

INDEX

Tasks	Page No
Task:1 Launched Instances	02
Task:2 Installing Ansible on the Main Server	06
Task:3 - SSH authentication for Slave servers from main server	08
Task:4 – Updating host file for slave Servers for ansible configuration	09
Task:5 – Creating script file to install Jenkins on main server	10
Task:6 – Creating script file to install docker on slave servers	10
Task:7 – Creating playbook to install the applications using script	11
Task:8 – Checking syntax for playbook	11
Task:9 – Checking dry-run for playbook	11
Task:10 – Running the playbook	12
Task:11 – Setting up of Jenkins from main servers	13
Task:12 – Creation of Slave1 node for test server	16
Task:13 – Creation of Slave2 node for Prod server	20
Task:14 – Forked the repository	22
Task:15 – Creation of Dockerfile	23
Task:16 – Creating the Develop branch	24
Task:17 – Create and Build Job1 for Slave1 node	25
Task:18 – Creating the Webhook and testing the Job1	31
Task:19 – Create and Build Job2 at Slave1 node	34
Task:20 – Create and Build Job3 at Slave2 node	39

Capstone Projects

You have been Hired Sr. DevOps Engineer in Abode Software. They want to implement DevOpsLifecycle in their company. You have been asked to implement this lifecycle as fast as possible. Abode Software is a product-based company, 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. Code Build should automatically be triggered once commit is made to master branch or develop branch.

If commit is made to master branch, test and push to prod

If 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 rebuilt every time there is a push to Git-Hub. 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:

Job1 : build

Job2: test

Job3 : prod

Task:1 Launched Instances.

The screenshot shows the 'Launch an instance' wizard in the AWS Management Console. The current step is 'Name and tags'. It includes a 'Name' input field containing 'Project' and a 'Add additional tags' button.

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

 *Search our full catalog including 1000s of application and OS images*

Recents

Quick Start

Amazon

Linux



macOS



Ubuntu



Windows



Red Hat



SUSE Li



[Browse more AMIs](#)

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type

ami-0f58b397bc5c1f2e8 (64-bit (x86)) / ami-0dda4ba9a42839a4b (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

▼ Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0124 USD per Hour
On-Demand Windows base pricing: 0.017 USD per Hour
On-Demand RHEL base pricing: 0.0724 USD per Hour
On-Demand SUSE base pricing: 0.0124 USD per Hour

Free tier eligible

All generations

[Compare instance types](#)

[Additional costs apply for AMIs with pre-installed software](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

DevOps



 [Create new key pair](#)

▼ Network settings [Info](#)

[Edit](#)

Network | [Info](#)
vpc-08bde8db1e7da9b9a | Default VPC

Subnet | [Info](#)
No preference (Default subnet in any availability zone)

Auto-assign public IP | [Info](#)
Enable
Additional charges apply when outside of [free tier allowance](#)

Firewall (security groups) | [Info](#)
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Common security groups [Info](#)

Select security groups ▾

default sg-04d9bdfee395aaade5 X
VPC: vpc-08bde8db1e7da9b9a

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

▼ Summary

Number of instances | [Info](#)
3

When launching more than 1 instance, [consider EC2 Auto Scaling](#)

Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...[read more](#)
ami-0f58b397bc5c1f2e8

Virtual server type (instance type)
t2.micro

Firewall (security group)
default

Storage (volumes)

[Cancel](#) [Launch instance](#)

[Review commands](#)

Instances (3) Info		C	Connect	Instance state ▾	Actions ▾	Launch instances ▾	
<input type="text"/> Find Instance by attribute or tag (case-sensitive)				All states ▾	< 1 >		
<input type="checkbox"/>	Name ↴	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	Project	i-0488528948c371d00	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b
<input type="checkbox"/>	Project	i-05f97718d3ac0342b	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b
<input type="checkbox"/>	Project	i-0d576c6a9396301c9	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b

Instances (3) Info		C	Connect	Instance state ▾	Actions ▾	Launch instances ▾	
<input type="text"/> Find Instance by attribute or tag (case-sensitive)				All states ▾	< 1 >		
<input type="checkbox"/>	Name ↴	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	Project-Main	i-0488528948c371d00	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b
<input type="checkbox"/>	Project-Prod	i-05f97718d3ac0342b	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b
<input type="checkbox"/>	Project-Test	i-0d576c6a9396301c9	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b

Swap usage: 0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-31-4-43:~$
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

```
Swap usage: 0%  
Expanded Security Maintenance for Applications is not enabled.  
0 updates can be applied immediately.  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/*copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
ubuntu@ip-172-31-6-87:~$  
  
i-05f97718d3ac0342b (Project-Prod)  
Public IPs: 13.201.187.195 Private IPs: 172.31.6.87
```

```
Swap usage: 0%  
Expanded Security Maintenance for Applications is not enabled.  
0 updates can be applied immediately.  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/*copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
ubuntu@ip-172-31-15-218:~$  
  
i-0d576c6a9396301c9 (Project-Test)  
Public IPs: 13.201.101.222 Private IPs: 172.31.15.218
```

Task:2 Installing Ansible on the Main Server.

We will use below command to install ansible in the Project-Main machine.

- **sudo apt-get update -y**
- **sudo apt install software-properties-common**
- **sudo add-apt-repository --yes --update ppa:ansible/ansible**
- **sudo apt install ansible**

```
GNU nano 7.2
sudo apt-get update -y
sudo apt install software-properties-common
sudo add-apt-repository --yes --update ppa:ansible/ansible
sudo apt install ansible
[]

^G Help      ^O Write Out    ^W Where Is     ^K Cut        ^T Ex
^X Exit      ^R Read File    ^\ Replace      ^U Paste      ^J Ju

i-0488528948c371d00 (Project-Main)
Public IPs: 65.2.82.228  Private IPs: 172.31.4.43
```

```
ubuntu@ip-172-31-4-43:~$ sudo nano ansible.sh
ubuntu@ip-172-31-4-43:~$ sudo bash ansible.sh
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 Packages [1401 kB]

i-0488528948c371d00 (Project-Main)
Public IPs: 65.2.82.228  Private IPs: 172.31.4.43
```

```

ubuntu@ip-172-31-4-43:~$ ansible --version
ansible [core 2.16.7]
  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 = 3.12.3 (main, Apr 10 2024, 05:33:47) [GCC 13.2.0] (/usr/bin/python3)
  jinja version = 3.1.2
  libyaml = True
ubuntu@ip-172-31-4-43:~$ []

```

i-0488528948c371d00 (Project-Main)
 PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

Task:3 - SSH authentication for Slave servers from main server.

```

ubuntu@ip-172-31-4-43:~$ ssh-keygen
Generating public/private ed25519 key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_ed25519):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_ed25519
Your public key has been saved in /home/ubuntu/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:FkTNnN+4EmZ8MPDDQzdaIhh9nbXGoKpaiLFWfqPqD7M ubuntu@ip-172-31-4-43
The key's randomart image is:
+--[ED25519 256]--+
|      .==oo=o. |
|     ..=O*o+ . |
|      .oB+ o+ |
|       o=o+.. |
|    . . So o . |
|   * . o . . |
| * o = . . |
| . + = . . |
| .Eo+ . . |
+---[SHA256]---+
ubuntu@ip-172-31-4-43:~$ []

```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

```

ubuntu@ip-172-31-4-43:~$ cd .ssh
ubuntu@ip-172-31-4-43:~/ssh$ ls
authorized_keys  id_ed25519  id_ed25519.pub  known_hosts
ubuntu@ip-172-31-4-43:~/ssh$ cat id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAICxG2ZyxWrObr2zMyuLqZ5rVt1XjOZBgTyYh1uLL5JEZ  ubuntu@ip-172-31-4-43
ubuntu@ip-172-31-4-43:~/ssh$ []

```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

```
ubuntu@ip-172-31-6-87:~$ cd .ssh
ubuntu@ip-172-31-6-87:~/ssh$ ls
authorized_keys
ubuntu@ip-172-31-6-87:~/ssh$ vi authorized_keys
ubuntu@ip-172-31-6-87:~/ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQCOxdzIURdm/fftm0yEKi6s8MtAAjMEcOqt3fhDulTJuDZQ4UwzI2qgfbcixYxu634vH81hKBDxo+b3CcKvEQZ8a+pVvqlIZG2Vr9tWELHL/o1KnVy+OBBr9lw//q4STGXhr42I+o7RqHxIEX2DzUj13FKqDEUsqlSrZdrK5HAs9Es1MjOUViSAgwPErzUeNDpAzMQ6+kf991Rx7N5GpdtS3FcUK6cV+i15f8cfiMsP4DBeQxYnQFpfN+7fyTCbxpMS62fTjh0FtTyig/qNnEeYPPPcZqmwjswdWI8336Mh+cUDlTCUkbybchibF860WpcAitdjZPZKG0T7e0m+G2z DevOps

ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAICxG2ZyxWrObr2zMyuLqZ5rVt1Xj0ZBgtYhluLL5JEZ ubuntu@ip-172-31-4-43
ubuntu@ip-172-31-6-87:~/ssh$ 
```

i-05f97718d3ac0342b (Project-Prod)

PublicIPs: 13.201.187.195 PrivatePs: 172.31.6.87

```
ubuntu@ip-172-31-15-218:~$ cd .ssh
ubuntu@ip-172-31-15-218:~/ssh$ ls
authorized_keys
ubuntu@ip-172-31-15-218:~/ssh$ vi authorized_keys
ubuntu@ip-172-31-15-218:~/ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQCOxdzIURdm/fftm0yEKi6s8MtAAjMEcOqt3fhDulTJuDZQ4UwzI2qgfbcixYxu634vH81hKBDxo+b3CcKvEQZ8a+pVvqlIZG2Vr9tWELHL/o1KnVy+OBBr9lw//q4STGXhr42I+o7RqHxIEX2DzUj13FKqDEUsqlSrZdrK5HAs9Es1MjOUViSAgwPErzUeNDpAzMQ6+kf991Rx7N5GpdtS3FcUK6cV+i15f8cfiMsP4DBeQxYnQFpfN+7fyTCbxpMS62fTjh0FtTyig/qNnEeYPPPcZqmwjswdWI8336Mh+cUDlTCUkbybchibF860WpcAitdjZPZKG0T7e0m+G2z DevOps

ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAICxG2ZyxWrObr2zMyuLqZ5rVt1Xj0ZBgtYhluLL5JEZ ubuntu@ip-172-31-4-43
ubuntu@ip-172-31-15-218:~/ssh$ 
```

i-0d576c6a9396301c9 (Project-Test)

PublicIPs: 13.201.101.222 PrivatePs: 172.31.15.218

Task:4 – Updating host file for Slave Servers for ansible configuration.

```
ubuntu@ip-172-31-4-43:~$ sudo nano /etc/ansible/hosts
ubuntu@ip-172-31-4-43:~$ cat /etc/ansible/hosts
172.31.15.218
172.31.6.87
ubuntu@ip-172-31-4-43:~$ ansible -m ping all
172.31.15.218 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
172.31.6.87 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
ubuntu@ip-172-31-4-43:~$ 
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivatePs: 172.31.4.43

Task:5 – Creating script file to install Jenkins on main server.

```
ubuntu@ip-172-31-4-43:~$ sudo nano master.sh
ubuntu@ip-172-31-4-43:~$ cat master.sh
sudo apt-get update -y
sudo apt install openjdk-11-jdk -y
sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
  https://pkg.jenkins.io/debian/jenkins.io-2023.key
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \
  https://pkg.jenkins.io/debian binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins
ubuntu@ip-172-31-4-43:~$ 
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

Master.sh

```
sudo apt-get update -y
sudo apt install openjdk-11-jdk -y
sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
  https://pkg.jenkins.io/debian/jenkins.io-2023.key
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \
  https://pkg.jenkins.io/debian binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install Jenkins
```

Task:6 – Creating script file to install docker on slave servers.

```
ubuntu@ip-172-31-4-43:~$ sudo nano slave.sh
ubuntu@ip-172-31-4-43:~$ cat slave.sh
sudo apt-get update -y
sudo apt install openjdk-11-jdk -y
sudo apt install docker.io -y
ubuntu@ip-172-31-4-43:~$ 
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

sudo apt-get update -y

```
sudo apt install openjdk-11-jdk -y
```

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

Task:7 – Creating playbook to install the applications using script.

```
ubuntu@ip-172-31-4-43:~$ sudo nano playbook.yaml
ubuntu@ip-172-31-4-43:~$ cat playbook.yaml
---
- name: task for master
  hosts: localhost
  become: true
  tasks:
    - name: executing script on master
      script: master.sh
- name: task for slave
  hosts: all
  become: true
  tasks:
    - name: executing script on slave
      script: slave.sh
ubuntu@ip-172-31-4-43:~$
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 65.2.82.228 PrivateIPs: 172.31.4.43

Task:8 – Checking syntax for playbook.

```
ubuntu@ip-172-31-4-43:~$ ansible-playbook playbook.yaml --syntax-check
playbook: playbook.yaml
```

Task:9 – Checking dry-run for playbook.

```
ubuntu@ip-172-31-4-43:~$ ansible-playbook playbook.yaml --check
PLAY [task for master] ****
*****
TASK [Gathering Facts] ****
*****
ok: [localhost]

TASK [executing script on master] ****
*****
skipping: [localhost]

PLAY [task for slave] ****
*****
```

i-0488528948c371d00 (Project-Main) X
PublicIPs: 15.207.110.84 PrivateIPs: 172.31.4.43

```

PLAY [task for slave] ****
*****
TASK [Gathering Facts] ****
*****
ok: [172.31.6.87]
ok: [172.31.15.218]

TASK [executing script on slave] ****
*****
skipping: [172.31.15.218]
skipping: [172.31.6.87]

PLAY RECAP ****
*****
172.31.15.218      : ok=1    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
172.31.6.87        : ok=1    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
localhost          : ok=1    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0

ubuntu@ip-172-31-4-43:~$ 
```

i-0488528948c371d00 (Project-Main) X

PublicIPs: 15.207.110.84 PrivateIPs: 172.31.4.43

Task:10 – Running the playbook.

```

ubuntu@ip-172-31-4-43:~$ ansible-playbook playbook.yaml

PLAY [task for master] ****
*****
TASK [Gathering Facts] ****
*****
ok: [localhost]

TASK [executing script on master] ****
*****
changed: [localhost]

PLAY [task for slave] ****
*****
TASK [Gathering Facts] ****
*****
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 15.207.110.84 PrivateIPs: 172.31.4.43

```

TASK [Gathering Facts] ****
*****
ok: [172.31.15.218]
ok: [172.31.6.87]

TASK [executing script on slave] ****
*****
changed: [172.31.6.87]
changed: [172.31.15.218]

PLAY RECAP ****
*****
172.31.15.218      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.6.87        : 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
```

i-0488528948c371d00 (Project-Main)

PublicIPs: 15.207.110.84 PrivateIPs: 172.31.4.43

```

ubuntu@ip-172-31-4-43:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
   Active: active (running) since Mon 2024-06-17 11:36:33 UTC; 6min ago
     Main PID: 19354 (java)
        Tasks: 41 (limit: 1130)
       Memory: 258.6M (peak: 288.6M)
          CPU: 19.082s
        CGroup: /system.slice/jenkins.service
                └─19354 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --ht
tpPort=8080

Jun 17 11:36:25 ip-172-31-4-43 jenkins[19354]: ****
Jun 17 11:36:25 ip-172-31-4-43 jenkins[19354]: ****
Jun 17 11:36:25 ip-172-31-4-43 jenkins[19354]: WARNING: An illegal reflective access operation has occurred
Jun 17 11:36:25 ip-172-31-4-43 jenkins[19354]: WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file

i-0488528948c371d00 (Project-Main)
PublicIPs: 15.207.110.84 PrivateIPs: 172.31.4.43

```

Task:11 – Setting up of Jenkins from main servers.

Not secure | 15.207.110.84:8080/login?from=%2F

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`

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

Administrator password

Continue

sudo cat /var/lib/jenkins/secrets/initialAdminPassword

Password: ace73af9fff3415e8a1d7d1d7bab7e90

⚠ Not secure | 15.207.110.84:8080

Getting Started

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.462

| 15.207.110.84:8080

Getting Started

Create First Admin User

Username

Password

Confirm password

Full name

E-mail address

Jenkins 2.462

Skip and continue as admin

Save and Continue

Getting Started

Instance Configuration

Jenkins URL:

http://15.207.110.84:8080/

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the `BUILD_URL` environment variable provided to build steps.

The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Jenkins 2.462

Not now

Save and Finish

<http://15.207.110.84:8080/>

The screenshot shows the Jenkins dashboard at <http://15.207.110.84:8080/>. The top navigation bar includes a 'Not secure' warning, a search bar, and user information for 'Hari Govind Singh'. Below the header, the 'Dashboard' link is highlighted. On the left, there are links for 'New Item', 'Build History', 'Manage Jenkins', and 'My Views'. A 'Build Queue' section shows 'No builds in the queue.' A 'Create a job' button is available. In the center, a 'Welcome to Jenkins!' message is displayed, followed by a 'Start building your software project' call-to-action. To the right, there are sections for 'Set up a distributed build', 'Set up an agent', and 'Configure a cloud'. At the bottom, a link leads to 'Learn more about distributed builds'.

The screenshot shows the Jenkins 'Nodes' page. On the left, there are two collapsed sections: 'Build Queue' (No builds in the queue) and 'Build Executor Status' (1 Idle, 2 Idle). The main area is titled 'Nodes' and contains a table with one row. The table columns are: S, Name, Architecture, Clock Difference, Free Disk Space, Free Swap Space, Free Temp Space, and Response Time. The single node listed is 'Built-In Node', which is a 'Linux (amd64)' machine. It shows 'In sync', 3.32 GiB free disk space, 0 B free swap space, 3.32 GiB free temp space, and 0ms response time. A 'Data obtained' status is shown with a timestamp of 14 min. A legend at the bottom indicates icons for Slave (S), Master (M), and Label (L).

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.32 GiB	0 B	3.32 GiB	0ms

Task:12 – Creation of Slave1 node for test server.

The screenshot shows the 'New node' creation page. The 'Node name' field is filled with 'Slave1'. The 'Type' section has a radio button selected for 'Permanent Agent'. A descriptive text explains that this adds a plain, permanent agent to Jenkins. At the bottom is a blue 'Create' button.

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

← ⌂ ⚠ Not secure 15.207.110.84:8080/manage/computer/createtItem

Dashboard > Manage Jenkins > Nodes >

Name ?
Slave1

Description ?

Plain text [Preview](#)

Number of executors ?
1

Remote root directory ?
/home/ubuntu/jenkins

Labels ?

Jenkins Credentials Provider: Jenkins

Add Credentials

Domain
Global credentials (unrestricted)

Kind
SSH Username with private key

Scope ?
Global (Jenkins, nodes, items, all child items, etc)

ID ?

Description ?

Jenkins Credentials Provider: Jenkins

Username
ubuntu

Treat username as secret ?

Private Key

Enter directly

Key

```
ptRx5dsibnKKCAk1DRsFp56ZGIOK09GqVc/VumsJ9rNYsSENPTFFuYuTTaM+ZkM2
X4yLfW5w8q5pudef3qV+hE+E7N+6TIW0HwTnLzx+vvOTC/uw0Ud24
-----END RSA PRIVATE KEY-----
```

Passphrase

Private Key

Enter directly

Key

```
ptRx5dsibnKKCAk1DRsFp56ZGIOK09GqVc/VumsJ9rNYsSENPTFFuYuTTaM+ZkM2
X4yLfW5w8q5pudef3qV+hE+E7N+6TIW0HwTnLzx+vvOTC/uw0Ud24
-----END RSA PRIVATE KEY-----
```

Passphrase

[Cancel](#) [Add](#)

Not secure | 15.207.110.84:8080/manage/computer/createlnem

Dashboard > Manage Jenkins > Nodes >

Usage ?
Use this node as much as possible

Launch method ?
Launch agents via SSH

Host ?
172.31.15.218

Credentials ?
ubuntu

+ Add ▾

Host Key Verification Strategy ?
Known hosts file Verification Strategy

Advanced ▾

Not secure | 15.207.110.84:8080/manage/computer/Slave1/configure

Dashboard > Manage Jenkins > Nodes > Slave1 > Configure

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced ▾ Edited

Availability ?

Keep this agent online as much as possible

Node Properties

Disable deferred wipeout on this node ?

Disk Space Monitoring Thresholds

Environment variables

Tool Locations

Not secure | 15.207.110.84:8080/manage/computer/

Jenkins

Search (CTRL+K)

Hari Govind Singh log out

Dashboard > Manage Jenkins > Nodes >

Nodes Clouds

+ New Node Configure Monitors

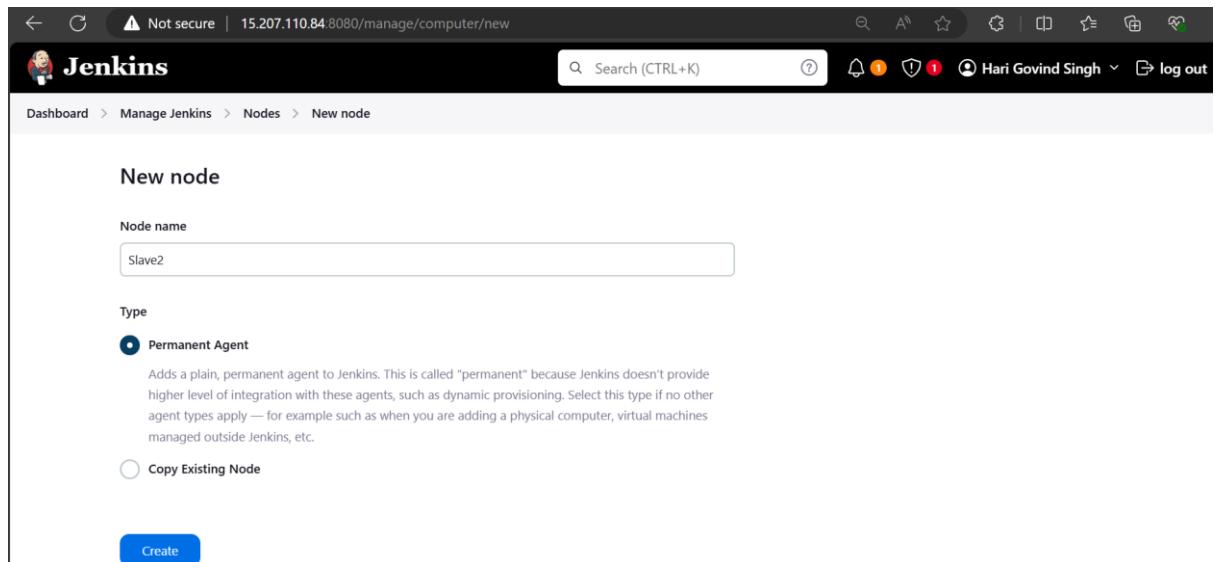
Build Queue ▾
No builds in the queue.

Build Executor Status ▾
 Built-In Node
1 Idle

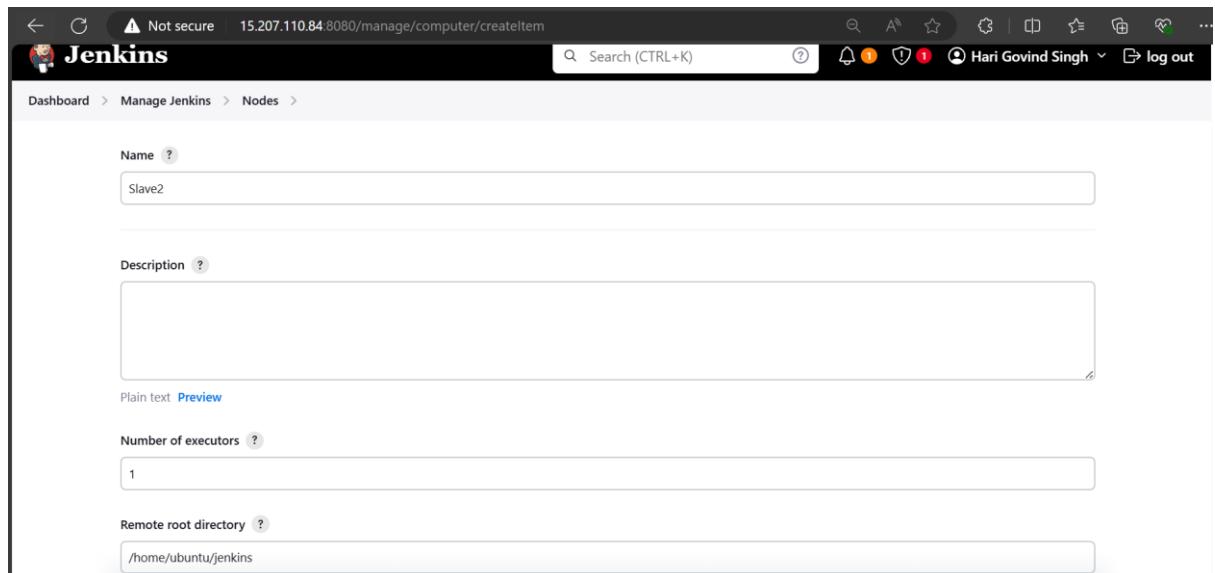
S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	3.32 GiB	0 B	3.32 GiB	0ms
	Slave1		N/A	N/A	N/A	N/A	N/A
	Data obtained	9 ms	7 ms	8 ms	5 ms	4 ms	27 min

Icon: S M L Legend

Task:13 – Creation of Slave2 node for Prod server.



The screenshot shows the Jenkins 'New node' configuration page. The URL is 15.207.110.84:8080/manage/computer/new. The page title is 'Jenkins'. The navigation path is 'Dashboard > Manage Jenkins > Nodes > New node'. The main section is titled 'New node'. It has a 'Node name' field containing 'Slave2'. Under 'Type', 'Permanent Agent' is selected (radio button is checked). A tooltip explains it adds a plain, permanent agent to Jenkins. There is also an option 'Copy Existing Node' (radio button is unselected). At the bottom is a blue 'Create' button.



The screenshot shows the Jenkins 'create item' configuration page. The URL is 15.207.110.84:8080/manage/computer/creatitem. The page title is 'Jenkins'. The navigation path is 'Dashboard > Manage Jenkins > Nodes >'. The main section has a 'Name' field containing 'Slave2'. Below it is a 'Description' field with a large empty text area. Under 'Plain text' there is a 'Preview' link. The 'Number of executors' field contains '1'. The 'Remote root directory' field contains '/home/ubuntu/jenkins'. The page includes standard Jenkins header elements like search, notifications, and user info.

← ⏪ ⚠ Not secure | 15.207.110.84:8080/manage/computer/createlnem

Dashboard > Manage Jenkins > Nodes >

Labels ?

Usage ?

Use this node as much as possible

Launch method ?

Launch agents via SSH

Host ?

172.31.6.87

Credentials ?

ubuntu

+ Add ▾

Host Key Verification Strategy ?

← ⏪ ⚠ Not secure | 15.207.110.84:8080/manage/computer/createlnem

Dashboard > Manage Jenkins > Nodes >

+ Add ▾

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced ▾

Availability ?

Keep this agent online as much as possible

Node Properties

- Disable deferred wipeout on this node ?
- Disk Space Monitoring Thresholds
- Environment variables
- Tool Locations

Save

The screenshot shows the Jenkins 'Nodes' page. On the left, there are two collapsed sections: 'Build Queue' (No builds in the queue) and 'Build Executor Status' (Slave1: Built-In Node, Slave2: Built-In Node). 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 has three rows: 'Built-In Node' (Linux (amd64), In sync, 3.06 GiB, 0 B, 3.06 GiB, 0ms), 'Slave1' (Linux (amd64), In sync, 4.02 GiB, 0 B, 4.02 GiB, 83ms), and 'Slave2' (Linux (amd64), In sync, 4.04 GiB, 0 B, 4.04 GiB, 127ms). A summary row at the bottom shows 'Data obtained' with values 0.93 sec, 0.87 sec, 0.85 sec, 0.85 sec, 0.85 sec, and 0.87 sec.

Task:14 – Forked the repository.

Now we will sign to github and will fork the repository given in the project.

The screenshot shows the GitHub 'Create a new fork' form. The title is 'Create a new fork'. A note says: 'A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks](#)'.

Required fields are marked with an asterisk (*).

Owner *: SinghH98 / Repository name *: Projectwebsite. A note says: 'Projectwebsite is available.'

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional):

Copy the master branch only. Note: Contribute back to hshar/website by adding your own branch. [Learn more](#).

Information: ⓘ You are creating a fork in your personal account.

Create fork button.

The screenshot shows a GitHub repository page for 'Projectwebsite'. The repository is public and was forked from 'hshar/website'. The 'master' branch is selected, showing 1 branch and 0 tags. The repository is up-to-date with 'hshar/website:master'. The commit history shows two commits by 'Ubuntu' from 5 years ago, modifying 'index.html' and creating a 'final' file in the 'images' directory. A 'README' file is also present. The interface includes standard GitHub navigation and search bars.

Task:15 – Creation of Dockerfile.

The screenshot shows a GitHub code editor displaying a Dockerfile. The file content is as follows:

```
1 FROM ubuntu
2 RUN apt update
3 RUN apt install apache2 -y
4 ADD . /var/www/html/
5 ENTRYPOINT apachectl D FOREGROUND
```

FROM ubuntu

RUN apt update

RUN apt install apache2 -y

ADD . /var/www/html/

ENTRYPOINT apachectl D FOREGROUND

The screenshot shows a GitHub repository page for 'SinghH98 / Projectwebsite'. The URL is https://github.com/SinghH98/Projectwebsite/tree/master. The page displays the contents of the 'master' branch. A commit from 'SinghH98' titled 'Create Dockerfile' is shown, indicating the branch is 1 commit ahead of 'hshar/website:master'. The file list includes 'images', 'Dockerfile', and 'index.html', with 'Dockerfile' having a 'final' commit message.

Task:16 – Creating the Develop branch.

Now we will create a new branch.

The screenshot shows the 'Create a branch' dialog box. The 'New branch name' field contains 'develop'. Under the 'Source' section, the dropdown shows 'SinghH98/Projec...' and 'master'. At the bottom, there are 'Cancel' and 'Create new branch' buttons, with 'Create new branch' being highlighted in green.

The screenshot shows a GitHub repository named 'Projectwebsite'. The repository is public and was forked from 'hshar/website'. The 'develop' branch is selected, showing 2 branches and 0 tags. A message indicates that this branch is 1 commit ahead of 'hshar/website:master'. The commit history includes:

- SinghH98 Create Dockerfile (3b12be6, 5 minutes ago)
- images final (5 years ago)
- Dockerfile Create Dockerfile (5 minutes ago)
- index.html modified (5 years ago)

On the right side, there are sections for 'About' (No description), 'Activity' (0 stars, 0 watching, 0 forks), 'Releases' (No releases published, Create a new release), and 'Packages'.

Now we will create the jobs.

Job1 – Slave1 - develop

Job2 – Slave1 - main

Job3 – Slave2 – main

Task:17 – Create and Build Job1 for Slave1 node.

The screenshot shows the Jenkins 'New Item' creation interface. The URL is 15.207.110.84:8080/view/all/newJob. The title is 'Jenkins'.

The steps to create a new item are as follows:

- Enter an item name: Job1
- Select an item type:
 - Freestyle project**: Classic, general-purpose job type that checks steps like archiving artifacts and sending emails.
 - Pipeline**: Orchestrates long-running activities that can run multiple parallel workflows (pipelines) and/or organizing complex activi
 - Multi-configuration project**
- Click the **OK** button at the bottom.

Not secure | 15.207.110.84:8080/job/Job1/configure

Dashboard > Job1 > Configuration

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.

Advanced ▾

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Not secure | 15.207.110.84:8080/job/Job1/configure

Dashboard > Job1 > Configuration

Source Code Management

Configure

None

Git ?

Repositories ?

Repository URL ?

https://github.com/SinghH98/Projectwebsite.git

Credentials ?

- none -

+ Add ▾

Advanced ▾

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Not secure | 15.207.110.84:8080/job/Job1/configure

Dashboard > Job1 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Branches to build

Branch Specifier (blank for 'any')

*/develop

Add Branch

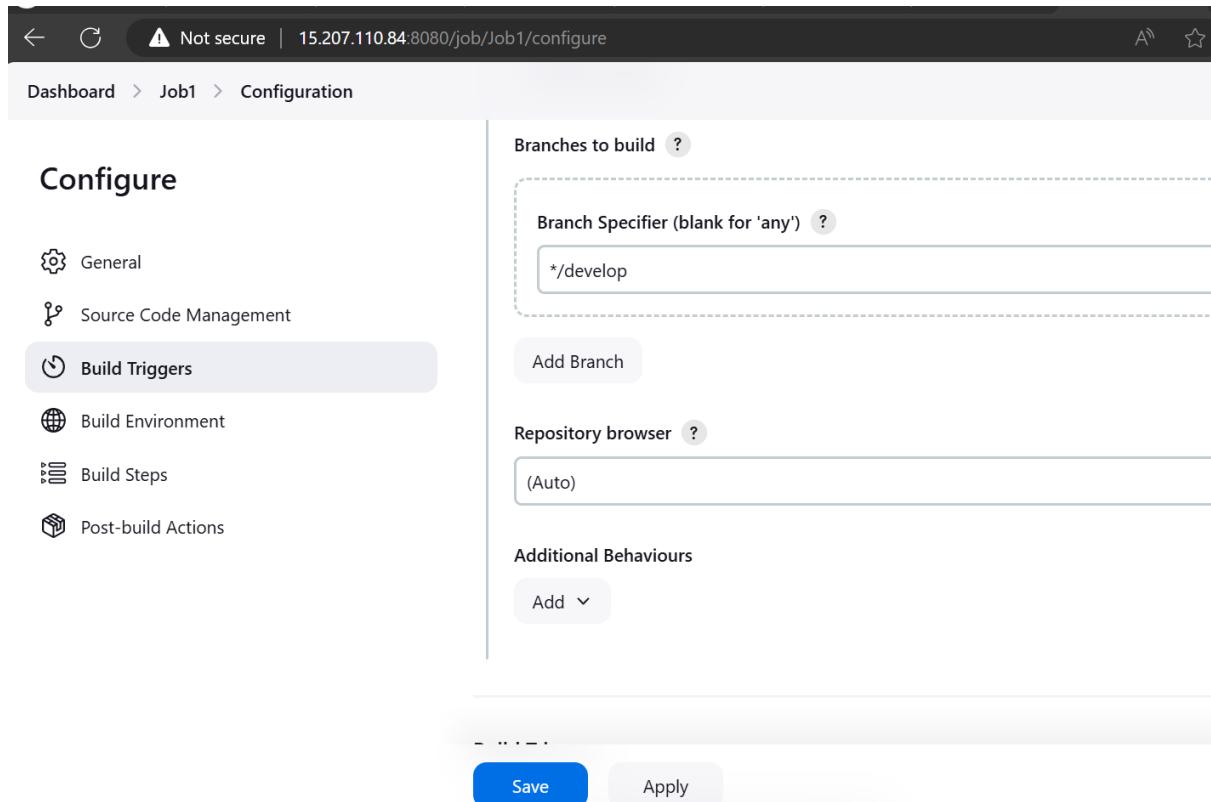
Repository browser

(Auto)

Additional Behaviours

Add

Save Apply

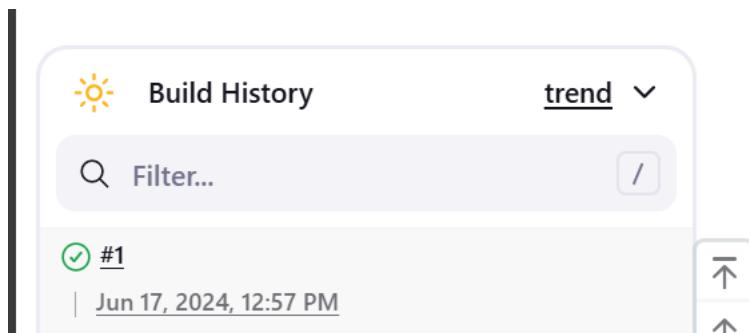


Build History

trend

Filter... /

#1 Jun 17, 2024, 12:57 PM



```
ubuntu@ip-172-31-15-218:~$ ls
jenkins
ubuntu@ip-172-31-15-218:~$ cd jenkins
ubuntu@ip-172-31-15-218:~/jenkins$ ls
remoting  remoting.jar  workspace
ubuntu@ip-172-31-15-218:~/jenkins$ cd workspace
ubuntu@ip-172-31-15-218:~/jenkins/workspace$ ls
Job1  Job2
ubuntu@ip-172-31-15-218:~/jenkins/workspace$ cd Job1
ubuntu@ip-172-31-15-218:~/jenkins/workspace/Job1$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-15-218:~/jenkins/workspace/Job1$
```

i-0d576c6a9396301c9 (Project-Test)

Public IPs: 65.2.69.244 Private IPs: 172.31.15.218

Now we will automate the job1 to create the dockerfile.

Build Steps

≡ Execute shell ?

Command

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

```
sudo docker build /home/ubuntu/jenkins/workspace/Job1/ -t job1
sudo docker run -itd -p 83:80 --name=c1 job1
```

Advanced ▾

Save Apply

☀ Build History trend ▾

Filter... /

✓ #2	Jun 17, 2024, 1:03 PM
✓ #1	Jun 17, 2024, 12:57 PM

Atom feed for all Atom feed for failures

Status Changes

Console Output

Edit Build Information

Delete build '#8'

Timings

Git Build Data

Previous Build

Console Output

Started by user Hari Govind Singh
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/SinghH98/Projectwebsite.git # timeout=10
Fetching upstream changes from https://github.com/SinghH98/Projectwebsite.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/SinghH98/Projectwebsite.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/develop^{commit} # timeout=10
Checking out Revision b162f40cec76913d9f83c13ecdbade5760e9d7d2 (refs/remotes/origin/develop)
> git config core.sparsecheckout # timeout=10
> git checkout -f b162f40cec76913d9f83c13ecdbade5760e9d7d2 # timeout=10
Commit message: "Update index.html"

```
#5 DONE 0.0s

#6 [2/4] RUN apt update
#6 CACHED

#7 [3/4] RUN apt install apache2 -y
#7 CACHED

#8 [4/4] ADD . /var/www/html/
#8 DONE 0.1s

#9 exporting to image
#9 exporting layers 0.0s done
#9 writing image sha256:5d53aa13799fefedb3a63ea77848a878b87051d12d62323601f46b593eed9a4d done
#9 naming to docker.io/library/job1 done
#9 DONE 0.1s
+ sudo docker run -itd -p 83:80 --name=c1 job1
cd1996a9b317d82eb3d1aefc369c991efe75a466a18b7456b4b9719d036f24df
Finished: SUCCESS
```



Hello world!



GitHub

Build Steps

≡
Execute shell
?

Command

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

```
sudo docker rm -f c1
sudo docker build /home/ubuntu/jenkins/workspace/Job1/ -t job1
sudo docker run -itd -p 83:80 --name=c1 job1
```

Advanced ▾

```
sudo docker rm -f c1
```

```
sudo docker build /home/ubuntu/jenkins/workspace/Job1/ -t job1
```

```
sudo docker run -itd -p 83:80 --name=c1 job1
```

Task:18 – Creating the Webhook and testing the Job1.

Not secure 15.207.110.84:8080/job/Job1/configure

Dashboard > Job1 > Configuration

Configure

Build Triggers



General



Source Code Management



Build Triggers



Build Environment



Build Steps



Post-build Actions

- Trigger builds remotely (e.g., from scripts) ?
- Build after other projects are built ?
- Build periodically ?
- GitHub hook trigger for GITScm polling ?
- Poll SCM ?

https://github.com/SinghH98/Projectwebsite/settings/hooks/new

SinghH98 / Projectwebsite

Code Pull requests Actions Projects Wiki Security Insights Settings

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Rules

Actions

Webhooks / Add webhook

We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in [our developer documentation](#).

Payload URL *

http://15.207.110.84:8080/github-webhook/

Content type

application/x-www-form-urlencoded

Webhooks

Add webhook

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](#).

✓ http://15.207.110.84:8080/github-w... (push)

Edit Delete

Now we will edit the index.html file present in the develop branch to see the job is executing automatically.

SinghH98 / Projectwebsite

Code Pull requests Actions Projects Wiki Security Insights Settings

Files

develop Go to file

images Dockerfile index.html

Projectwebsite / index.html

SinghH98 Update index.html

Code Blame 8 lines (8 loc) · 204 Bytes Code 55% faster with GitHub Copilot

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

GITHUB HOOK LOG

Rename

Build History trend

Filter... /

#6 Jun 17, 2024, 1:39 PM

Status Changes

Console Output

Edit Build Information Delete build '#10'

Timings Git Build Data Previous Build

Console Output

Started by user Hari Govind Singh
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/SinghH98/Projectwebsite.git # timeout=10
Fetching upstream changes from https://github.com/SinghH98/Projectwebsite.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/SinghH98/Projectwebsite.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/develop^{commit} # timeout=10
Checking out Revision 5b4a2b242de72f2826b3a28f63bec1b66351fdf0 (refs/remotes/origin/develop)
> git config core.sparsecheckout # timeout=10
> git checkout -f 5b4a2b242de72f2826b3a28f63bec1b66351fdf0 # timeout=10
Commit message: "Update index.html"

```
#5 DONE 0.0s

#6 [2/4] RUN apt update
#6 CACHED

#7 [3/4] RUN apt install apache2 -y
#7 CACHED

#8 [4/4] ADD . /var/www/html/
#8 DONE 0.1s

#9 exporting to image
#9 exporting layers 0.0s done
#9 writing image sha256:e0be12a369bc872a69beffb5393c9d2644417c3fc162b51e6db98d3933d615fc done
#9 naming to docker.io/library/job1 done
#9 DONE 0.1s
+ sudo docker run -itd -p 83:80 --name=c1 job1
5dde6051c9f513c86cf0857b1161d408190ef857f3baf6290afc0fc222b0d111
Finished: SUCCESS
```

REST API Jenkins 2.462

⚠ Not secure | 65.2.69.244:83



Hello world from Hari!!



GitHub

Task:19 – Create and Build Job2 at Slave1 node.

The screenshot shows the Jenkins interface for creating a new item. At the top, there's a navigation bar with the Jenkins logo and a search bar. Below it, the breadcrumb navigation shows 'Dashboard > All > New Item'. The main title 'New Item' is centered above a text input field labeled 'Enter an item name', which contains the value 'Job2'. Below this, a section titled 'Select an item type' lists three options: 'Freestyle project', 'Pipeline', and 'Multi-configuration project'. The 'Freestyle project' option is currently selected, as indicated by its highlighted background. The 'OK' button is located at the bottom of the selection panel.

Dashboard > All > New Item

New Item

Enter an item name

Job2

Select an item type

 Freestyle project
Classic, general-purpose job type that checks out code, runs steps like archiving artifacts and sending email

 Pipeline
Orchestrates long-running activities that can specify workflows (e.g., parallel, sequential) and/or organizing complex activities

 Multi-configuration project

OK

Configure

General

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

GitHub project

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 restricti

Advanced ▾

Configure

General

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

Source Code Management

None

Git ?

Repositories ?

Repository URL ?

`https://github.com/SinghH98/Projectwebsite.git`

Credentials ?

- none -

+ Add ▾

← ⏪ Not secure | 15.207.110.84:8080/job/Job2/configure

Dashboard > Job2 > Configuration

Configure

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

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Repository browser ?

(Auto)

Additional Behaviours

Add ▾

← ⏪ Not secure | 15.207.110.84:8080/job/Job2/configure

Dashboard > Job2 > Configuration

Configure

Build Triggers

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

- Trigger builds remotely (e.g., from scripts) ?
- Build after other projects are built ?
- Build periodically ?
- GitHub hook trigger for GITScm polling ?
- Poll SCM ?

Build Steps

≡ **Execute shell** ?

Command

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

```
#sudo docker rm -f c2
sudo docker build /home/ubuntu/jenkins/workspace/Job2/ -t job2
sudo docker run -itd -p 82:80 --name=c2 job2
```

```
#sudo docker rm -f c2
sudo docker build /home/ubuntu/jenkins/workspace/Job2/ -t job2
sudo docker run -itd -p 82:80 --name=c2 job2
```

Build History trend

Filter... /

#1 Jun 17, 2024, 1:51 PM

Atom feed for all Atom feed for failures

↑ ↑ ↓

```
ubuntu@ip-172-31-15-218:~$ ls
jenkins
ubuntu@ip-172-31-15-218:~$ cd jenkins
ubuntu@ip-172-31-15-218:~/jenkins$ ls
remoting remoting.jar workspace
ubuntu@ip-172-31-15-218:~/jenkins$ cd workspace
ubuntu@ip-172-31-15-218:~/jenkins/workspace$ ls
Job1 Job2
ubuntu@ip-172-31-15-218:~/jenkins/workspace$ cd Job2
ubuntu@ip-172-31-15-218:~/jenkins/workspace/Job2$ ls
Dockerfile images index.html
ubuntu@ip-172-31-15-218:~/jenkins/workspace/Job2$
```

i-0d576c6a9396301c9 (Project-Test)

Public IPs: 65.2.69.244 Private IPs: 172.31.15.218

[Status](#)[Changes](#)[Console Output](#)[Edit Build Information](#)[Delete build '#3'](#)[Timings](#)[Git Build Data](#)[← Previous Build](#)

Console Output

[Download](#)[Copy](#)[View as plain text](#)

```
Started by user Hari Govind Singh
Running as SYSTEM
Building remotely on Slave1 in workspace /home/ubuntu/jenkins/workspace/Job2
The recommended git tool is: NONE
No credentials specified
> 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/SinghH98/Projectwebsite.git # timeout=10
Fetching upstream changes from https://github.com/SinghH98/Projectwebsite.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/SinghH98/Projectwebsite.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision a1e134bb6836f28526413f4a0372048e67778533 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f a1e134bb6836f28526413f4a0372048e67778533 # timeout=10
Commit message: "Update Dockerfile"
```

#4 DONE 0.0s

```
#5 [internal] load build context
#5 transferring context: 5.12kB 0.0s done
#5 DONE 0.0s
```

```
#6 [3/4] RUN apt install apache2 -y
#6 CACHED
```

```
#7 [2/4] RUN apt update
#7 CACHED
```

```
#8 [4/4] ADD . /var/www/html/
#8 CACHED
```

```
#9 exporting to image
#9 exporting layers done
#9 writing image sha256:956b9dce7cf4db8d32ea88a6702a2e375e84c1080d7f2986e490e4518751494 done
#9 naming to docker.io/library/job2 done
#9 DONE 0.0s
+ sudo docker run -itd -p 82:80 --name=c2 job2
c1cffde5b8667e09564cadce1803e3352375955c6600a8e38fac385d0e6bf4f1
Finished: SUCCESS
```



Task:20 – Create and Build Job3 at Slave2 node.

Dashboard > All > New Item

New Item

Enter an item name

Job3

Select an item type

Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, steps like archiving artifacts and sending email notifications.

Pipeline

Orchestrates long-running activities that can span multiple build agents workflows) and/or organizing complex activities that do not easily fit in

Multi-configuration project

Suitable for projects that need a large number of different configurations platform-specific builds, etc.

OK

Configure

General

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

Restrict where this project can be run [?](#)

Label Expression [?](#)

Slave2

[Label Slave2](#) matches 1 node. Permissions or other restrictions provide

Advanced [▼](#)

Source Code Management

None

Git [?](#)

Repositories [?](#)

Repository URL [?](#)

<https://github.com/SinghH98/Projectwebsite.git>

[Save](#)

[Apply](#)

Configure

General

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

Build Triggers

- Trigger builds remotely (e.g., from scripts) [?](#)
- Build after other projects are built [?](#)
- Build periodically [?](#)
- GitHub hook trigger for GITScm polling [?](#)
- Poll SCM [?](#)

```
#sudo docker rm -f c3
```

```
sudo docker build /home/ubuntu/jenkins/workspace/Job3/ -t job3
```

```
sudo docker run -itd -p 80:80 --name=c3 job3
```

Build Steps

Execute shell

Command

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

```
#sudo docker rm -f c3
sudo docker build /home/ubuntu/jenkins/workspace/Job3/ -t job3
sudo docker run -itd -p 80:80 --name=c3 job3
```

 Build History trend ▾

Filter... /

① #1 | Jun 17, 2024, 2:16 PM

[Atom feed for all](#) [Atom feed for failures](#)

```
ubuntu@ip-172-31-6-87:~$ ls
jenkins
ubuntu@ip-172-31-6-87:~$ cd jenkins
ubuntu@ip-172-31-6-87:~/jenkins$ ls
remoting  remoting.jar  workspace
ubuntu@ip-172-31-6-87:~/jenkins$ cd workspace
ubuntu@ip-172-31-6-87:~/jenkins/workspace$ ls
Job3
ubuntu@ip-172-31-6-87:~/jenkins/workspace$ cd Job3
ubuntu@ip-172-31-6-87:~/jenkins/workspace/Job3$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-6-87:~/jenkins/workspace/Job3$
```

i-05f97718d3ac0342b (Project-Prod)

Public IPs: 13.200.215.114 Private IPs: 172.31.6.87

Status  **Console Output** Download Copy View as plain text

</> Changes

Console Output

Edit Build Information

Delete build '#3'

Timings

Git Build Data

← Previous Build

```
Started by user Hari Govind Singh
Running as SYSTEM
Building remotely on Slave2 in workspace /home/ubuntu/jenkins/workspace/Job3
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/Job3/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/SinghH98/Projectwebsite.git # timeout=10
Fetching upstream changes from https://github.com/SinghH98/Projectwebsite.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/SinghH98/Projectwebsite.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision a1e134bb6836f28526413f4a0372048e67778533 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f a1e134bb6836f28526413f4a0372048e67778533 # timeout=10
Commit message: "Update Dockerfile"
```

Install the buildx component to build images with BuildKit:
<https://docs.docker.com/go/buildx/>

Sending build context to Docker daemon 290.3kB

Step 1/5 : FROM ubuntu

---> 17c0145030df

Step 2/5 : RUN apt update

---> Using cache

---> 8db4d4a5ffef

Step 3/5 : RUN apt install apache2 -y

---> Using cache

---> 31e7c0349612

Step 4/5 : ADD . /var/www/html/

---> Using cache

---> 20cf7d63fb88

Step 5/5 : ENTRYPOINT apachectl -D FOREGROUND

---> Using cache

---> 8634cc98896c

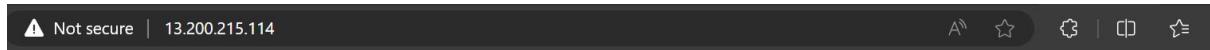
Successfully built 8634cc98896c

Successfully tagged job3:latest

+ sudo docker run -itd -p 80:80 --name=c3 job3

0bc0c4b896ebd3414ea46860af399e82ed9e0325584709e188e64b79bf18c17a

Finished: SUCCESS



Hello world!



GitHub

As per the project given, completed all the requirement and got the expected result

***** The END *****