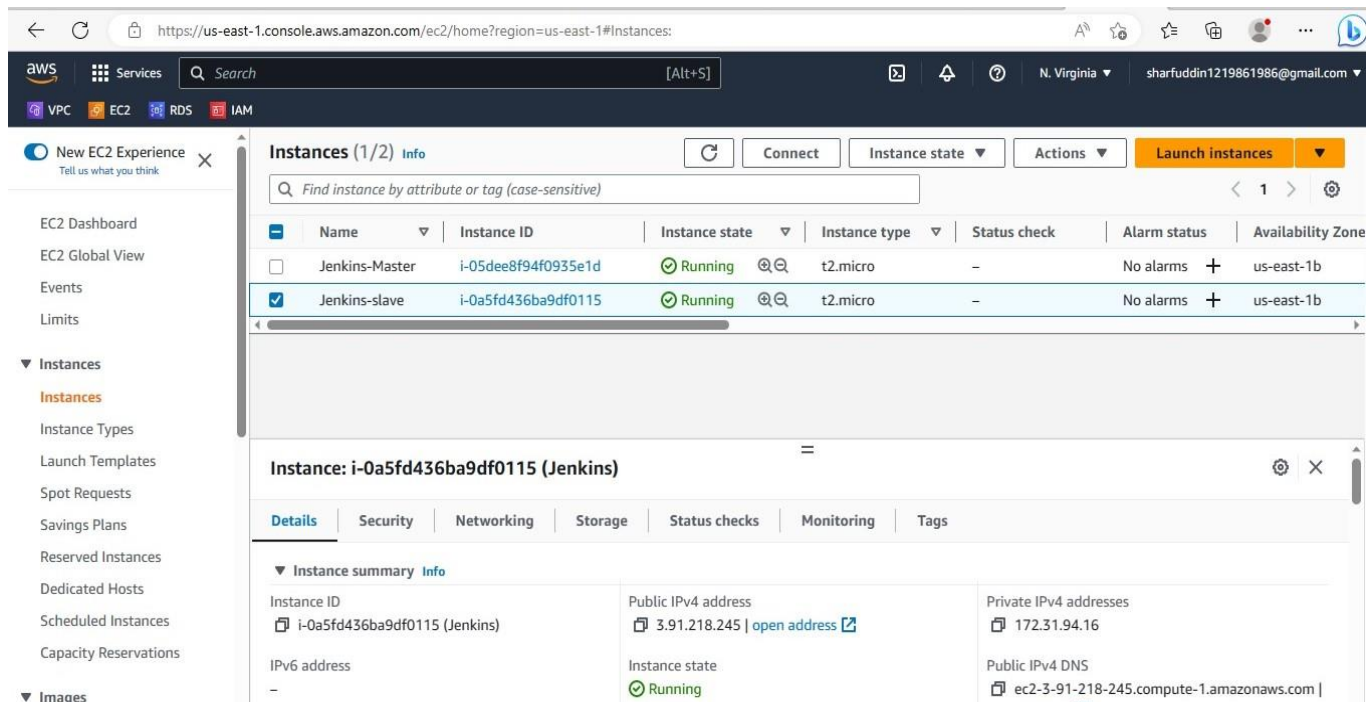


Module-8: Jenkins Assignment - 1

You have been asked to:

- Trigger a pipeline using Git when push on Develop branch
- Pipeline should pull git content to a folder

1) Create a pipeline using Git on develop branch.



The screenshot shows the AWS Management Console for the us-east-1 region. The left sidebar displays navigation options like EC2 Dashboard, EC2 Global View, Events, Limits, and Instances. The main content area shows a list of EC2 instances under the heading 'Instances (1/2) Info'. Two instances are listed: 'Jenkins-Master' and 'Jenkins-slave', both in a 'Running' state. Below the list, the details for the 'Jenkins-slave' instance (ID: i-0a5fd436ba9df0115) are expanded, showing its public IP address (3.91.218.245), private IP address (172.31.194.16), and other configuration details.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Jenkins-Master	i-05dee8f94f0935e1d	Running	t2.micro	-	No alarms	us-east-1b
Jenkins-slave	i-0a5fd436ba9df0115	Running	t2.micro	-	No alarms	us-east-1b

Instance: i-0a5fd436ba9df0115 (Jenkins)		
Details	Security	Networking
Instance summary Info		
Instance ID i-0a5fd436ba9df0115 (Jenkins)	Public IPv4 address 3.91.218.245 open address	Private IPv4 addresses 172.31.194.16
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-91-218-245.compute-1.amazonaws.com

```

ubuntu@ip-172-31-81-127:~$
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage

System information as of Mon May 22 19:59:32 UTC 2023

System load: 0.07 Processes: 104
Usage of /: 20.8% of 7.57GB Users logged in: 0
Memory usage: 21% IPv4 address for eth0: 172.31.81.127
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 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-172-31-81-127:~$

```

Master Machine

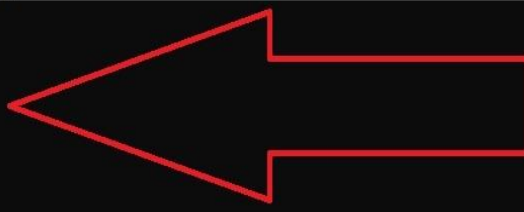
```

root@ip-172-31-81-127:~$ sudo apt install openjdk-11-jdk -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  at-spi2-core ca-certificates-java fontconfig-config fonts-dejavu-core fonts-dejavu-extra java-common libatk-bridge2.0-0 libatk-wrapper-java libatk-wrapper-java-jni
  libatk1.0-0 libatk1.0-data libatspi2.0-0 libavahi-client3 libavahi-common-data libavahi-common3 libcups2 libdrm-amdgpu1 libdrm-intel1 libdrm-nouveau2 libdrm-radeon1
  libfontconfig1 libfontenc1 libgif7 libgl1 libgl1-mesa-dri libglapi-mesa libglvnd0 libglx-mesa0 libglx0 libgraphite2-3 libharfbuzz0b libice-dev libice6
  libjpeg-turbo8 libjpeg8 liblcms2-2 libllvm12 libpciaccess0 libpcsc-lite1 libpthread-stubs0-dev libsensors-config libsensors5 libsm-dev libsm6 libvulkan1
  libwayland-client0 libx11-dev libx11-xcb1 libxau-dev libxaw7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-randr0 libxcb-shape0 libxcb-shm0
  libxcb-sync1 libxcb-xf86vm0 libxcb1-dev libxcomposite1 libxdmcp-dev libxfixes3 libxft2 libxi6 libxinerama1 libxkbfile1 libxmu6 libxpm4 libxrandr2 libxrender1
  libxshmfence1 libxt-dev libxt6 libxtst6 libxv1 libxxf86dga1 libxxf86vm1 mesa-vulkan-drivers openjdk-11-jdk-headless openjdk-11-jre openjdk-11-jre-headless
  x11-common x11-utils x11proto-core-dev x11proto-dev xorg-sgml-doctools xtrans-dev
Suggested packages:
  default-jre cups-common libice-doc liblcms2-utils pcsd lm-sensors libsm-doc libx11-doc libxcb-doc libxt-doc openjdk-11-demo openjdk-11-source visualvm libnss-mdns
  fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic mesa-utils
The following NEW packages will be installed:
  at-spi2-core ca-certificates-java fontconfig-config fonts-dejavu-core fonts-dejavu-extra java-common libatk-bridge2.0-0 libatk-wrapper-java libatk-wrapper-java-jni
  libatk1.0-0 libatk1.0-data libatspi2.0-0 libavahi-client3 libavahi-common-data libavahi-common3 libcups2 libdrm-amdgpu1 libdrm-intel1 libdrm-nouveau2 libdrm-radeon1
  libfontconfig1 libfontenc1 libgif7 libgl1 libgl1-mesa-dri libglapi-mesa libglvnd0 libglx-mesa0 libglx0 libgraphite2-3 libharfbuzz0b libice-dev libice6
  libjpeg-turbo8 libjpeg8 liblcms2-2 libllvm12 libpciaccess0 libpcsc-lite1 libpthread-stubs0-dev libsensors-config libsensors5 libsm-dev libsm6 libvulkan1
  libwayland-client0 libx11-dev libx11-xcb1 libxau-dev libxaw7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-randr0 libxcb-shape0 libxcb-shm0
  libxcb-sync1 libxcb-xf86vm0 libxcb1-dev libxcomposite1 libxdmcp-dev libxfixes3 libxft2 libxi6 libxinerama1 libxkbfile1 libxmu6 libxpm4 libxrandr2 libxrender1
  libxshmfence1 libxt-dev libxt6 libxtst6 libxv1 libxxf86dga1 libxxf86vm1 mesa-vulkan-drivers openjdk-11-jdk-headless openjdk-11-jre openjdk-11-jre-headless
  x11-common x11-utils x11proto-core-dev x11proto-dev xorg-sgml-doctools xtrans-dev
0 upgraded, 89 newly installed, 0 to remove and 0 not upgraded.
Need to get 157 MB of archives.
After this operation, 810 MB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libatspi2.0-0 amd64 2.36.0-2 [64.2 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 x11-common all 1:7.7+19ubuntu14 [22.3 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libxtst6 amd64 2:1.2.3-1 [12.8 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 at-spi2-core amd64 2.36.0-2 [48.7 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 java-common all 0.72 [6816 B]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libavahi-common-data amd64 0.7-4ubuntu7.1 [21.4 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libavahi-common3 amd64 0.7-4ubuntu7.1 [21.7 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libavahi-client3 amd64 0.7-4ubuntu7.1 [25.5 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libcups2 amd64 2.3.1-9ubuntu1.2 [233 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 liblcms2-2 amd64 2.9-4 [140 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 libjpeg-turbo8 amd64 2.0.3-0ubuntu1.20.04.3 [118 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libjpeg8 amd64 8c-2ubuntu8 [2194 B]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 fonts-dejavu-core all 2.37-1 [1041 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 fontconfig-config all 2.13.1-2ubuntu3 [28.8 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libfontconfig1 amd64 2.13.1-2ubuntu3 [114 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libgraphite2-3 amd64 1.3.13-11build1 [73.5 kB]

```

```
root@ip-172-31-81-127: ~
root@ip-172-31-81-127:~# which java
/usr/bin/java
root@ip-172-31-81-127:~# sudo nano a.sh
```

```
root@ip-172-31-81-127: ~
GNU nano 4.8 a.sh Modified
curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee \
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
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_
```



```
root@ip-172-31-81-127:~  
root@ip-172-31-81-127:~# which java  
/usr/bin/java  
root@ip-172-31-81-127:~# sudo nano a.sh  
root@ip-172-31-81-127:~# bash a.sh  
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease  
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease  
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]  
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease  
Ign:5 https://pkg.jenkins.io/debian-stable binary/ InRelease  
Get:6 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]  
Get:7 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]  
Get:8 https://pkg.jenkins.io/debian-stable binary/ Packages [24.8 kB]  
Fetched 136 kB in 1s (160 kB/s)  
Reading package lists... Done  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
  net-tools  
The following NEW packages will be installed:  
  jenkins net-tools  
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.  
Need to get 98.1 MB of archives.  
After this operation, 99.3 MB of additional disk space will be used.  
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 net-tools amd64 1.60+git20180626.aebd88e-1ubuntu1 [196 kB]  
Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.387.3 [97.9 MB]  
Fetched 98.1 MB in 7s (13.7 MB/s)  
Selecting previously unselected package net-tools.  
(Reading database ... 63714 files and directories currently installed.)  
Preparing to unpack .../net-tools_1.60+git20180626.aebd88e-1ubuntu1_amd64.deb ...  
Unpacking net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...  
Selecting previously unselected package jenkins.  
Preparing to unpack .../jenkins_2.387.3_all.deb ...  
Unpacking jenkins (2.387.3) ...  
Setting up net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...  
Setting up jenkins (2.387.3) ...  
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/system/jenkins.service.
```

← ↻ ⚠ Not secure | 3.86.199.63:8080/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


```

root@ip-172-31-81-127: /var/lib/jenkins/secrets
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  net-tools
The following NEW packages will be installed:
  jenkins net-tools
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 98.1 MB of archives.
After this operation, 99.3 MB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 net-tools amd64 1.60+git20180626.aebd88e-1ubuntu1 [196 kB]
Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.387.3 [97.9 MB]
Fetched 98.1 MB in 7s (13.7 MB/s)
Selecting previously unselected package net-tools.
(Reading database ... 63714 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20180626.aebd88e-1ubuntu1_amd64.deb ...
Unpacking net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...
Selecting previously unselected package jenkins.
Preparing to unpack .../jenkins_2.387.3_all.deb ...
Unpacking jenkins (2.387.3) ...
Setting up net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...
Setting up jenkins (2.387.3) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for systemd (245.4-4ubuntu3.21) ...
root@ip-172-31-81-127:~# maven --version

Command 'maven' not found, did you mean:

  command 'aven' from deb survex-aven (1.2.42-1build2)

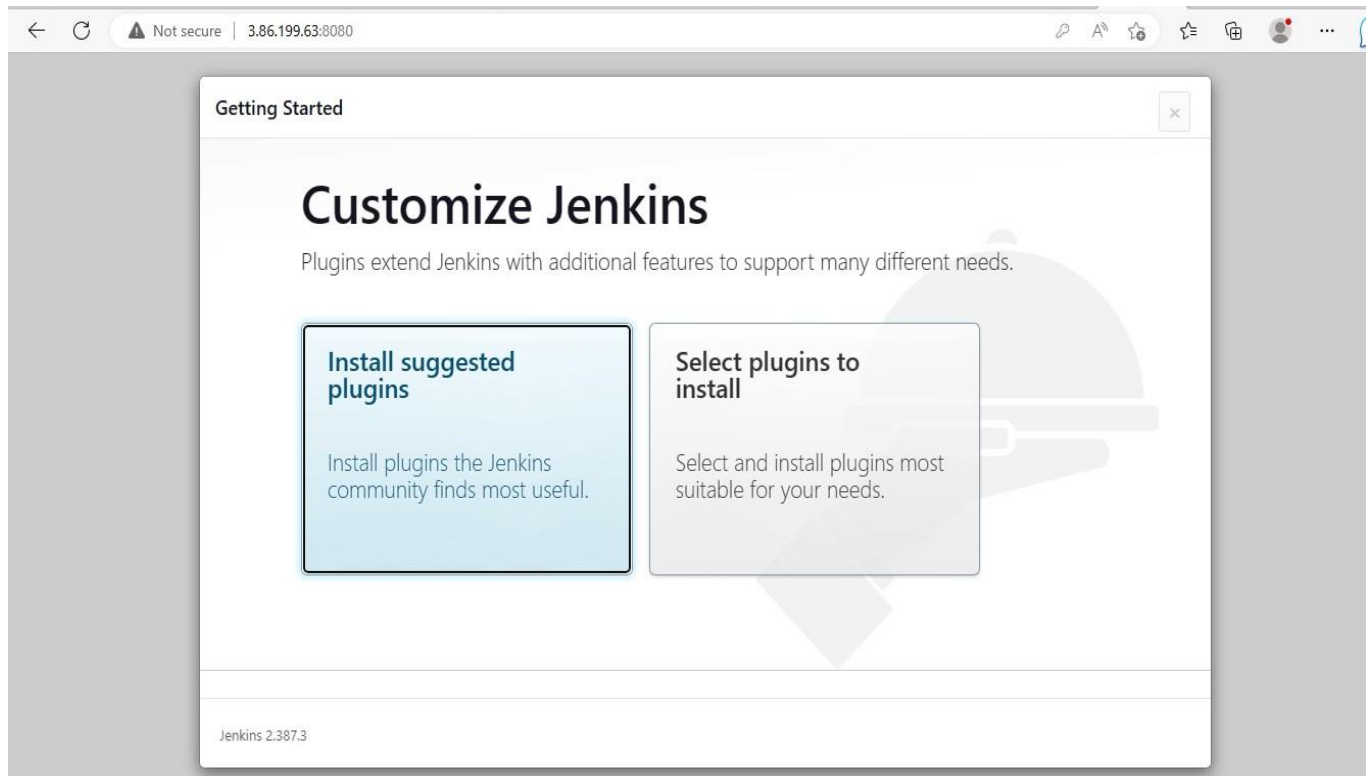
```

Try: apt install <deb name>

```

oot@ip-172-31-81-127:~# cd /var/lib/jenkins/secrets
oot@ip-172-31-81-127:/var/lib/jenkins/secrets# ll
total 20
-rwxr-xr-x 2 jenkins jenkins 4096 May 22 20:18 ./
-rwxr-xr-x 1 jenkins jenkins 4096 May 22 20:19 ../
-rw-r--r-- 1 jenkins jenkins 33 May 22 20:18 initialAdminPassword
-rw-r--r-- 1 jenkins jenkins 32 May 22 20:18 jenkins.model.Jenkins.crumbSalt
-rw-r--r-- 1 jenkins jenkins 256 May 22 20:18 master.key
oot@ip-172-31-81-127:/var/lib/jenkins/secrets# cat initialAdminPassword
60ae7723e06428eab34a5fd9eabf6c5
oot@ip-172-31-81-127:/var/lib/jenkins/secrets#

```



Getting Started

Customize Jenkins

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

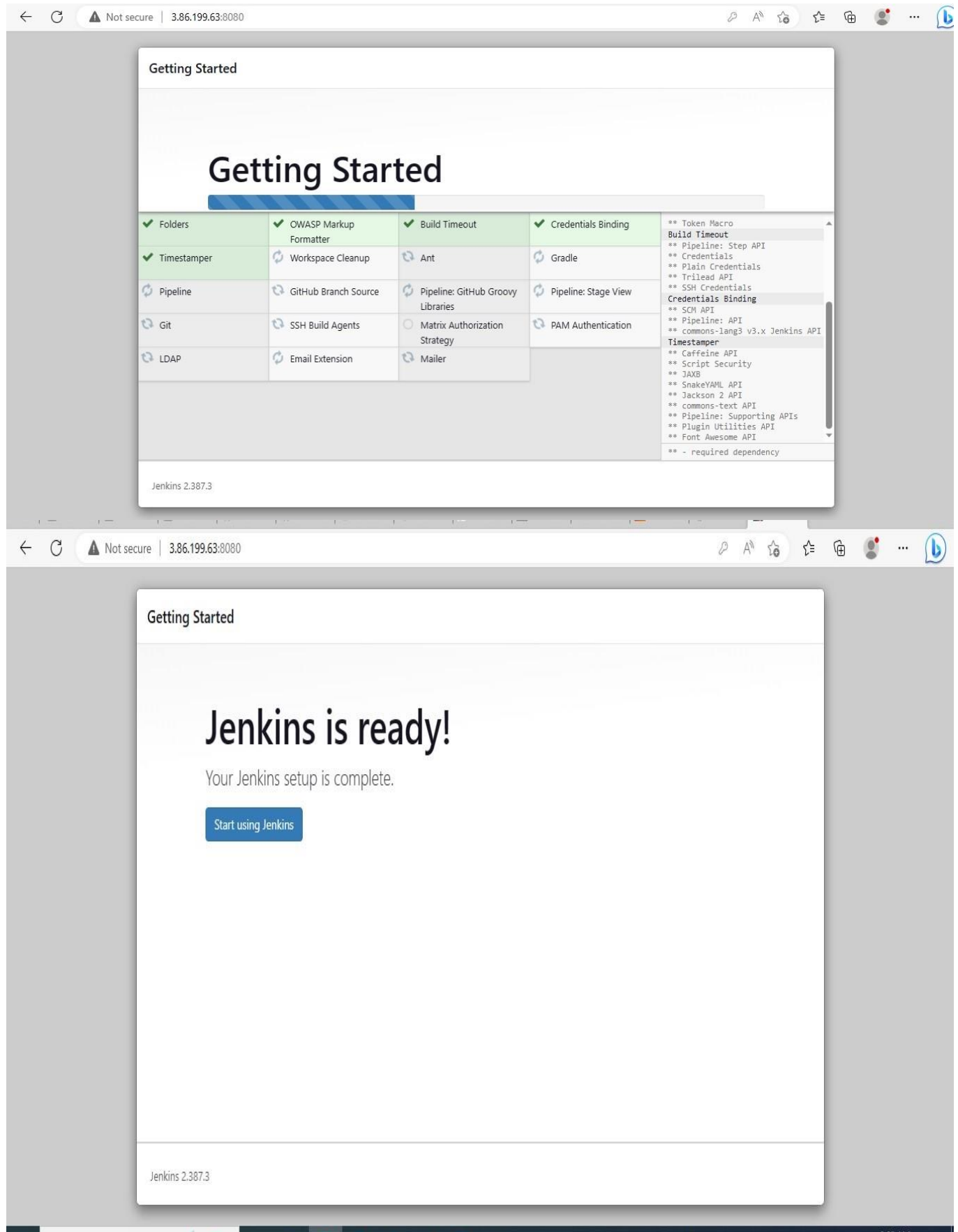
Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.387.3



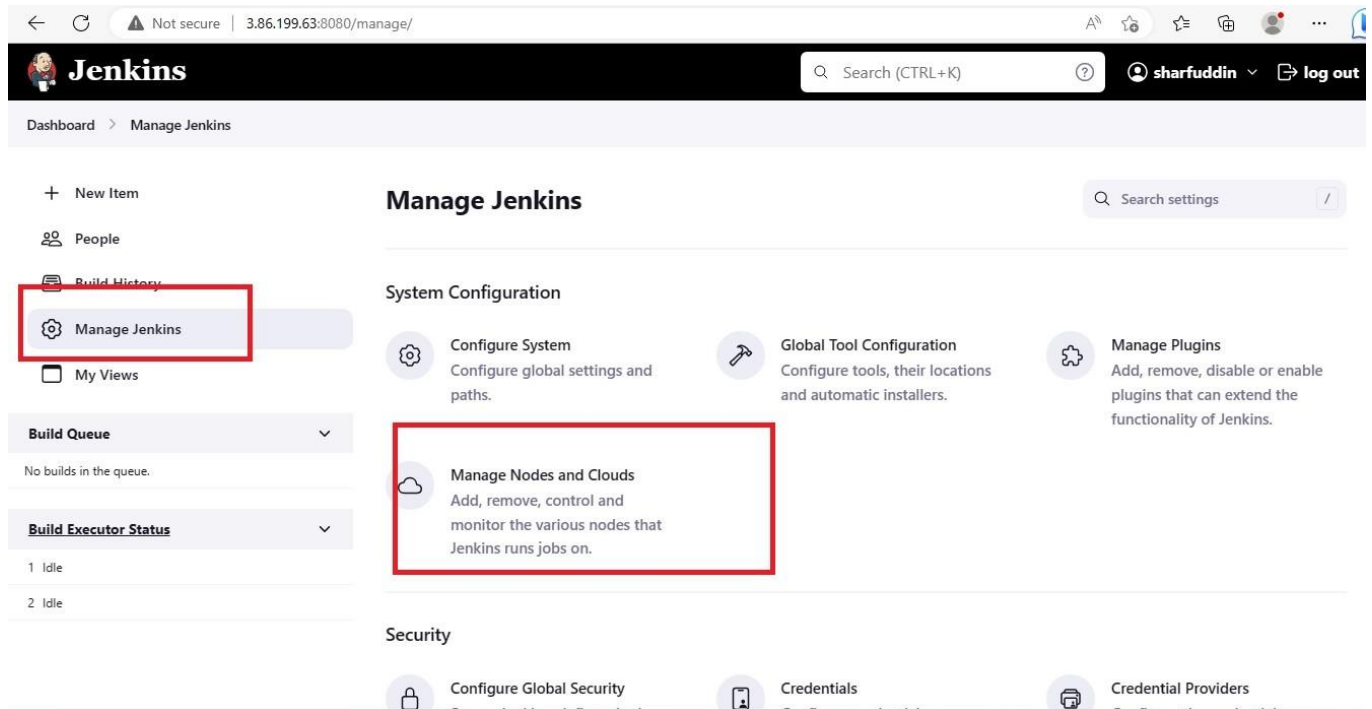
The screenshot shows the Jenkins 'Getting Started' screen during a fresh installation. The browser address bar indicates the URL is 3.86.199.63:8080. The main heading is 'Getting Started'. Below it, a table lists various plugins and their installation status. A right-hand pane shows a detailed list of installed plugins and their dependencies.

Plugin	Status
Folders	✓
OWASP Markup Formatter	✓
Build Timeout	✓
Credentials Binding	✓
Timestampers	✓
Workspace Cleanup	⚙️
Ant	⚙️
Gradle	⚙️
Pipeline	⚙️
GitHub Branch Source	⚙️
Pipeline: GitHub Groovy Libraries	⚙️
Pipeline: Stage View	⚙️
Git	⚙️
SSH Build Agents	⚙️
Matrix Authorization Strategy	⚙️
PAM Authentication	⚙️
LDAP	⚙️
Email Extension	⚙️
Mailer	⚙️

Installed Plugins and Dependencies:

- Token Macro
- Build Timeout
 - Pipeline: Step API
 - Credentials
 - Plain Credentials
 - Trilead API
 - SSH Credentials
- Credentials Binding
 - SCM API
 - Pipeline: API
 - commons-lang3 v3.x Jenkins API
- Timestampers
 - Caffeine API
 - Script Security
 - JAXB
 - SnakeYAML API
 - Jackson 2 API
 - commons-text API
 - Pipeline: Supporting APIs
 - Plugin Utilities API
 - Font Awesome API
- required dependency

Jenkins 2.387.3



Dashboard > Manage Jenkins

Manage Jenkins

Search settings

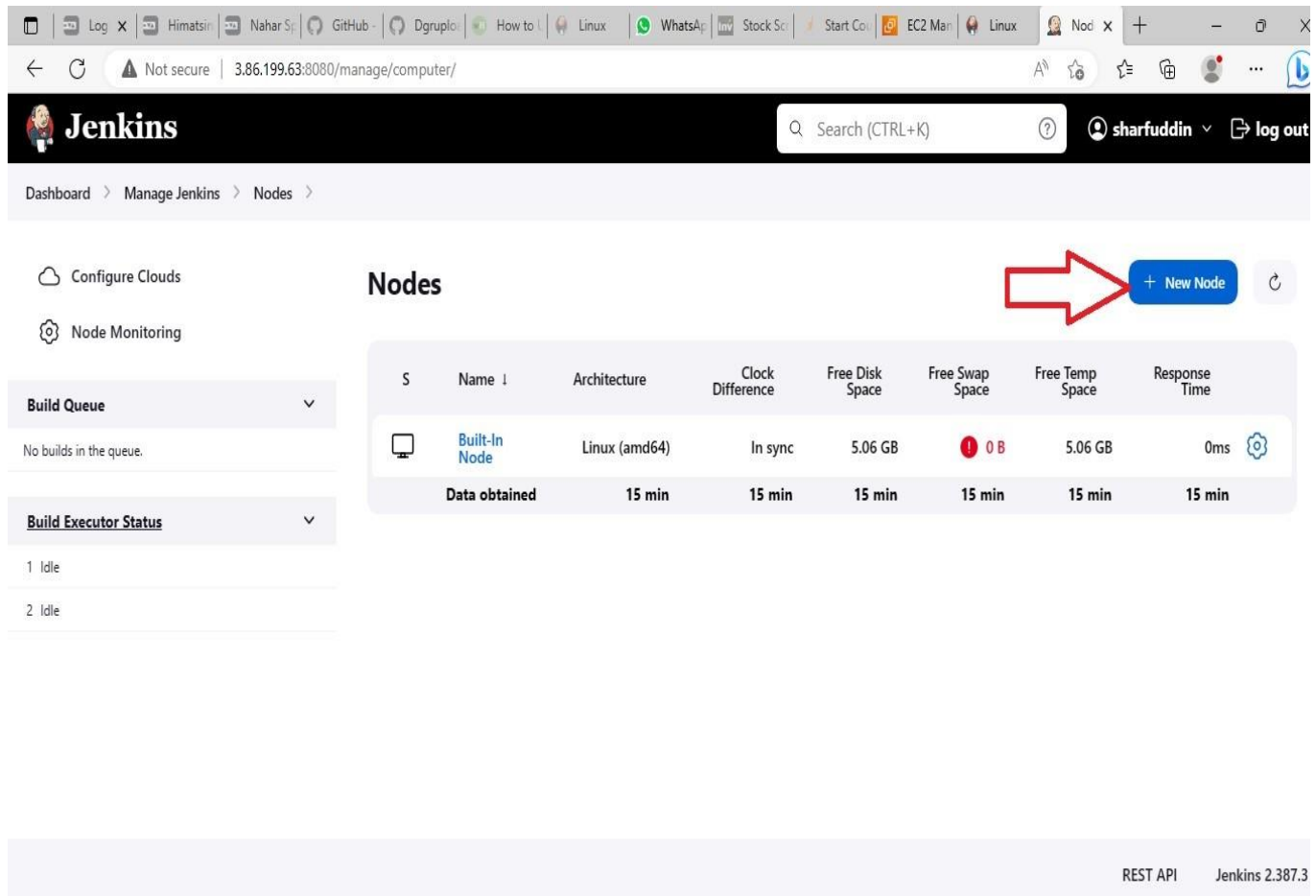
System Configuration

- Configure System**
Configure global settings and paths.
- Global Tool Configuration**
Configure tools, their locations and automatic installers.
- Manage Plugins**
Add, remove, disable or enable plugins that can extend the functionality of Jenkins.
- Manage Nodes and Clouds**
Add, remove, control and monitor the various nodes that Jenkins runs jobs on.

Security

- Configure Global Security**
- Credentials**
- Credential Providers**




Left sidebar: + New Item, People, Build History, **Manage Jenkins**, My Views, Build Queue, Build Executor Status.



Dashboard > Manage Jenkins > Nodes

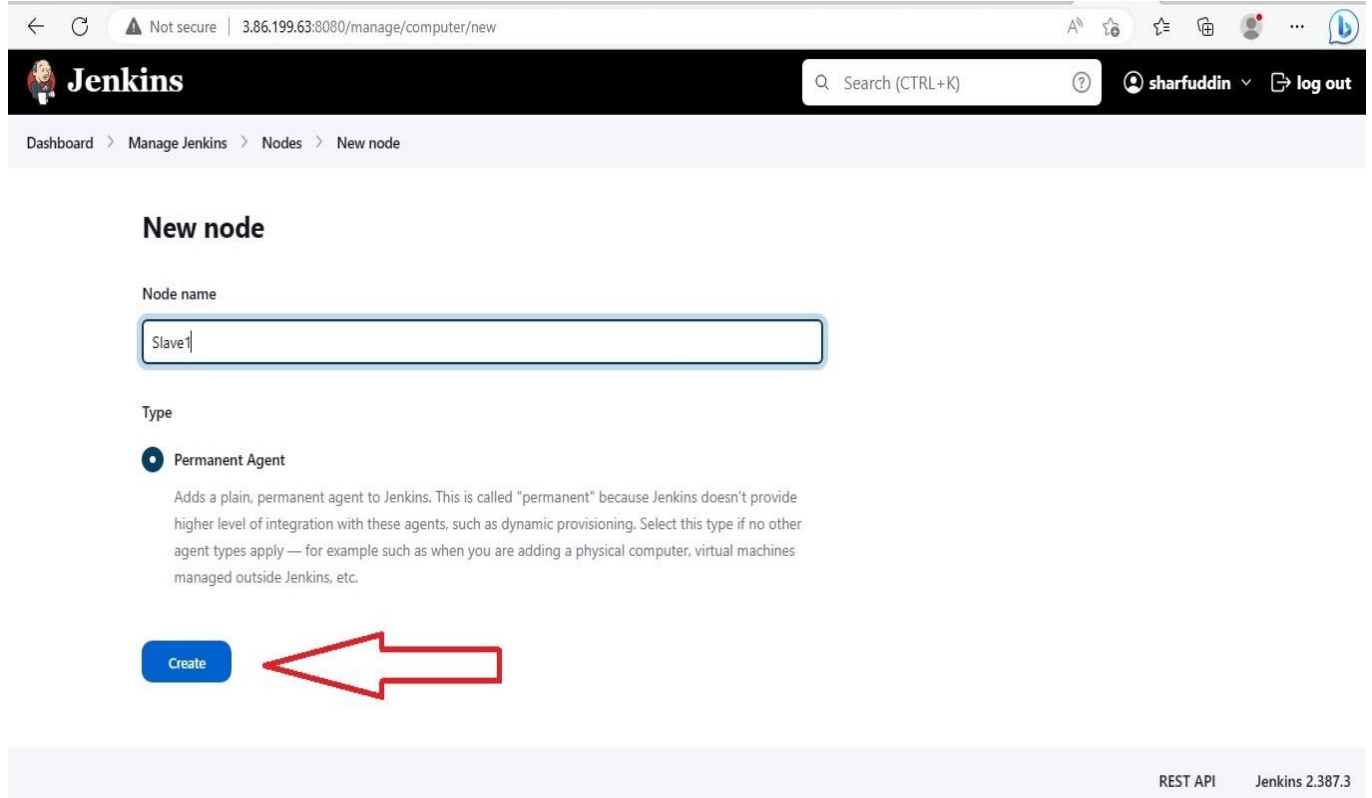
Nodes

+ 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	5.06 GB	 0 B	5.06 GB	0ms 
	Data obtained	15 min	15 min	15 min	15 min	15 min	15 min

REST API Jenkins 2.387.3

2)Add slave node



The screenshot shows the Jenkins 'New node' page. The 'Node name' field contains 'Slave1'. The 'Type' section has 'Permanent Agent' selected. A red arrow points to the 'Create' button. The bottom right corner shows 'REST API' and 'Jenkins 2.387.3'.

Node name

Slave1

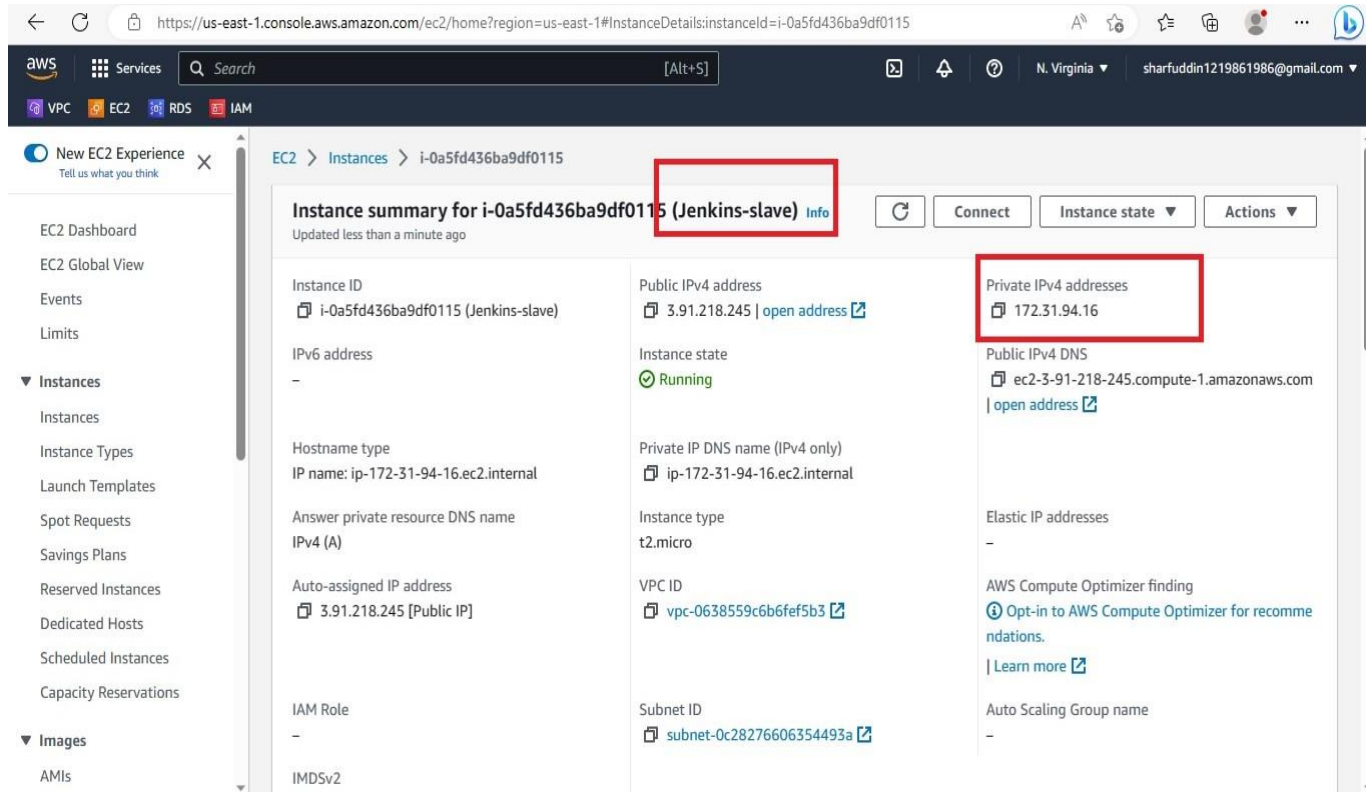
Type

☒ 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 2.387.3



The screenshot shows the AWS Management Console 'Instance summary' page for instance i-0a5fd436ba9df0115 (Jenkins-slave). The instance is in a 'Running' state. Key details include:

- Instance ID: i-0a5fd436ba9df0115 (Jenkins-slave)
- Public IPv4 address: 3.91.218.245
- Private IPv4 addresses: 172.31.94.16
- Instance state: Running
- Hostnames: ip-172-31-94-16.ec2.internal
- Instance type: t2.micro
- VPC ID: vpc-0638559c6b6fef5b3
- Subnet ID: subnet-0c28276606354493a

Instance summary for i-0a5fd436ba9df0115 (Jenkins-slave) Info

Updated less than a minute ago

Instance ID
i-0a5fd436ba9df0115 (Jenkins-slave)

Public IPv4 address
3.91.218.245 | open address

Private IPv4 addresses
172.31.94.16

Instance state
Running

Hostnames type
IP name: ip-172-31-94-16.ec2.internal

Private IP DNS name (IPv4 only)
ip-172-31-94-16.ec2.internal

Instance type
t2.micro

VPC ID
vpc-0638559c6b6fef5b3

Subnet ID
subnet-0c28276606354493a

Public IPv4 DNS
ec2-3-91-218-245.compute-1.amazonaws.com | open address

Elastic IP addresses
-

AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name
-

← ↻ ⚠ Not secure | 3.86.199.63:8080/manage/computer/createItem

Dashboard > Manage Jenkins > Nodes >

Remote root directory ?

/home/ubuntu/jenkins/ ←

Labels ?

Usage ?

Use this node as much as possible

Launch method ?

Launch agents via SSH ←

Host ?

172.31.94.16 ←

Save

← ↻ ⚠ Not secure | 3.86.199.63:8080/manage/computer/createItem

Dashboard > Manage Jenkins > Nodes >

Launch

Launch

Jenkins Credentials Provider: Jenkins

Add Credentials

Domain

Global credentials (unrestricted)

Kind

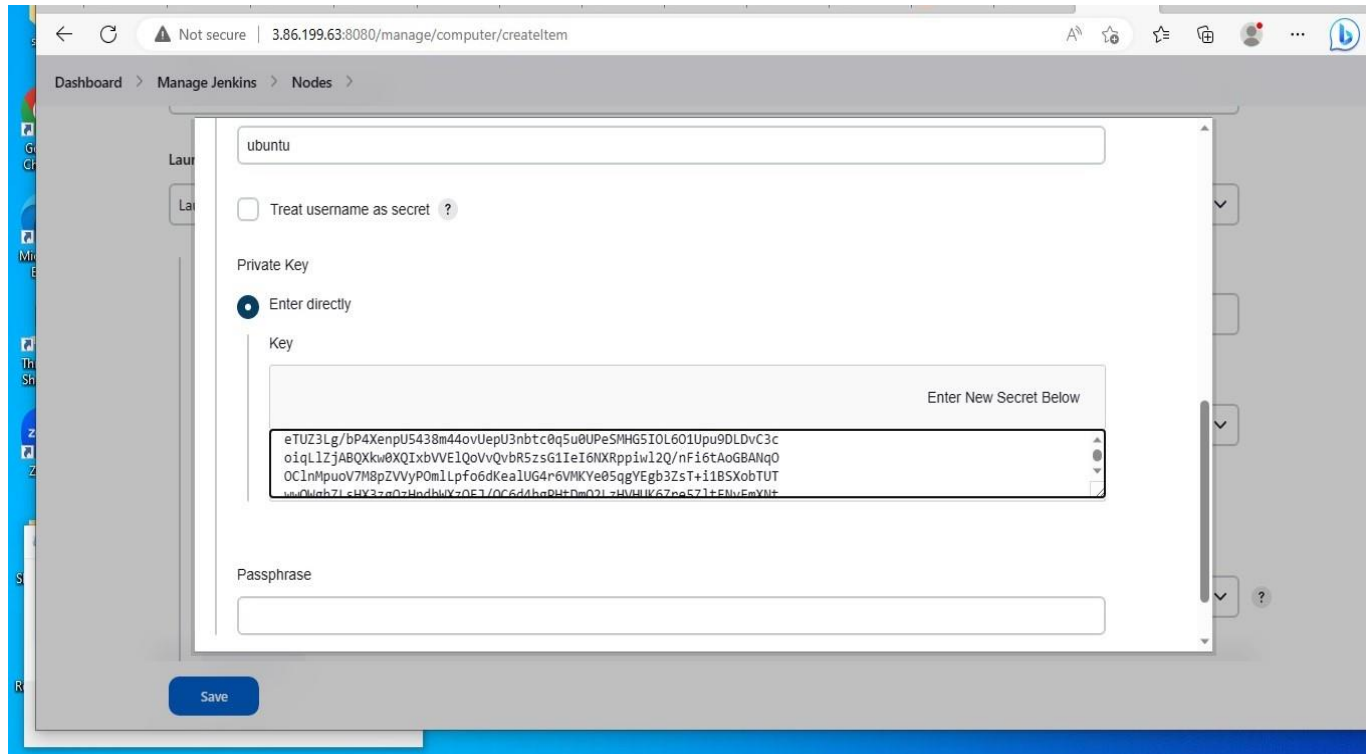
SSH Username with private key ←

Scope ?

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

ID ?

Save



Dashboard > Manage Jenkins > Nodes >

ubuntu

☐ Treat username as secret ?

Private Key

☒ Enter directly

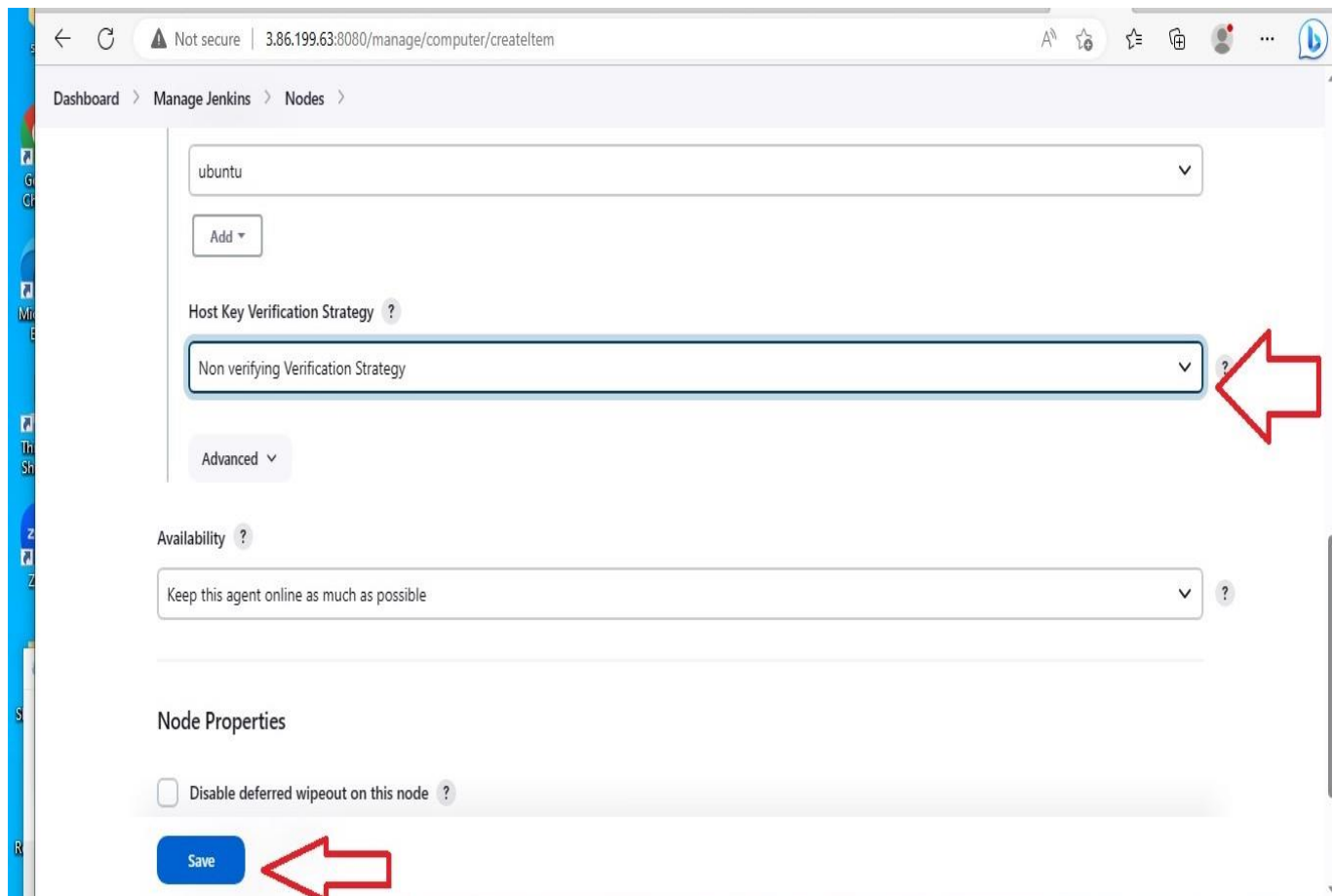
Key

Enter New Secret Below

```
eTuz3Lg/bP4XenpU5438m44ovUepU3nbtC0q5u0UPeSMHG5IOL601Upu9DLdVc3c  
oiqL1ZjABQXkw0XQIXbVVE1QoVvQvbR5zsG1IeI6NXRppiw12Q/nF16tAoGBANqO  
OC1nMpuoV7M8pZVvyP0m1Lpfo6dKea1UG4r6VMKYe05qgYEgb3ZsT+11BSXobTUT  
uQWb7LsHY3zgDzHedblYz0E3/OC6d4bqRH+Dm02LzHVHUK67e571tFmVEmYnt
```

Passphrase

Save



Dashboard > Manage Jenkins > Nodes >

ubuntu

Add

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced

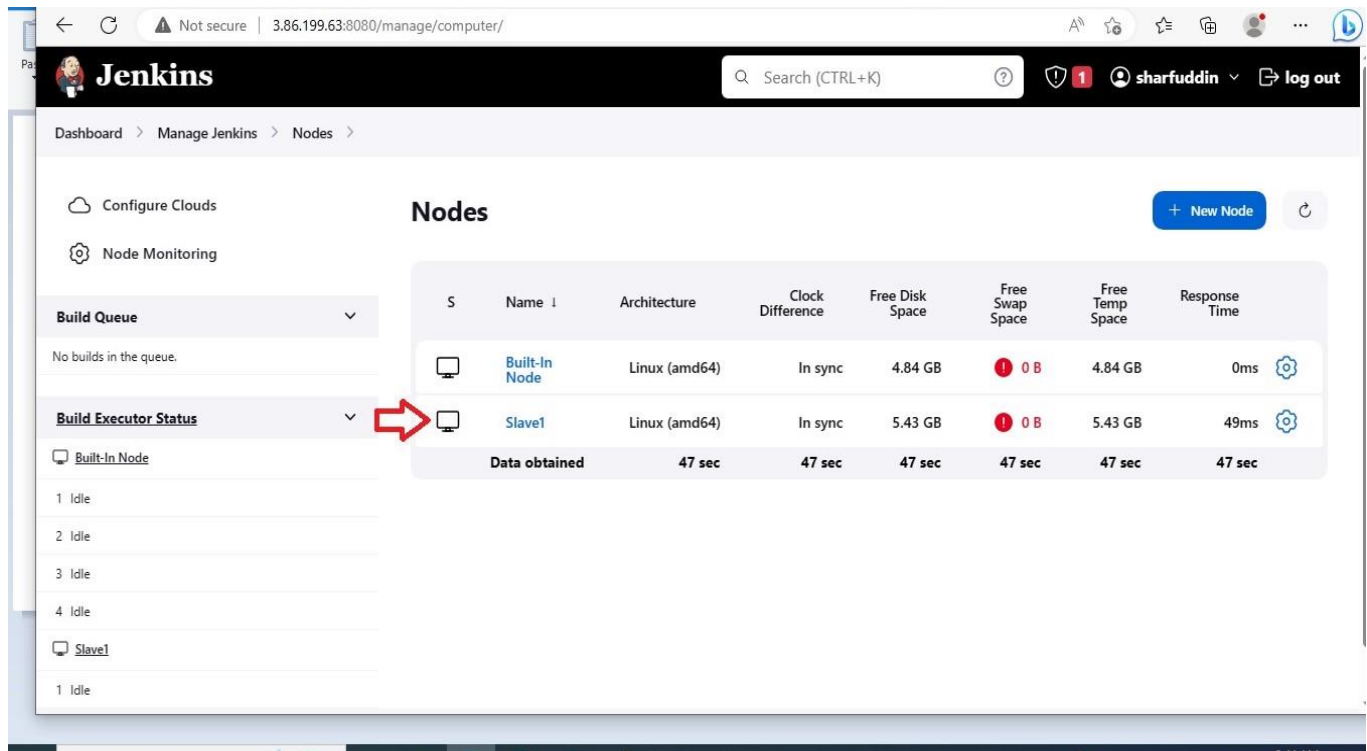
Availability ?

Keep this agent online as much as possible

Node Properties

☐ Disable deferred wipeout on this node ?

Save



Jenkins Search (CTRL+K) 1 sharfuddin log out

Dashboard > Manage Jenkins > Nodes

Configure Clouds Node Monitoring

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	4.84 GB	1 0 B	4.84 GB	0ms
	Slave1	Linux (amd64)	In sync	5.43 GB	1 0 B	5.43 GB	49ms
Data obtained		47 sec	47 sec	47 sec	47 sec	47 sec	47 sec

Build Queue No builds in the queue.

Build Executor Status

- Built-in Node
 - 1 Idle
 - 2 Idle
 - 3 Idle
 - 4 Idle
- Slave1
 - 1 Idle

```

ubuntu@ip-172-31-94-16: ~/jenkins
Adding debian:Comodo_AAA_Services_root.pem
done.
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
Processing triggers for systemd (245.4-4ubuntu3.21) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for ca-certificates (20211016ubuntu0.20.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
done.
ubuntu@ip-172-31-94-16:~$ ll
total 32
drwxr-xr-x 5 ubuntu ubuntu 4096 May 22 21:13 ./
drwxr-xr-x 3 root root 4096 May 22 19:56 ../
-rw-r--r-- 1 ubuntu ubuntu 220 Feb 25 2020 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Feb 25 2020 .bashrc
drwx----- 3 ubuntu ubuntu 4096 May 22 21:13 .cache/
-rw-r--r-- 1 ubuntu ubuntu 807 Feb 25 2020 .profile
drwx----- 2 ubuntu ubuntu 4096 May 22 19:56 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 May 22 21:04 .sudo_as_admin_successful
-rwx----- 3 ubuntu ubuntu 4096 May 22 21:13 jenkins/
ubuntu@ip-172-31-94-16:~$ cd jenkins/
ubuntu@ip-172-31-94-16:~/jenkins$ ls
emoting remoting.jar
ubuntu@ip-172-31-94-16:~/jenkins$
  
```

```

ubuntu@ip-172-31-81-127: ~/git
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
New release '22.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
Last login: Mon May 22 21:21:09 2023 from 170.133.122.239
ubuntu@ip-172-31-81-127:~$ ls
ubuntu@ip-172-31-81-127:~$ ls -al
total 32
drwxr-xr-x 4 ubuntu ubuntu 4096 May 22 21:21 .
drwxr-xr-x 3 root root 4096 May 22 19:56 ..
-rw-r--r-- 1 ubuntu ubuntu 8 May 22 21:21 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Feb 25 2020 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Feb 25 2020 .bashrc
drwx----- 2 ubuntu ubuntu 4096 May 22 19:59 .cache
-rw-r--r-- 1 ubuntu ubuntu 807 Feb 25 2020 .profile
drwx----- 2 ubuntu ubuntu 4096 May 22 19:56 .ssh
-rw-r--r-- 1 ubuntu ubuntu 0 May 22 20:01 .sudo_as_admin_successful
ubuntu@ip-172-31-81-127:~$ mkdir git
ubuntu@ip-172-31-81-127:~$ cd git
ubuntu@ip-172-31-81-127:~/git$ git init
initialized empty Git repository in /home/ubuntu/git/.git/
ubuntu@ip-172-31-81-127:~/git$

```

```

ubuntu@ip-172-31-81-127: ~/git
ubuntu@ip-172-31-81-127:~/git$ touch main.c
ubuntu@ip-172-31-81-127:~/git$ git add main.c
ubuntu@ip-172-31-81-127:~/git$ git commit -m "master branch"
[master (root-commit) 1e2f72e] master branch
Committer: Ubuntu <ubuntu@ip-172-31-81-127.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

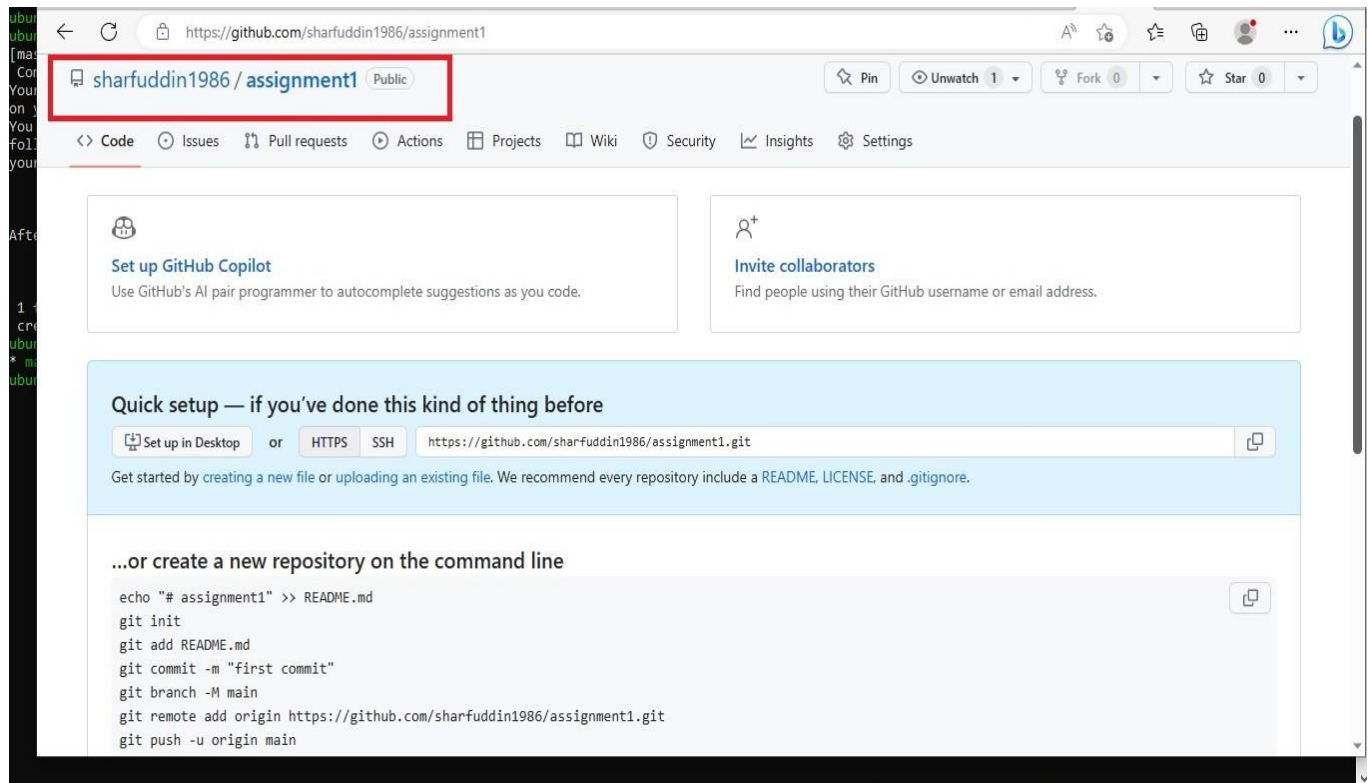
    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 main.c
ubuntu@ip-172-31-81-127:~/git$ git branch
* master
ubuntu@ip-172-31-81-127:~/git$

```

```
ubuntu@ip-172-31-81-127: ~/git
ubuntu@ip-172-31-81-127:~/git$ touch main.c
ubuntu@ip-172-31-81-127:~/git$ git add main.c
ubuntu@ip-172-31-81-127:~/git$ git commit -m "master branch "
[master (root-commit) 1e2f72e] master branch
Committer: Ubuntu <ubuntu@ip-172-31-81-127.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 main.c
ubuntu@ip-172-31-81-127:~/git$ git branch
* master
ubuntu@ip-172-31-81-127:~/git$ git remote add origin https://github.com/sharfuddin1986/assignment1.git
ubuntu@ip-172-31-81-127:~/git$ git remote -v
origin https://github.com/sharfuddin1986/assignment1.git (fetch)
origin https://github.com/sharfuddin1986/assignment1.git (push)
ubuntu@ip-172-31-81-127:~/git$
```

```
ubuntu@ip-172-31-81-127: ~/git
ubuntu@ip-172-31-81-127:~/git$ git branch
  develop
* master
ubuntu@ip-172-31-81-127:~/git$ git checkout develop
Switched to branch 'develop'
ubuntu@ip-172-31-81-127:~/git$ git checkout develop
Already on 'develop'
ubuntu@ip-172-31-81-127:~/git$ pwd
/home/ubuntu/git
ubuntu@ip-172-31-81-127:~/git$ git branch
* develop
  master
ubuntu@ip-172-31-81-127:~/git$ ls
main.c
ubuntu@ip-172-31-81-127:~/git$ touch develop.c
ubuntu@ip-172-31-81-127:~/git$ git add develop.c
ubuntu@ip-172-31-81-127:~/git$ git commit -m " develop file "
[develop 77f5e1c] develop file
Committer: Ubuntu <ubuntu@ip-172-31-81-127.ec2.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

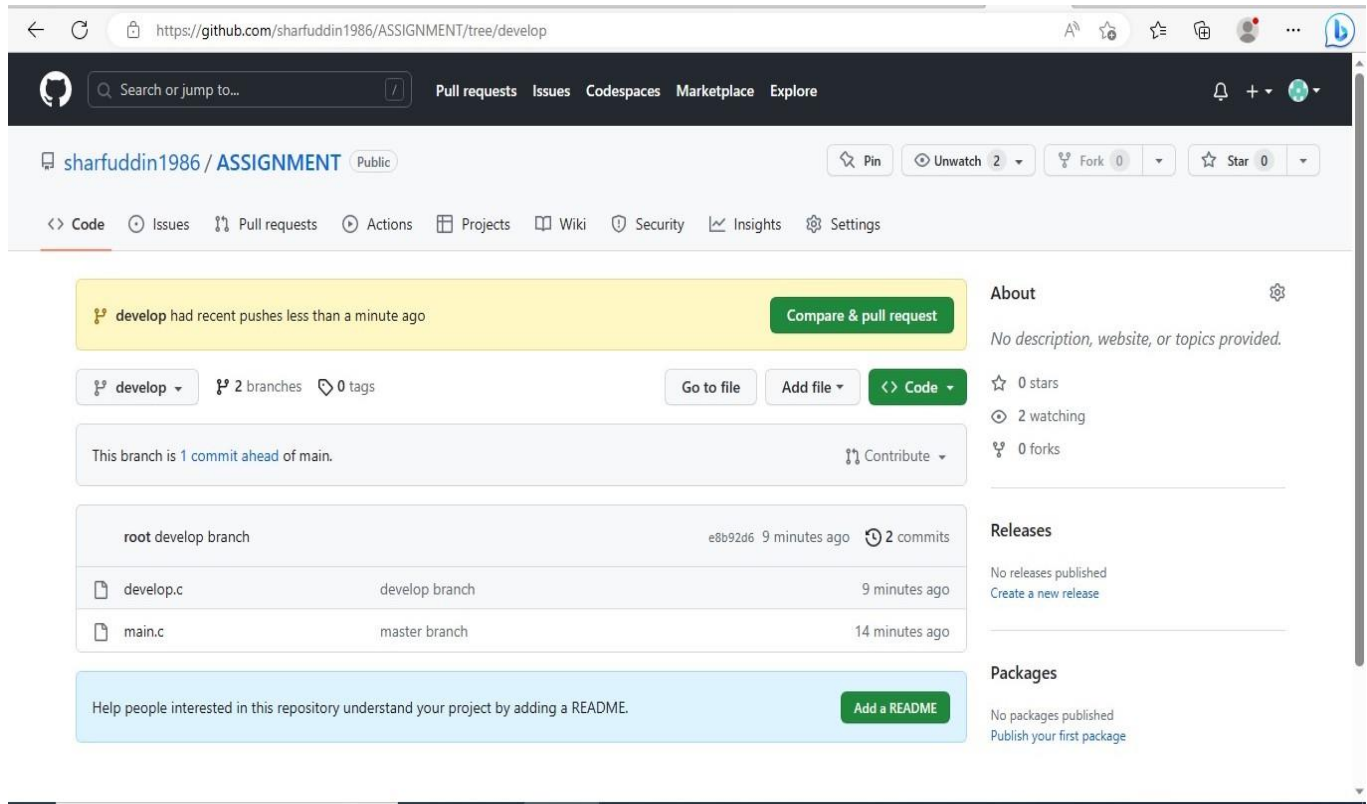
    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

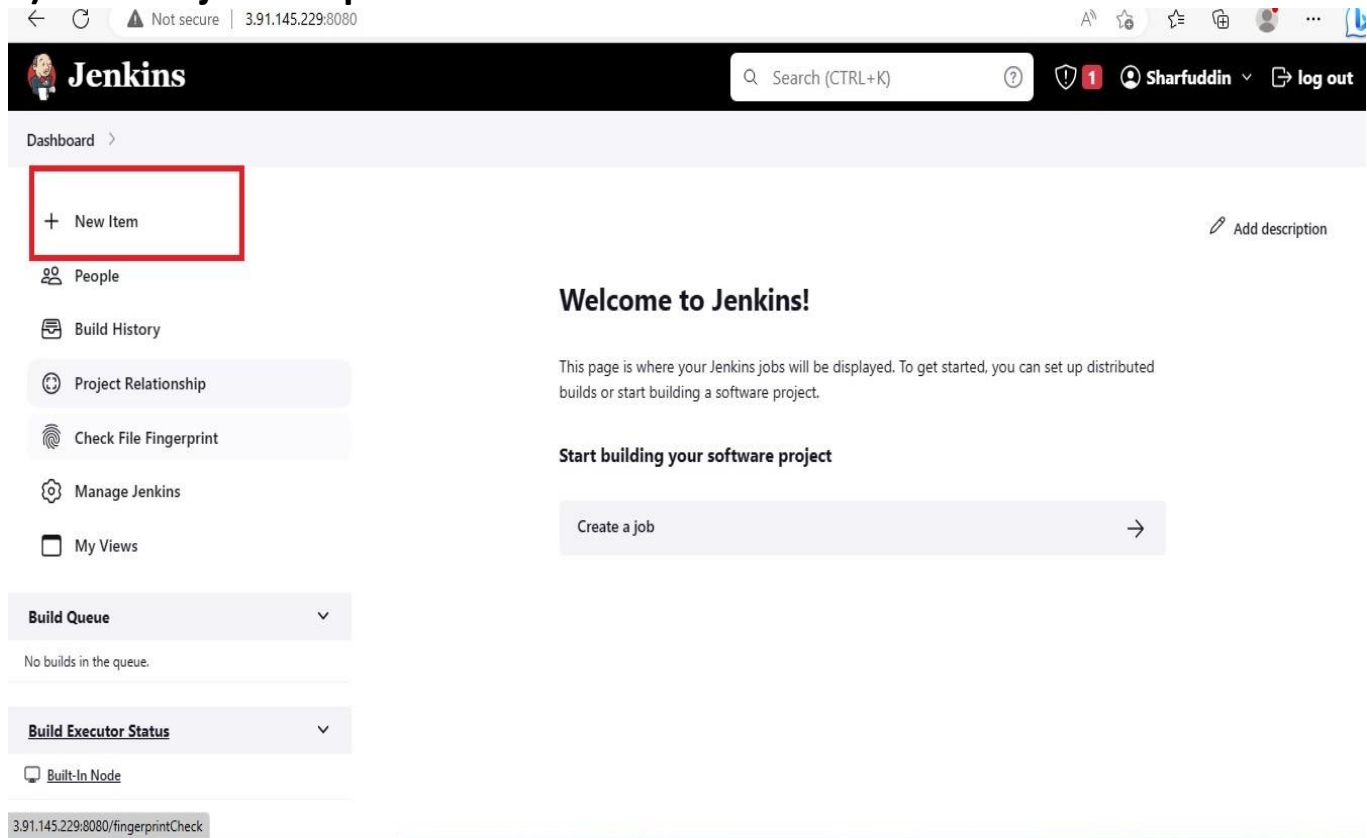
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 develop.c
ubuntu@ip-172-31-81-127:~/git$ git push origin master
Username for 'https://github.com': sharfuddin1986
Password for 'https://sharfuddin1986@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/en/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for information on currently recomm
ended modes of authentication.
fatal: Authentication failed for 'https://github.com/sharfuddin1986/assignment1.git/'
ubuntu@ip-172-31-81-127:~/git$
ubuntu@ip-172-31-81-127:~/git$ git push origin master
Username for 'https://github.com': sharfuddin1986
Password for 'https://sharfuddin1986@github.com':
```

```
ubuntu@ip-172-31-81-127: ~/git
fatal: Authentication failed for 'https://github.com/sharfuddin1986/assignment1.git/'
ubuntu@ip-172-31-81-127:~/git$ git push origin master
Username for 'https://github.com': sharfuddin1986
Password for 'https://sharfuddin1986@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 220 bytes | 110.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/sharfuddin1986/assignment1.git
 * [new branch]      master -> master
ubuntu@ip-172-31-81-127:~/git$
```

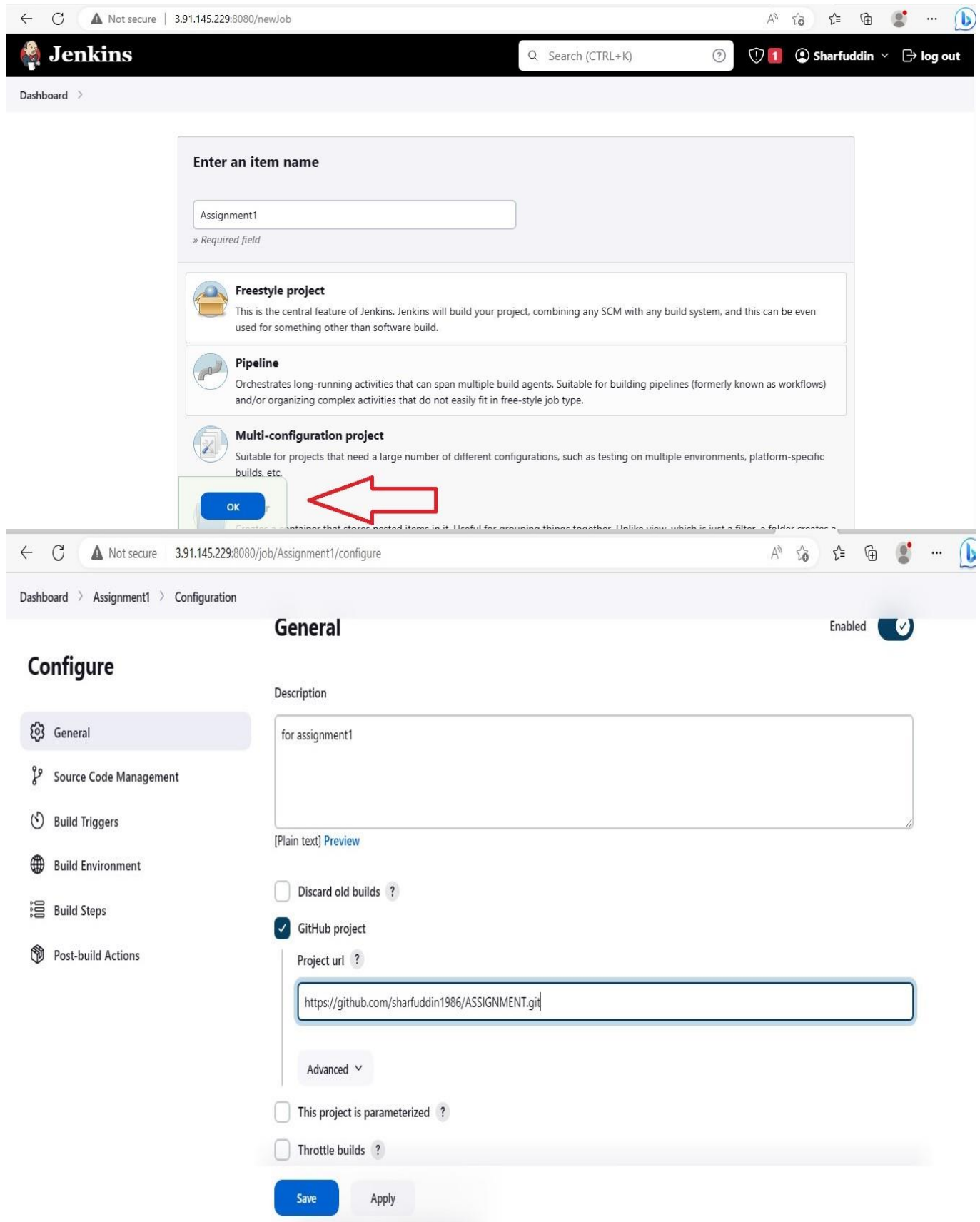


The screenshot shows a GitHub repository page for 'sharfuddin1986 / ASSIGNMENT'. The repository is public and has 0 stars, 2 watchers, and 0 forks. The 'develop' branch is selected, showing it is 1 commit ahead of 'main'. The repository has 2 branches and 0 tags. The 'develop' branch has 2 commits, with the latest commit 'e8b92d6' made 9 minutes ago. The 'main' branch has 1 commit, made 14 minutes ago. The repository is currently empty, with a message encouraging the user to add a README. The right sidebar shows the 'About' section with no description, and the 'Releases' and 'Packages' sections with no published items.

3) Create a job and pull the code from Github account.



The screenshot shows the Jenkins dashboard. The top navigation bar includes the Jenkins logo, a search bar, and a user profile for 'Sharfuddin' with a 'log out' button. The left sidebar contains a 'Dashboard' link and a list of menu items: 'New Item' (highlighted with a red box), 'People', 'Build History', 'Project Relationship', 'Check File Fingerprint', 'Manage Jenkins', and 'My Views'. The main content area displays a 'Welcome to Jenkins!' message, stating that this page is where Jenkins jobs will be displayed and providing instructions on how to get started. Below the welcome message, there is a section titled 'Start building your software project' with a 'Create a job' button. The bottom of the dashboard shows a 'Build Queue' section with no builds in the queue and a 'Build Executor Status' section with one built-in node.



The screenshot shows the Jenkins web interface. At the top, the Jenkins logo and a search bar are visible. The user 'Sharfuddin' is logged in. The main content area is titled 'Enter an item name' and shows a text input field with 'Assignment1'. Below this, there are three options for creating a new item: 'Freestyle project', 'Pipeline', and 'Multi-configuration project'. A red arrow points to the 'Multi-configuration project' option. The 'OK' button is also visible. Below the main content area, the breadcrumb trail shows 'Dashboard > Assignment1 > Configuration'. The 'General' tab is selected, and the 'Enabled' checkbox is checked. The 'Configure' section on the left lists various settings: General, Source Code Management, Build Triggers, Build Environment, Build Steps, and Post-build Actions. The 'Description' field contains 'for assignment1'. The 'Discard old builds' checkbox is unchecked. The 'GitHub project' checkbox is checked. The 'Project url' field contains 'https://github.com/sharfuddin1986/ASSIGNMENT.git'. The 'Advanced' section is expanded, showing 'This project is parameterized' and 'Throttle builds' checkboxes, both of which are unchecked. The 'Save' and 'Apply' buttons are at the bottom.

Enter an item name

Assignment1

» Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

OK

Dashboard > Assignment1 > Configuration

General

Enabled

Configure

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

Description

for assignment1

[Plain text] Preview

☐ Discard old builds ?

☒ GitHub project

Project url ?

https://github.com/sharfuddin1986/ASSIGNMENT.git

Advanced ▾

☐ This project is parameterized ?

☐ Throttle builds ?

Save Apply

← ↻ ⚠ Not secure | 3.91.145.229:8080/job/Assignment1/configure

Dashboard > Assignment1 > Configuration

Configure

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

- none -

Add

Advanced

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/develop

Add Branch

Repository browser ?

(Auto)

Save

Apply

Configure

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

Build Triggers

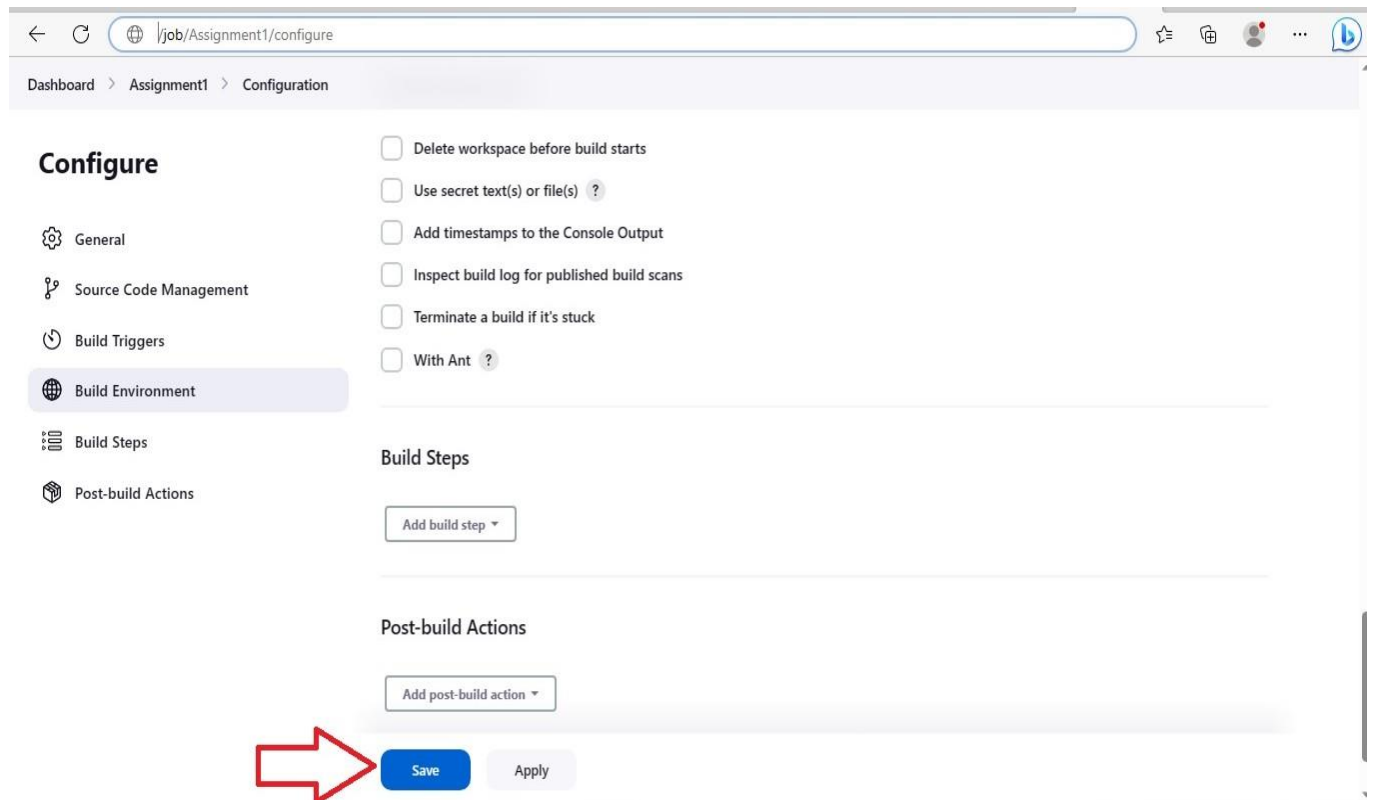
- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☒ GitHub hook trigger for GITScm polling ?
- ☐ Poll SCM ?

Build Environment

- ☐ Delete workspace before build starts
- ☐ Use secret text(s) or file(s) ?
- ☐ Add timestamps to the Console Output
- ☐ Inspect build log for published build scans
- ☐ Terminate a build if it's stuck

Save

Apply



Dashboard > Assignment1 > Configuration

Configure

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

- ☐ Delete workspace before build starts
- ☐ Use secret text(s) or file(s) ?
- ☐ Add timestamps to the Console Output
- ☐ Inspect build log for published build scans
- ☐ Terminate a build if it's stuck
- ☐ With Ant ?

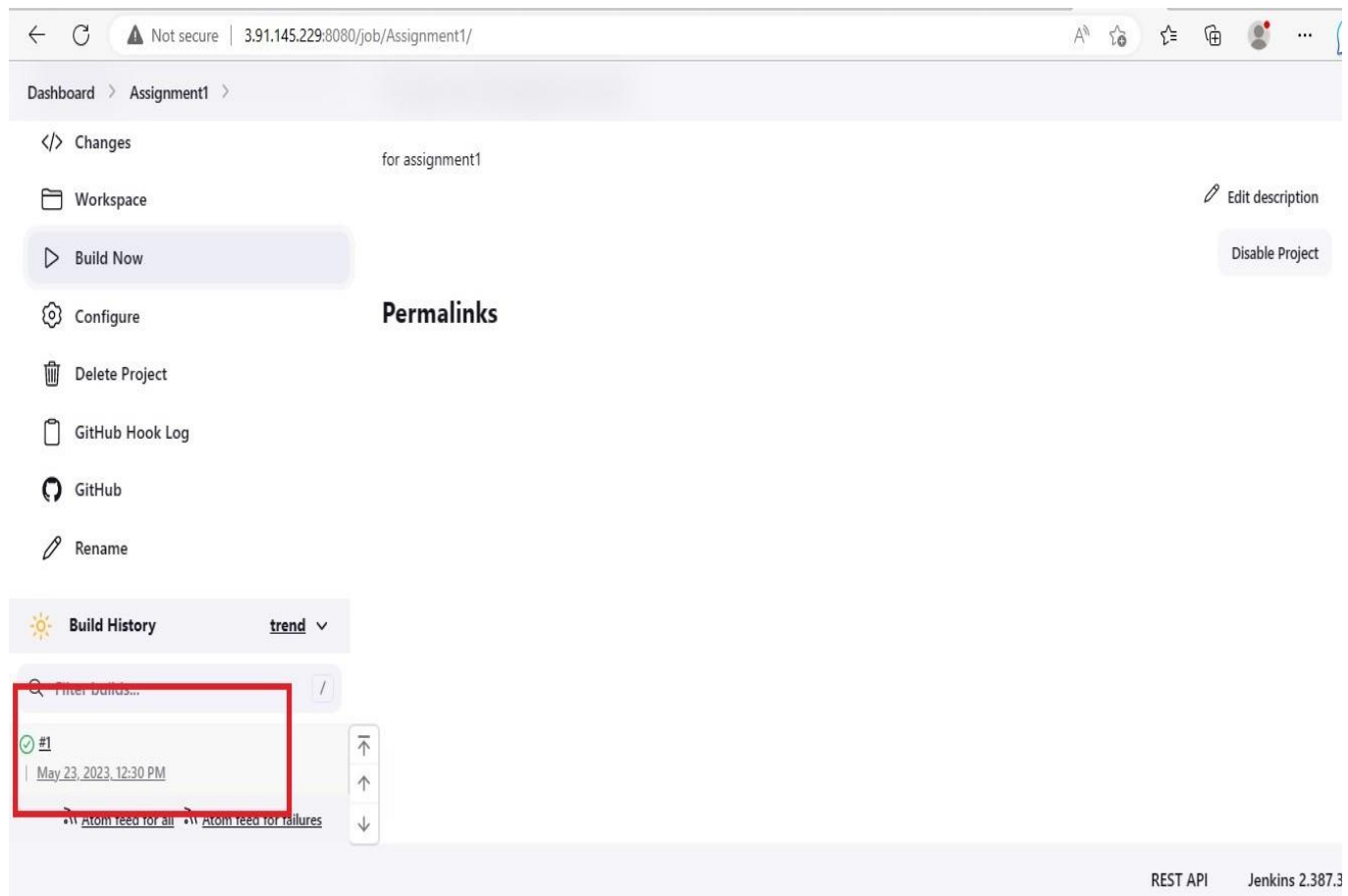
Build Steps

Add build step ▾

Post-build Actions

Add post-build action ▾

Save Apply



Dashboard > Assignment1 >

</> Changes for assignment1

Workspace Edit description

Build Now Disable Project

Configure

Delete Project

GitHub Hook Log

GitHub

Rename

Permalinks

Build History trend ▾

Filter builds...

#1 May 23, 2023, 12:30 PM

Atom feed for all Atom feed for failures

REST API Jenkins 2.387.3

https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-01250c87f2cfabf76...

Services Search [Alt+S]

VPC EC2 RDS IAM

```
ubuntu@ip-172-31-82-178:~/jenkins$ ls -al
total 1356
drwx----- 4 ubuntu ubuntu 4096 May 23 12:30 .
drwxr-xr-x 6 ubuntu ubuntu 4096 May 23 12:32 ..
drwxrwxr-x 4 ubuntu ubuntu 4096 May 23 11:39 remoting
-rw-rw-r-- 1 ubuntu ubuntu 1370647 May 23 11:39 remoting.jar
drwxrwxr-x 3 ubuntu ubuntu 4096 May 23 12:30 workspace
ubuntu@ip-172-31-82-178:~/jenkins$
```

i-01250c87f2cfabf76 (Jenkins-Slave)

PublicIPs: 18.205.115.0 PrivateIPs: 172.31.82.178

https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-01250c87f2cfabf76...

Services Search [Alt+S]

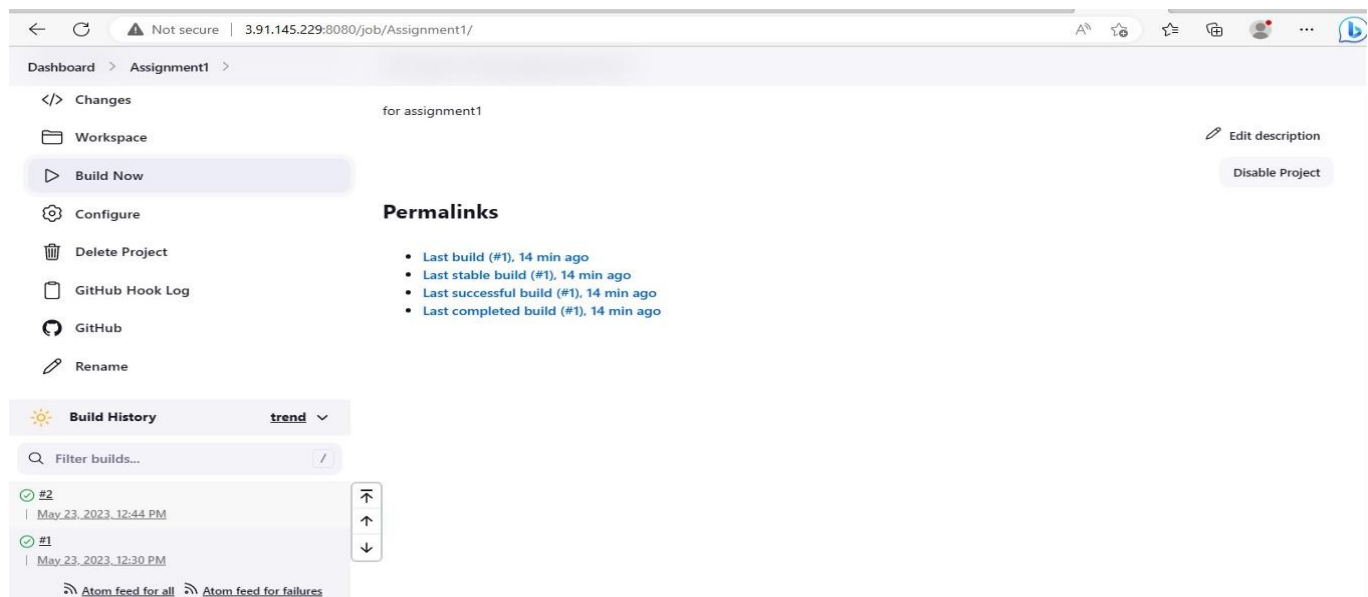
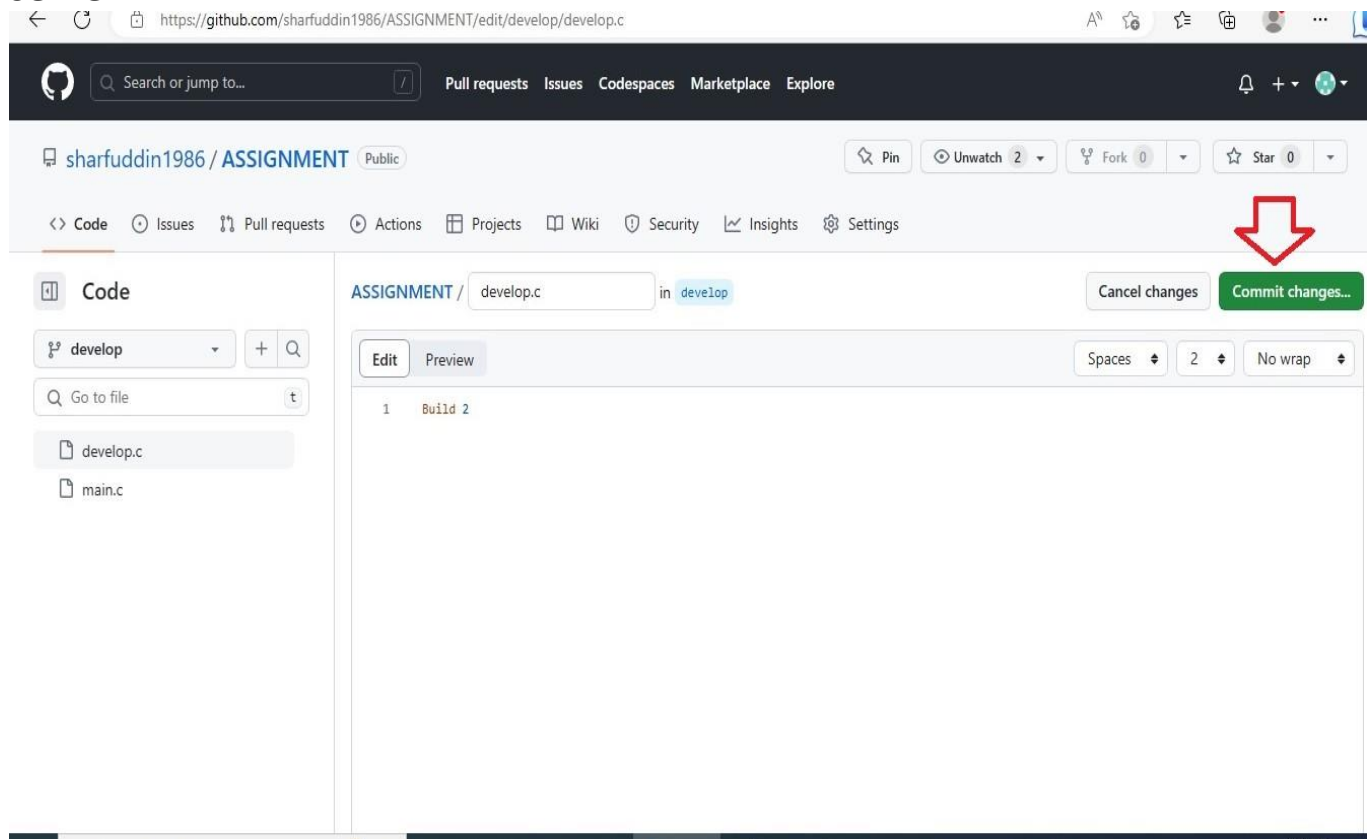
VPC EC2 RDS IAM

```
ubuntu@ip-172-31-82-178:~/jenkins$ ls -al
total 1356
drwx----- 4 ubuntu ubuntu 4096 May 23 12:30 .
drwxr-xr-x 6 ubuntu ubuntu 4096 May 23 12:32 ..
drwxrwxr-x 4 ubuntu ubuntu 4096 May 23 11:39 remoting
-rw-rw-r-- 1 ubuntu ubuntu 1370647 May 23 11:39 remoting.jar
drwxrwxr-x 3 ubuntu ubuntu 4096 May 23 12:30 workspace
ubuntu@ip-172-31-82-178:~/jenkins$ cd workspace
ubuntu@ip-172-31-82-178:~/jenkins/workspace$ ls -al
total 12
drwxrwxr-x 3 ubuntu ubuntu 4096 May 23 12:30 .
drwx----- 4 ubuntu ubuntu 4096 May 23 12:30 ..
drwxrwxr-x 3 ubuntu ubuntu 4096 May 23 12:30 Assignment1
ubuntu@ip-172-31-82-178:~/jenkins/workspace$ cd Assignment1/
ubuntu@ip-172-31-82-178:~/jenkins/workspace/Assignment1$ ls
develop.c main.c
ubuntu@ip-172-31-82-178:~/jenkins/workspace/Assignment1$
```

i-01250c87f2cfabf76 (Jenkins-Slave)

PublicIPs: 18.205.115.0 PrivateIPs: 172.31.82.178

4) Update the code in central repo after job is build automatically in Jenkins server.



All the steps completed and screenshot also attached, still if any thing requires, please email me or call me on my registered number and please share the obtained marks on my email.