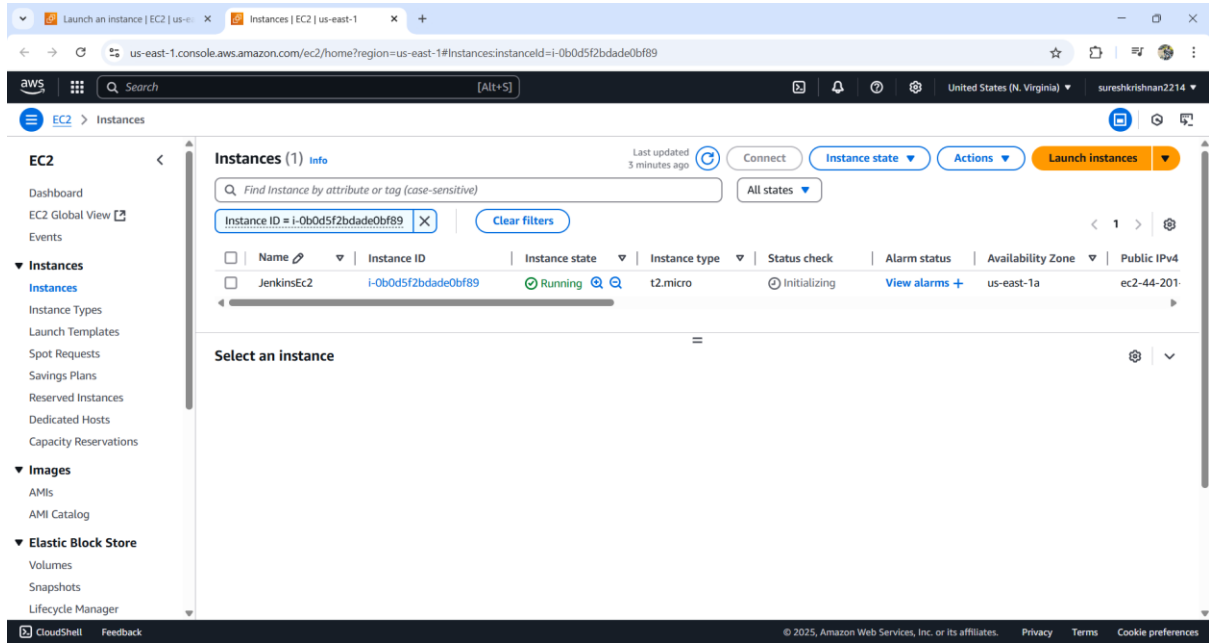


## Jenkins Task-2

### Creating EC2 Instance:



The screenshot shows the AWS Management Console for the 'us-east-1' region. The left sidebar contains navigation links for EC2, including Dashboard, Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, and Lifecycle Manager. The main content area displays the 'Instances (1)' page. A search bar at the top allows finding instances by attribute or tag. Below the search bar, a table lists the instance 'JenkinsEc2' with ID 'i-0b0d5f2bdade0bf89', state 'Running', type 't2.micro', and status 'Initializing'. The table also shows the availability zone 'us-east-1a' and public IPv4 address 'ec2-44-201-119-166.compute-1.amazonaws.com'. A 'Select an instance' dropdown is visible below the table. The bottom of the console shows the footer with copyright information and links for Privacy, Terms, and Cookie preferences.

```
ubuntu@ip-172-31-81-48: ~$ ssh ubuntu@ec2-44-201-119-166.compute-1.amazonaws.com
The authenticity of host 'ec2-44-201-119-166.compute-1.amazonaws.com (44.201.119.166)' can't be established.
ED25519 key fingerprint is SHA256:WhtFdr6p64meopBKvLIWsgY/s6alF92ymF13U0Js6X8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-44-201-119-166.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1024-aws x86_64)

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

System information as of Tue Apr 22 12:45:50 UTC 2025

System load:  0.02          Processes:    106
Usage of /:   25.0% of 6.71GB Users logged in: 0
Memory usage: 21%          IPv4 address for enx0: 172.31.81.48
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-172-31-81-48:~$
```

## Installing Java:

```
ubuntu@ip-172-31-81-48: ~$ sudo dpkg --get-selections | grep -E 'deb|amd64' | xargs dpkg --get-selections
Adding debian:TrustAsia_Global_Root_CA_G4.pem
Adding debian:Trustwave_Global_Certification_Authority.pem
Adding debian:Trustwave_Global_ECC_P256_Certification_Authority.pem
Adding debian:Trustwave_Global_ECC_P384_Certification_Authority.pem
Adding debian:TunTrust_Root_CA.pem
Adding debian:UCA_Extended_Validation_Root.pem
Adding debian:UCA_Global_G2_Root.pem
Adding debian:USERTrust_ECC_Certification_Authority.pem
Adding debian:USERTrust_RSA_Certification_Authority.pem
Adding debian:XRamp_Global_CA_Root.pem
Adding debian:certSIGN_Root_CA.pem
Adding debian:certSIGN_Root_CA_G2.pem
Adding debian:e-Szigno_Root_CA_2017.pem
Adding debian:ePKI_Root_Certification_Authority.pem
Adding debian:emSign_ECC_Root_CA_-_C3.pem
Adding debian:emSign_ECC_Root_CA_-_G3.pem
Adding debian:emSign_Root_CA_-_C1.pem
Adding debian:emSign_Root_CA_-_G1.pem
Adding debian:vTrus_ECC_Root_CA.pem
Adding debian:vTrus_Root_CA.pem
done.
Setting up openjdk-21-jre:amd64 (21.0.6+7-1-24.04.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
Processing triggers for libgdk-pixbuf-2.0-0:amd64 (2.42.10+dfsg-3ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-81-48:~$ java -version
openjdk version "21.0.6" 2025-01-21
OpenJDK Runtime Environment (build 21.0.6+7-Ubuntu-124.04.1)
OpenJDK 64-Bit Server VM (build 21.0.6+7-Ubuntu-124.04.1, mixed mode, sharing)
ubuntu@ip-172-31-81-48:~$
```

## Installing Jenkins:

```
ubuntu@ip-172-31-81-48: ~$ sudo apt-get install jenkins
Fetching 31.6 kB in 1s (40.7 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-81-48:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree... Done
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 63 not upgraded.
Need to get 95.0 MB of archives.
After this operation, 97.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 net-tools amd64 2.10-0.1ubuntu4 [204 kB]
Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.492.3 [94.8 MB]
Fetched 95.0 MB in 18s (5407 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 85332 files and directories currently installed.)
Preparing to unpack .../net-tools_2.10-0.1ubuntu4_amd64.deb ...
Unpacking net-tools (2.10-0.1ubuntu4) ...
Selecting previously unselected package jenkins.
Preparing to unpack .../jenkins_2.492.3_all.deb ...
Unpacking jenkins (2.492.3) ...
Setting up net-tools (2.10-0.1ubuntu4) ...
Setting up jenkins (2.492.3) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

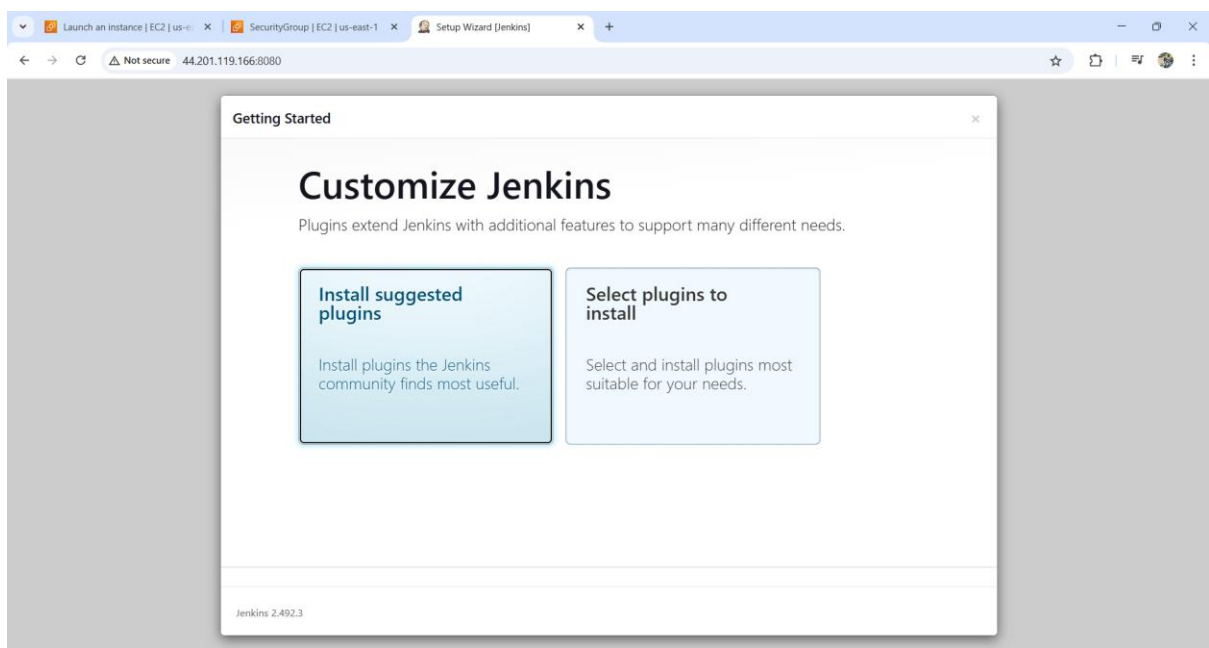
No containers need to be restarted.

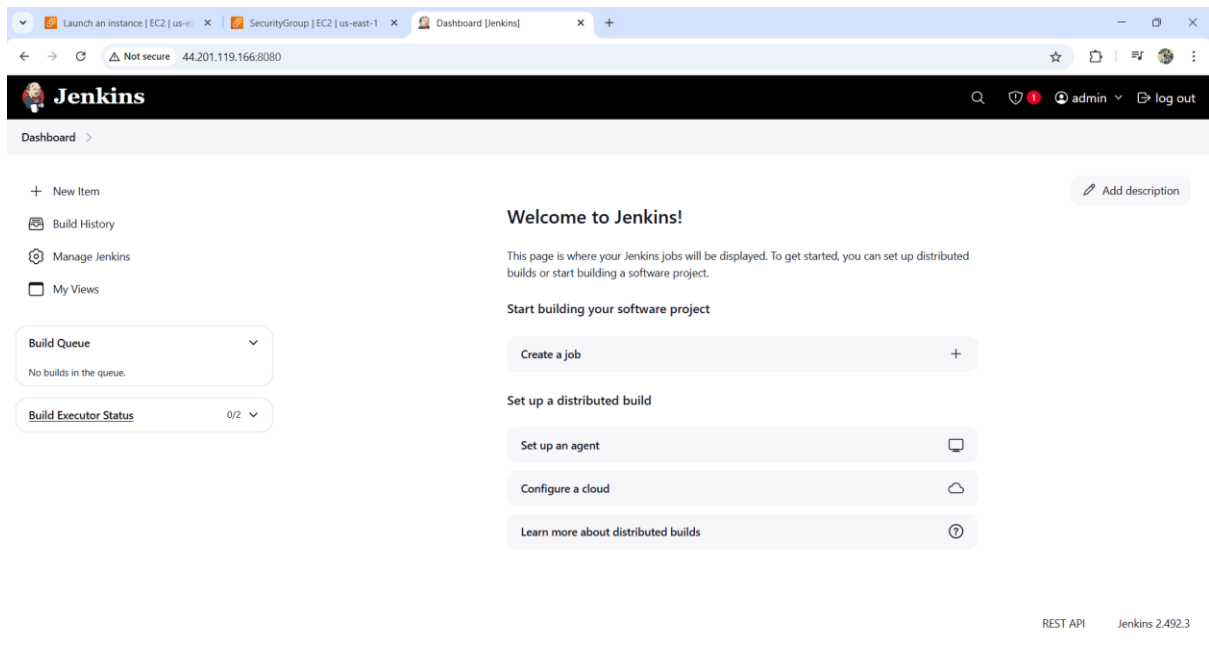
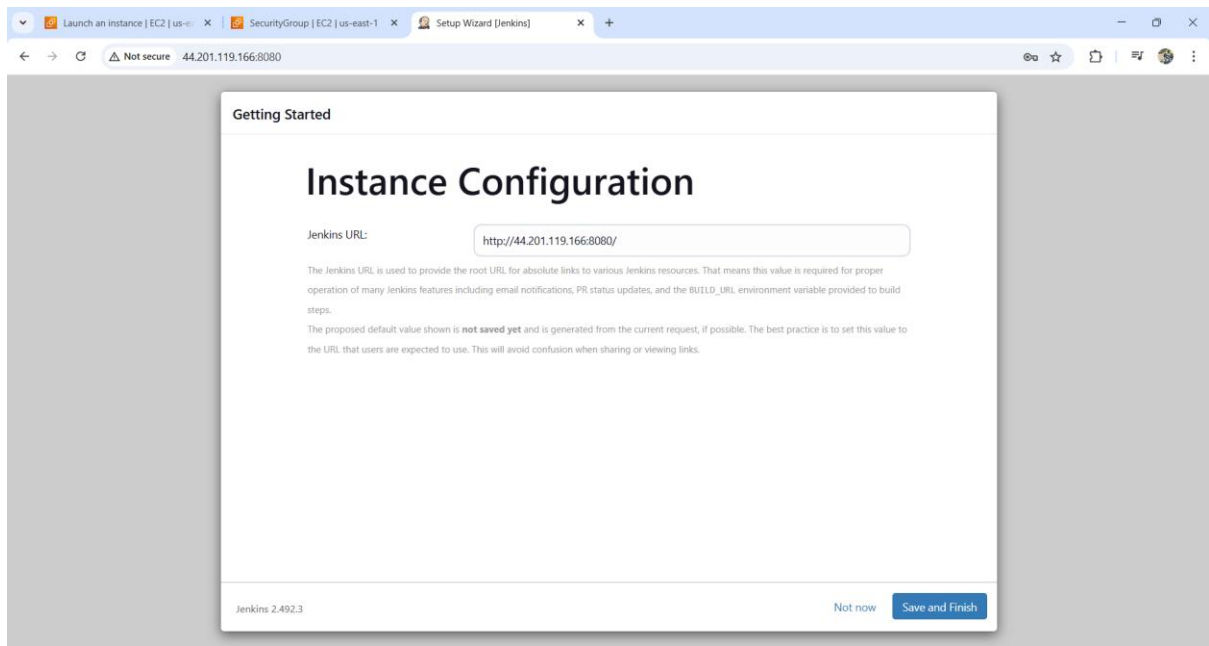
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-81-48:~$
```

## Starting Jenkins:

```
ubuntu@ip-172-31-81-48: ~$ sudo systemctl start jenkins
ubuntu@ip-172-31-81-48:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
ubuntu@ip-172-31-81-48:~$
```



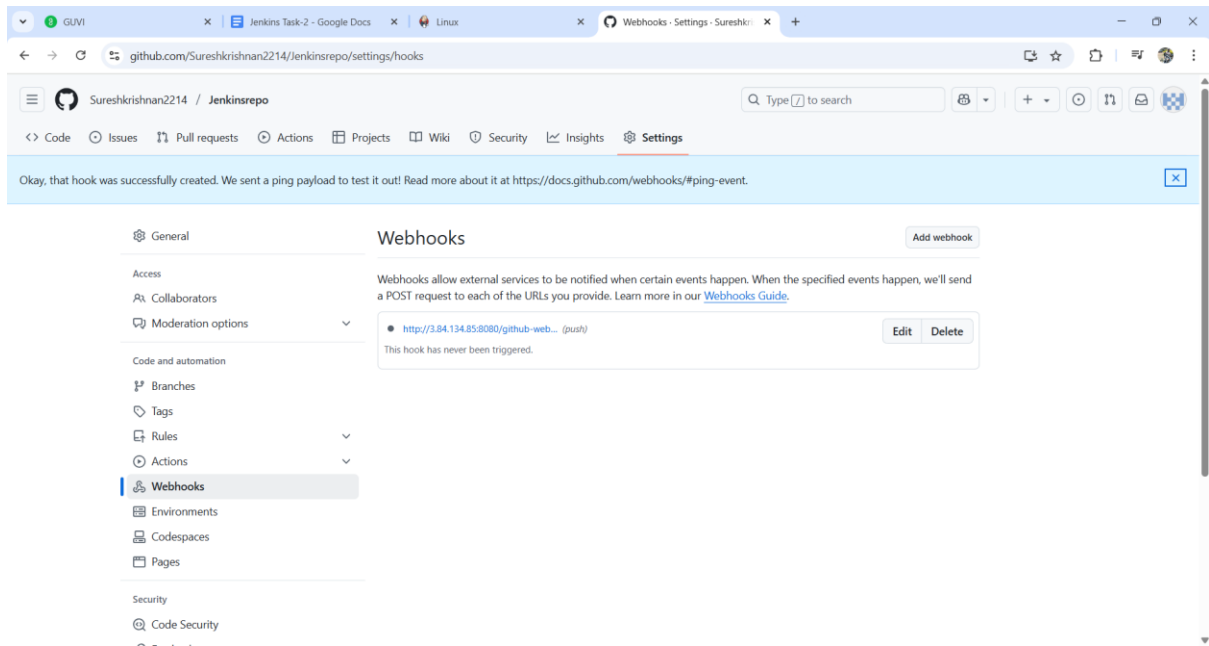


## Creating a Git Repo

```
ubuntu@ip-172-31-81-48: ~$ echo "Hello from Jenkins!" > hello.txt
ubuntu@ip-172-31-81-48:~$
```

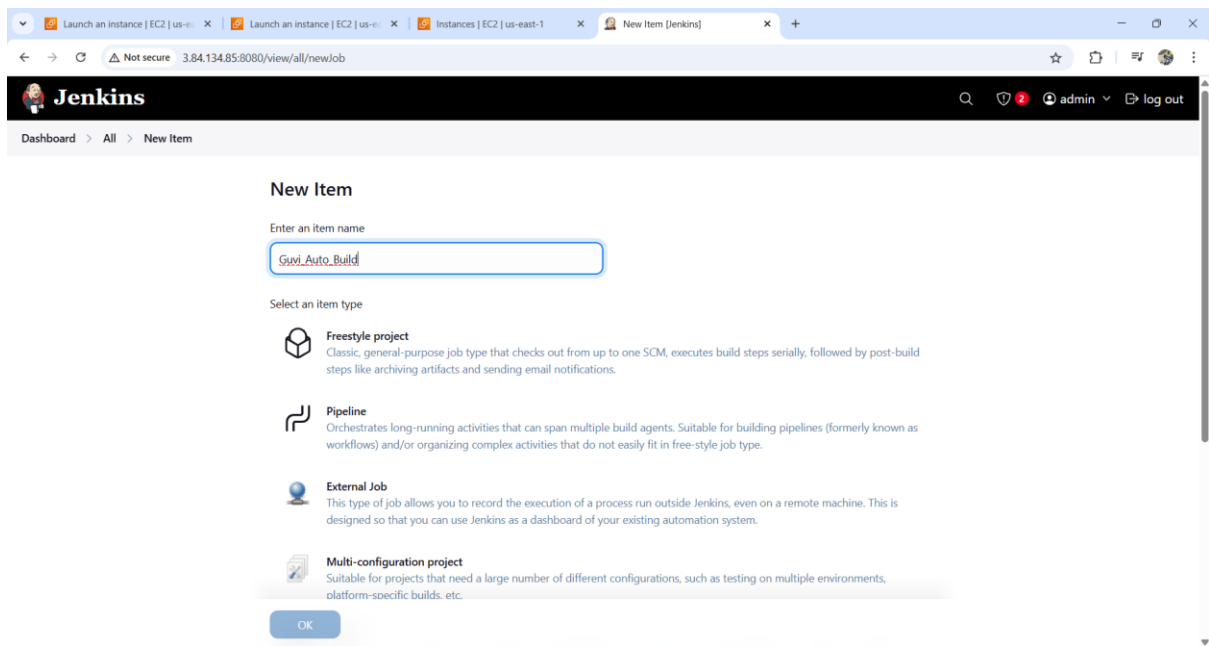
```
.. ...+.+.
+----[SHA256]-----+
ubuntu@ip-172-31-85-10:~$ eval "$(ssh-agent -s)"
Agent pid 4602
ubuntu@ip-172-31-85-10:~$ ssh-add ~/.ssh/id_ed25519
Identity added: /home/ubuntu/.ssh/id_ed25519 (sureshkrishnan2214@gmail.com)
ubuntu@ip-172-31-85-10:~$ cat ~/.ssh/id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZD11NTE5AAAAIClt5e8bi/ndAq7LC6NWiorFAav0mEH+SdKRp766iMy sureshkrishnan2214@gmail.com
ubuntu@ip-172-31-85-10:~$ ssh -T git@github.com
Hi Sureshkrishnan2214! You've successfully authenticated, but GitHub does not provide shell access.
ubuntu@ip-172-31-85-10:~$ git push -u origin main
To github.com:Sureshkrishnan2214/JenkinsRepo.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'github.com:Sureshkrishnan2214/JenkinsRepo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
ubuntu@ip-172-31-85-10:~$ git pull origin main --rebase
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 868 bytes | 868.00 KiB/s, done.
From github.com:Sureshkrishnan2214/JenkinsRepo
 * branch            main      -> FETCH_HEAD
 * [new branch]      main      -> origin/main
Successfully rebased and updated refs/heads/main.
ubuntu@ip-172-31-85-10:~$ git push -u origin main
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Compressing objects: 100% (6/6), done.
Writing objects: 100% (10/10), 3.21 KiB | 3.21 MiB/s, done.
Total 10 (delta 0), reused 0 (delta 0), pack-reused 0
remote: This repository moved. Please use the new location:
remote:   git@github.com:Sureshkrishnan2214/Jenkinsrepo.git
To github.com:Sureshkrishnan2214/JenkinsRepo.git
 8192dc4..aae31bc main -> main
branch 'main' set up to track 'origin/main'.
ubuntu@ip-172-31-85-10:~$
```

## Configuring Webhook in Github:



The screenshot shows the GitHub repository settings for 'Jenkinsrepo'. The 'Webhooks' tab is selected in the left sidebar. A notification at the top states: 'Okay, that hook was successfully created. We sent a ping payload to test it out! Read more about it at <https://docs.github.com/webhooks/#ping-event>.' The 'Webhooks' section on the right shows a single webhook with the URL 'http://3.84.134.85:8080/github-webhook' and the event 'push'. The status indicates 'This hook has never been triggered.' There are 'Edit' and 'Delete' buttons for this webhook.

## Creating Jenkins Job:



The screenshot shows the Jenkins 'New Item' page. The 'Enter an item name' field contains 'Guvu.Auto.Build'. Under 'Select an item type', 'Freestyle project' is selected. The other options are 'Pipeline', 'External Job', and 'Multi-configuration project'. The 'Freestyle project' description states: 'Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.'

Launch an instance | EC2 | us-east-1 | Launch an instance | EC2 | us-east-1 | Instances | EC2 | us-east-1 | Guv\_Auto\_Build Config [Jenkins]

← → ↻ Not secure 3.84.134.85:8080/job/Guv\_Auto\_Build/configure

Dashboard > Guv\_Auto\_Build > Configuration

### Configure

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

**Execute shell** ?

Command

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

```
cat hello.txt
```

Advanced ▾

Add build step ▾

**Post-build Actions**

Define what happens after a build completes, like sending notifications, archiving artifacts, or triggering other jobs.

Add post-build action ▾

Save Apply

## Configure Email Notification

Launch an instance | EC2 | us-east-1 | Launch an instance | EC2 | us-east-1 | Instances | EC2 | us-east-1 | Sureshkrishnan | System [Jenkins] | Email Extension | Inbox (109) - su | Security Check |

← → ↻ Not secure 3.84.134.85:8080/manage/configure

Dashboard > Manage Jenkins > System

Excluded Recipients ?

Default Subject ?

\$PROJECT\_NAME - Build # \$BUILD\_NUMBER - \$BUILD\_STATUS!

Maximum Attachment Size ?

-1

Default Content ?

```
Build # $BUILD_NUMBER - $BUILD_STATUS
Project: $PROJECT_NAME
URL: $BUILD_URL
```

Default Pre-send Script ?

Save Apply

```
ubuntu@ip-172-31-85-10: ~$ echo "Change trigger" >> hello.txt
ubuntu@ip-172-31-85-10:~$ git att .
git: 'att' is not a git command. See 'git --help'.

The most similar command is
tag
ubuntu@ip-172-31-85-10:~$ git add .
ubuntu@ip-172-31-85-10:~$ git commit -m "trigger test"
[main eelf174] trigger test
Committer: Ubuntu <ubuntu@ip-172-31-85-10.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, 1 insertion(+)
ubuntu@ip-172-31-85-10:~$
```

Launch an instar

Launch an instar

Connect to insta

Sureshkrishnan

Dashboard (Jeni

Email Extension

Inbox (109) - su

Security Check

← → ↻ ⚠ Not secure 3.84.134.85:8080

Jenkins

admin

log out

Dashboard

+ New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

0/2

All

S	W	Name	Last Success	Last Failure	Last Duration
⊗	☁	Guvv_Auto_Build	N/A	2 min 16 sec #2	26 ms

Icons: S M L

Add description

REST API

Jenkins 2.492.3



