with a button to 'Add a README'.

The screenshot shows the GitHub settings interface for a repository named 'raneekpramanick / website'. The 'Webhooks' tab is selected. A new webhook is being configured with the following details:

- Payload URL ***: `http://http://3.91.200.41:8080/github-webhook/`
- Content type ***: `application/x-www-form-urlencoded`
- Secret**: (empty)
- SSL verification**: `Enable SSL verification` (radio button selected)

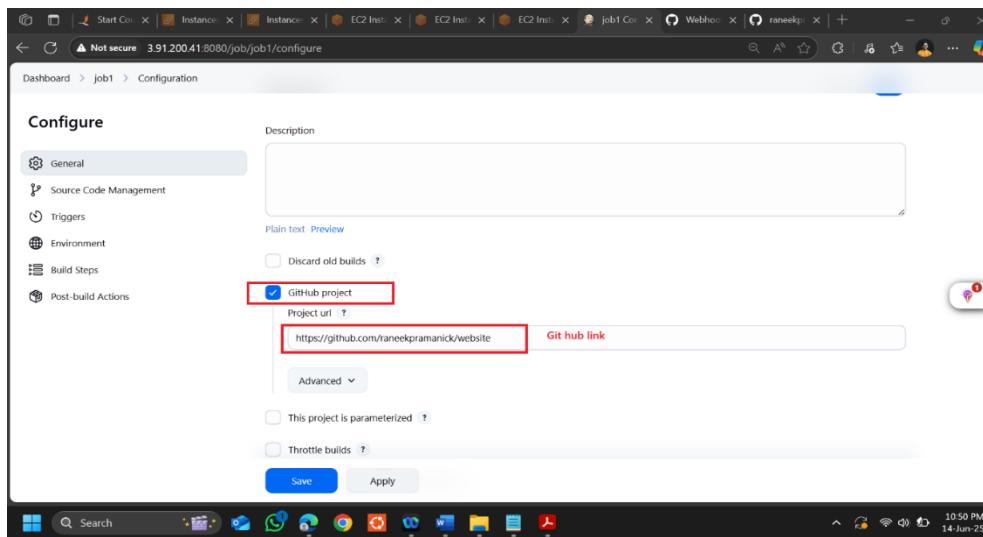
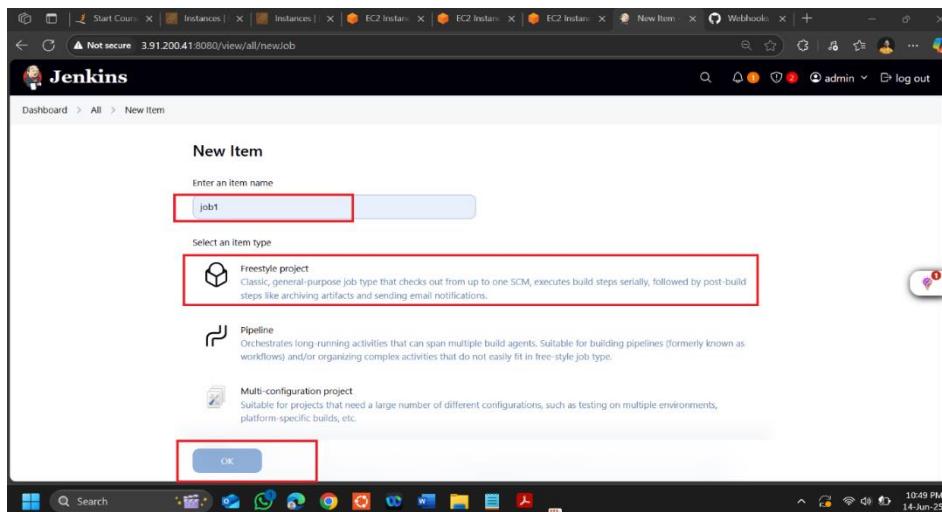
The status bar at the bottom indicates the time as 10:24 PM on 14-Jun-25.

The screenshot shows the GitHub settings interface for the same repository. The newly created webhook is listed:

Action	URL	Status
<code>Edit</code>	<code>http://3.91.200.41:8080/github-webhook/ (local)</code>	<code>Last delivery was successful.</code>

The status bar at the bottom indicates the time as 10:47 PM on 14-Jun-25.

The screenshot shows the Jenkins dashboard. The top navigation bar includes links for 'Build History', 'Project Relationship', 'Check File Fingerprint', 'Manage Jenkins', and 'My Views'. The main content area features a 'Welcome to Jenkins!' message and a 'Start building your software project' section with a 'Create a job' button. On the left, there are two expandable sections: 'Build Queue' (which is currently empty) and 'Build Executor Status' (listing three executors: 'Built-in Node' (0/2), 'Slave1' (0/1), and 'Slave2' (0/1)). The status bar at the bottom indicates the time as 10:48 PM on 14-Jun-25.



Configure

General

GitHub project
Project url: <https://github.com/raneekpramanick/website/>

This project is parameterized

Throttle builds

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.

Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

None

Git

Repository URL: <https://github.com/raneekpramanick/website>

Credentials: - none -

+ Add

Advanced

Add Repository

Branches to build

Save Apply

The image consists of three vertically stacked screenshots of the Jenkins configuration interface for a job named "job1".

- Screenshot 1: Source Code Management Configuration**

This screenshot shows the "Source Code Management" section of the configuration. Under "Branches to build", the "Branch Specifier" field contains the value "/develop". A red box highlights this field.
- Screenshot 2: Triggers Configuration**

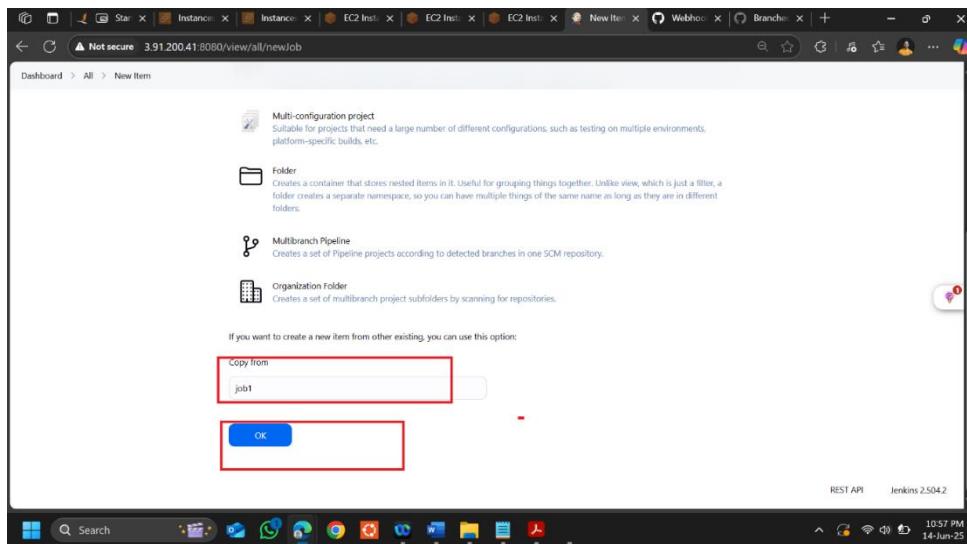
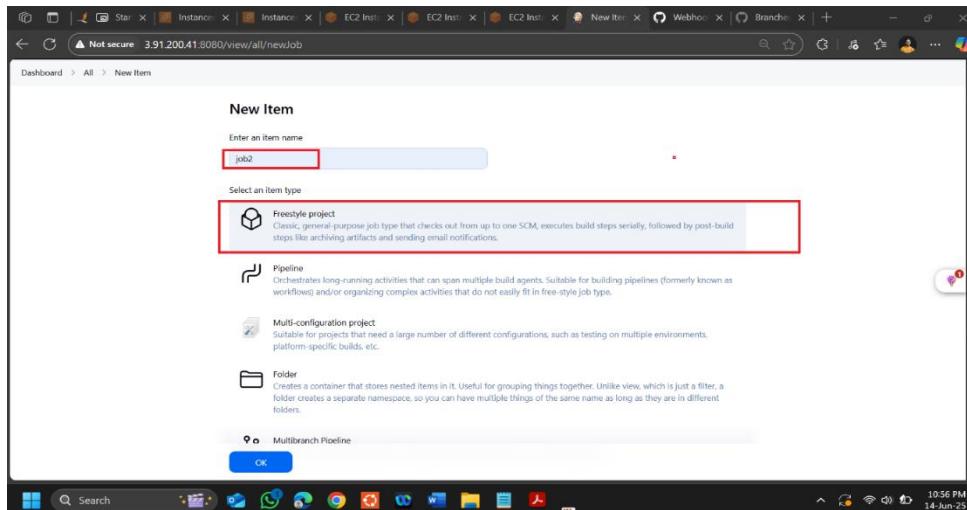
This screenshot shows the "Triggers" section. The "GitHub hook trigger for GITScm polling" checkbox is selected and highlighted with a red box.
- Screenshot 3: General Configuration**

This screenshot shows the general configuration page for job1. It includes sections for "General", "Triggers", "Environment", "Build Steps", and "Post-build Actions". The "Triggers" section is expanded, showing the GitHub hook trigger configuration. The "Save" and "Apply" buttons at the bottom are highlighted with a red box.

This screenshot shows the Jenkins dashboard for the job "job1".

- Left sidebar:** Shows options like Status, Changes, Workspace, Build Now (highlighted with a red box), Configure, Delete Project, GitHub Hook Log, GitHub, and Rename.
- Builds section:** Displays a message "No builds". Below it, a "Today" section shows a single build entry: "5:25 PM". This entry is also highlighted with a red box.
- Top right:** An "Add description" button.

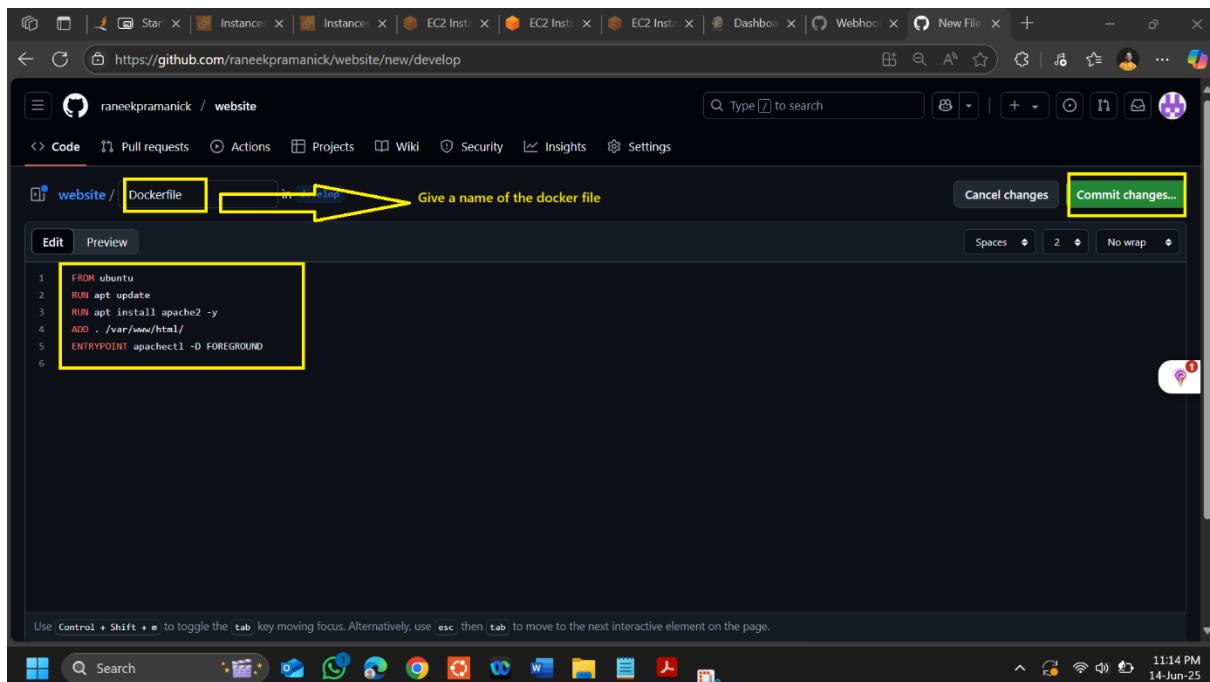
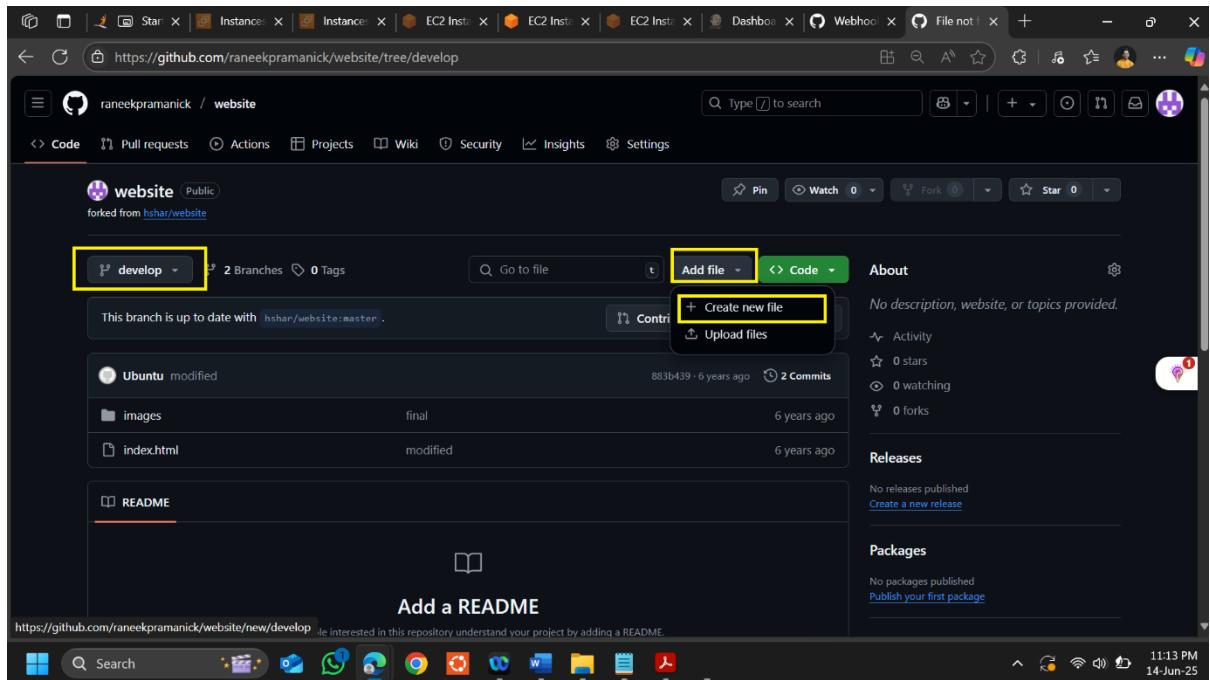
Now we have to create another job for master.

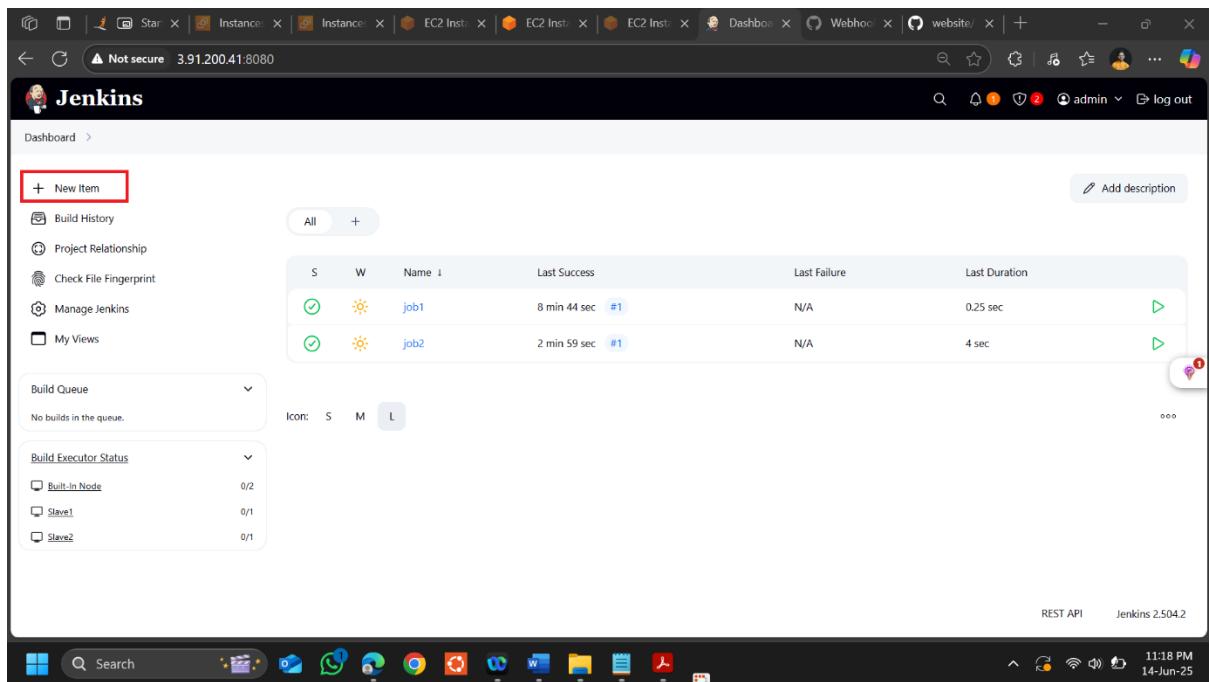
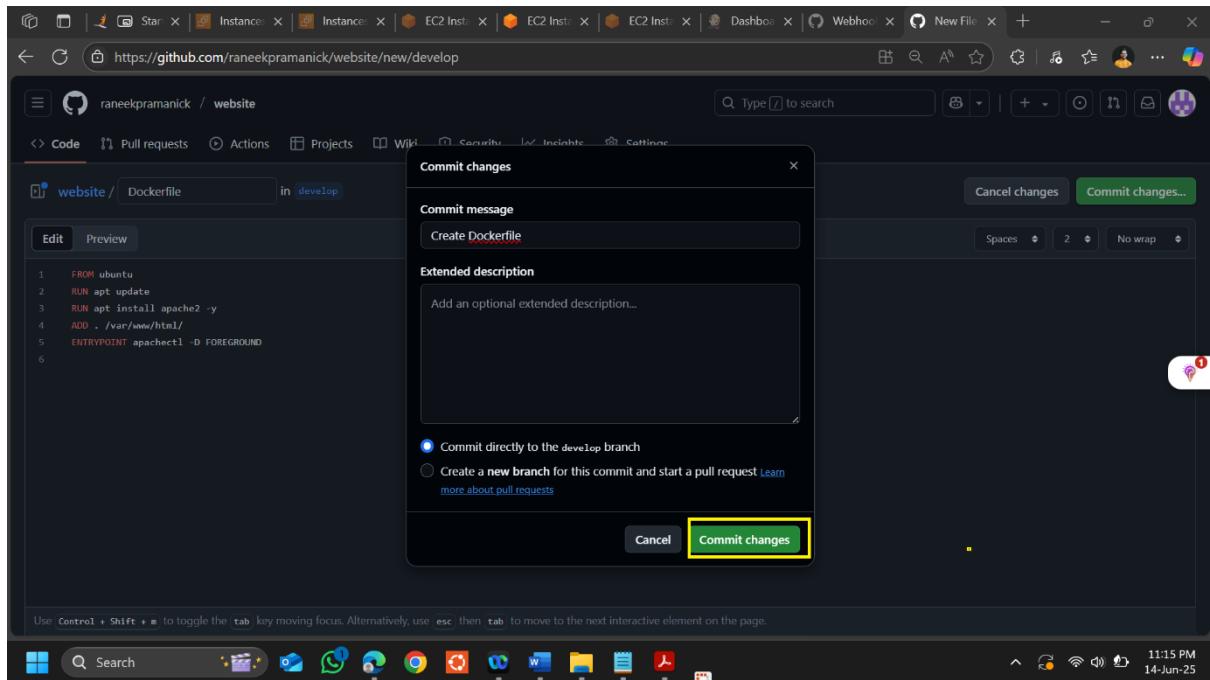


The screenshots show the Jenkins configuration page for job2. In the first screenshot, under the 'General' section, the 'Restrict where this project can be run' checkbox is checked, and the 'Label Expression' dropdown is set to 'Slave1'. In the second screenshot, under the 'Source Code Management' section, the 'Branches to build' dropdown is set to '*/\master'. Both screenshots have the 'Save' and 'Apply' buttons highlighted with red boxes.

The screenshot shows the Jenkins dashboard for job2. The left sidebar has 'Build Now' highlighted with a red box. The main area shows the build history with one entry: '#1 5:31 PM'. At the bottom right, it says 'Jenkins 2.504.2'.

Now we have to create job 3. But before that we need to create docker file manually in Develop branch.





The screenshot shows the Jenkins 'New Item' dialog. In the 'Enter an item name' field, 'job3' is typed. Under 'Select an item type', the 'Freestyle project' option is highlighted with a red box. Other options shown are 'Pipeline', 'Multi-configuration project', and 'Folder'. A blue 'OK' button is at the bottom.

The screenshot shows the Jenkins 'New Item' dialog. The 'Multi-configuration project' option is selected and highlighted with a red box. Other options shown are 'Folder', 'Multibranch Pipeline', and 'Organization Folder'. Below the options, there is a note about creating a new item from an existing one. A 'Copy from' field contains 'job1' and a blue 'OK' button is at the bottom. The status bar at the bottom right shows 'REST API Jenkins 2.504.2'.

The screenshot shows the Jenkins configuration page for job3. In the 'General' section, the 'GitHub project' checkbox is checked, and the 'Project url' field contains <https://github.com/raneekpramanick/website/>. The 'Restrict where this project can be run' checkbox is checked, and the 'Label Expression' field contains 'Slave2'. Below the configuration area, there are 'Save' and 'Apply' buttons, both of which are highlighted with a red box.

The screenshot shows the Jenkins job3 dashboard. The job name 'job3' is displayed prominently at the top. On the left, a sidebar lists options like Status, Changes, Workspace, Build Now (which is highlighted with a red box), Configure, Delete Project, GitHub Hook Log, GitHub, and Rename. In the main area, under the 'Builds' section, it says 'No builds'. Below that, a 'Today' section shows a single build entry: '#1 6:06 PM'. The entire dashboard page is framed by a red border.

The screenshot shows the Jenkins dashboard at <http://3.91.200.41:8080>. The main area displays a table of jobs:

S	W	Name	Last Success	Last Failure	Last Duration
Green	Yellow	job1	20 min #2	N/A	0.28 sec
Green	Yellow	job2	25 min #2	N/A	0.43 sec
Green	Yellow	job3	1 min 30 sec #1	N/A	7.5 sec

On the left sidebar, there are links for 'New Item', 'Build History', 'Project Relationship', 'Check File Fingerprint', 'Manage Jenkins', and 'My Views'. Under 'Build Queue', it says 'No builds in the queue.' Below that is 'Build Executor Status' with entries for 'Built-in Node' (0/2), 'Slave1' (0/1), and 'Slave2' (0/1). The status icons are S (green), M (yellow), and L (grey).

The screenshot shows the Jenkins job1 configuration page at <http://3.91.200.41:8080/job/job1/>. The left sidebar includes links for 'Status', 'Changes', 'Workspace', 'Build Now', 'Configure' (which is highlighted with a red box), 'Delete Project', 'GitHub Hook Log', 'GitHub', and 'Rename'. The main content area shows the job name 'job1' in a box with a green checkmark icon. It also lists 'Permalinks' and a history of builds:

- Last build (#2), 21 min ago
- Last stable build (#2), 21 min ago
- Last successful build (#2), 21 min ago
- Last completed build (#2), 21 min ago

Below this is a 'Builds' section with a search bar and a table of builds:

Build	Time
#2	5:47 PM
#1	5:25 PM

The screenshot shows the Jenkins job configuration page for 'job1'. The 'Build Steps' section is highlighted with a red box. A dropdown menu titled 'Add build step' is open, showing various options like 'Execute Windows batch command', 'Execute shell' (which is selected), 'Execute shell script on remote host using ssh', 'Invoke Ant', etc. Below the dropdown, there's a note about sending notifications, archiving artifacts, or triggering other jobs.

The screenshot shows the Jenkins job configuration page for 'job1'. The 'Post-build Actions' section is highlighted with a red box. It contains two buttons: 'Save' and 'Apply'. The 'Save' button is blue, and the 'Apply' button is white with black text.

`sudo docker build . -t img1`

`sudo docker run -itd --name C1 -p 81:80 img1`

The screenshot shows the Jenkins job1 dashboard. The title bar indicates the URL is 3.91.200.41:8080/job/job1/. The dashboard includes a sidebar with options like Status, Changes, Workspace, Build Now (which is highlighted with a red box), Configure, Delete Project, GitHub Hook Log, GitHub, and Rename. Below the sidebar is a 'Builds' section with a 'Filter' input. A list of builds is shown, with the last three entries (#3, #2, #1) highlighted with red boxes. The build details for #3 show a green checkmark icon and the timestamp 6:16 PM.

The screenshot shows an AWS CloudShell session. The top navigation bar includes links for EC2, EFS, VPC, S3, Aurora and RDS, IAM, CloudWatch, Lambda, Simple Queue Service, CloudFormation, Simple Notification Service, and Elastic Beanstalk. The session title is "System information as of Sat Jun 14 17:34:57 UTC 2025". The terminal window displays system load, memory usage, and swap usage. It also shows a warning about Ubuntu Pro security features and a list of available updates. The terminal then switches to a Jenkins workspace directory where it lists files like "remoting", "remoting.jar", and "workspace". A message at the bottom of the terminal window reads "Copy the public ip and paste it on new tab and open it on port no 81". The public IP address 13.220.135.212 is highlighted with a red box. The bottom of the screen shows the AWS navigation bar and the status bar indicating the date and time as 14-Jun-25.

