Jenkins Task

Task Description:

- Create a simple script file and push it to repo. Create a project in Jenkins connected to your GitHub repository. When a commit is made to your repo, automatically build must get triggered from Jenkins and the output must be shared to me via email.

Tech Stack Used:

- GCP
- GitHub
- Jenkins
- G-mail

Steps :

Jenkins Server Creation:

- Go to the GCP platform (or AWS platform) and create a server with below specifications.

2vCPU with 8 GB Memory
20 GB Storage
Allow http and https in security
Allow port 8080 (for jenkins)
Linux OS

Details | Observability | OS Info | Screenshot

Basic information

Name	jenkins
Instance Id	5794870780496431583
Description	None
Type	Instance
Status	Running
Creation time	Jul 6, 2025, 6:46:33 PM UTC+05:30
Location	us-central1-c
Instance template	None
In use by	None
Physical host	None
Maintenance status	–
Reservations	Automatically choose
Labels	None
Tags	–
Deletion protection	Disabled
Confidential VM service	Disabled
Preserved state size	0 GB

Machine configuration

Machine type	e2-standard-2 (2 vCPUs, 8 GB Memory)
CPU platform	Intel Broadwell
Minimum CPU platform	None
Architecture	x86/64
vCPUs to core ratio	–
Custom visible cores	–
All-core turbo-only mode	–

VM instances

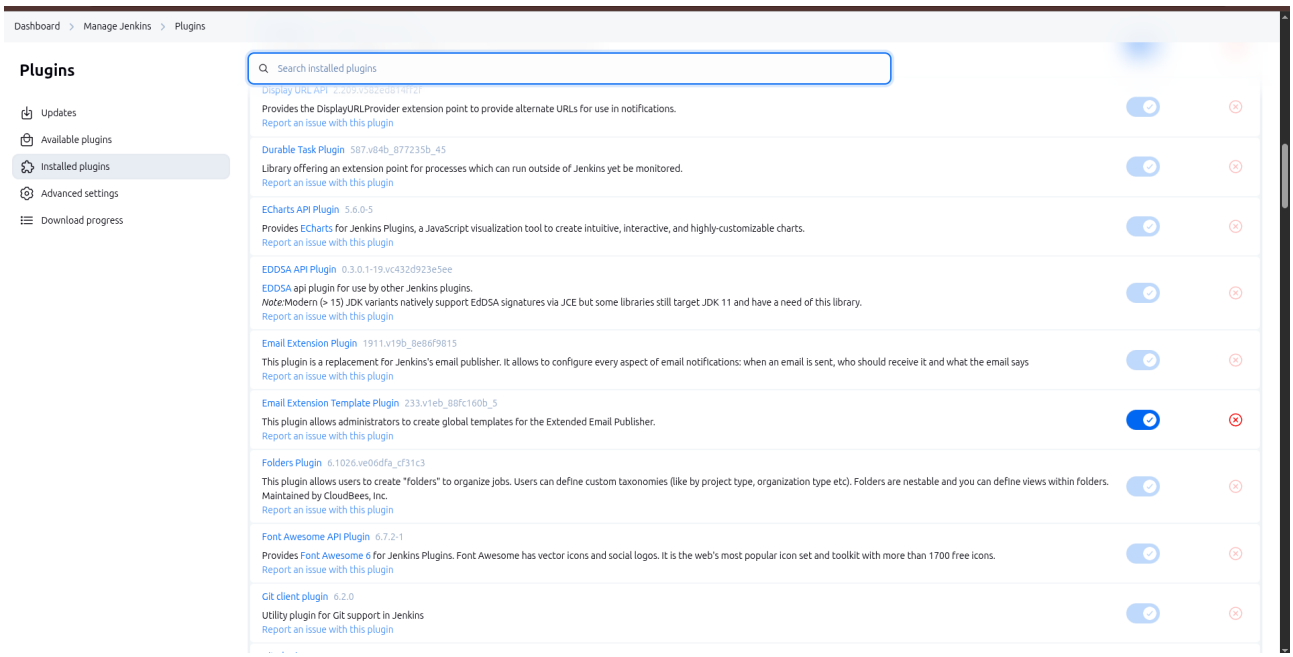
Filter Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	jenkins	us-central1-c			10.128.0.5 (nic0)	35.226.209.37 (nic0)	SSH

Jenkins Installation:
- Log into the sever and run the below bash script to install the Jenkins in automate way.

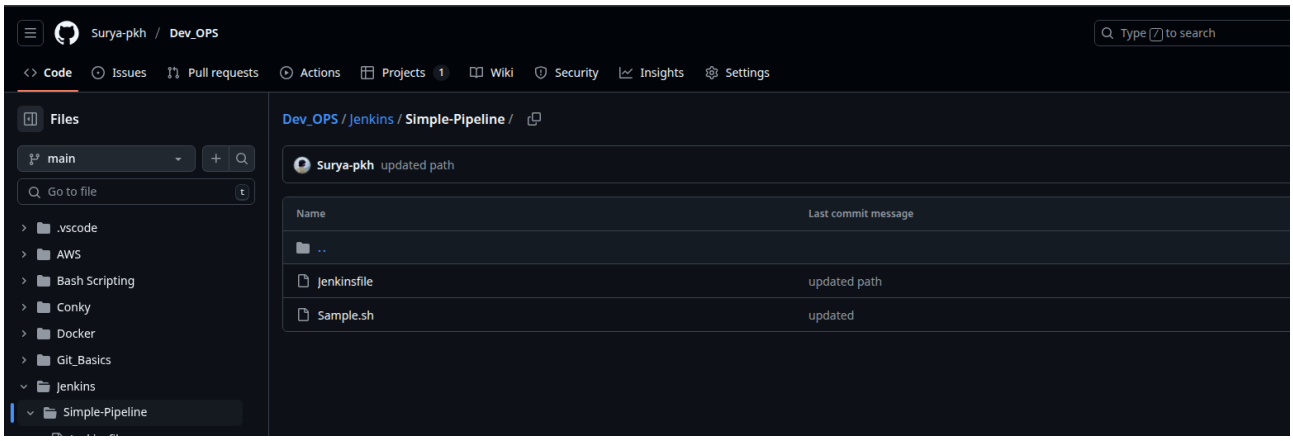
```
#!/bin/bash
# USE UBUNTU20.04 - INSTANCE: 2GB RAM + 2VCPU MIN - WILL ONLY WORK
sudo apt update -y
sudo apt install openjdk-17-jdk -y
sudo apt update -y
sudo apt install openjdk-8-jdk -y
sudo apt install maven -y
curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo
tee \
/usr/share/keyrings/jenkins-keyring.asc > /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 -y
sudo apt-get install jenkins -y
###
```

-Post installation try to connect the jenkin using the http://<IP of the srevrer>:8080/
- Then try to ste up the initial password and ID.
- Then follow the wizard to proceed set up the Jenkins.
- Once installation completed try to install the required plug-ins for Jenkins:
1. Build Timestamp
2. Pipeline Utility Steps
3. Email Notification template



GitHub Repo Setup:

- In Github create a repo.
- Add a SH file and a Jnekin file.



Sample.sh:

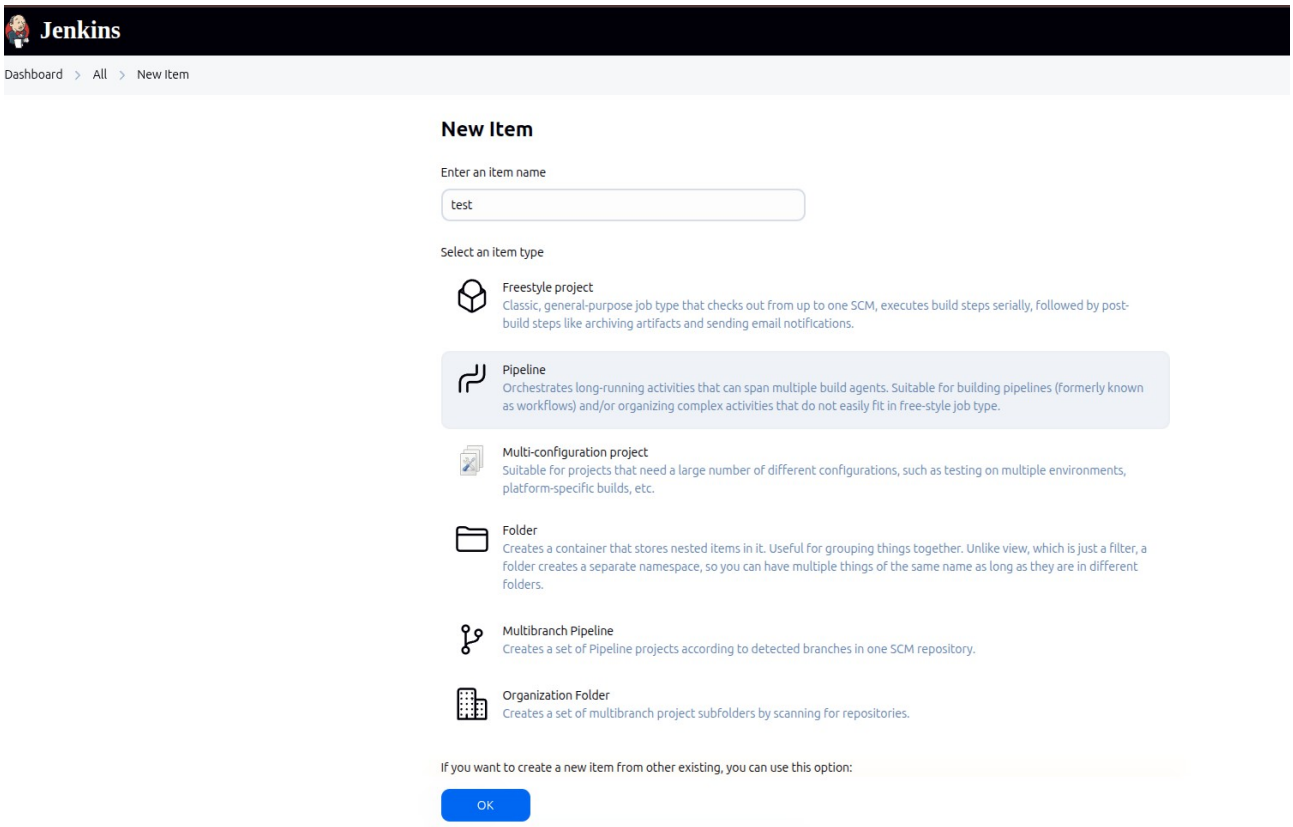
```
#!/bin/bash
echo "Hello from Jenkins Pipeline!" > output.txt
echo "Another Jenkins Build Test2"
```

Jenkinfile:

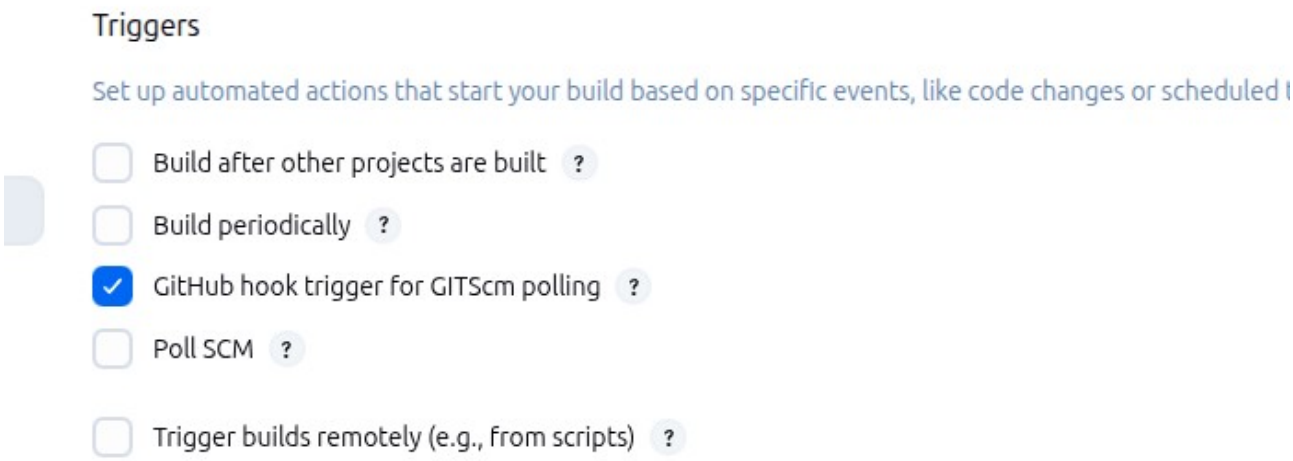
```
pipeline {
agent any
environment {
RECIPIENT = 'gcpsurya27@gmail.com'
}
stages {
stage('Checkout') {
steps {
checkout scm
}
}
stage('Run Script') {
steps {
sh 'bash Jenkins/Simple-Pipeline/Sample.sh'
}
}
}
post {
always {
mail(
to: 'gcpsurya27@gmail.com',
```

```
subject: "Pipeline Notification",
body: "Pipeline completed with status: ${currentBuild.currentResult}"
)
}
}
}
```

Creating Pipeline in Jenkins :
- Open jenkins and create **new item**.
- Give name and choose **Pipeline** option and click **ok** .

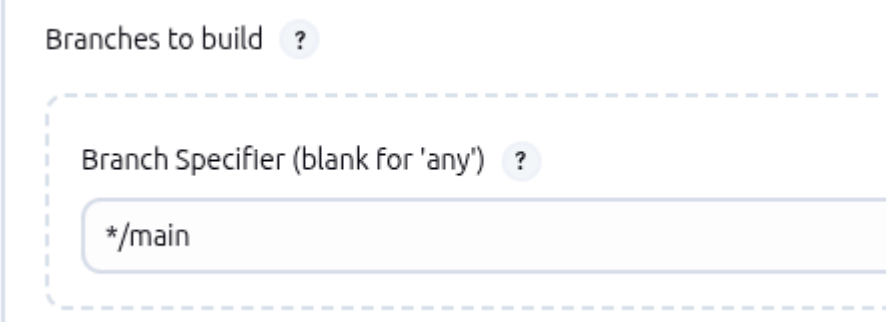


- in the Configuration choose the **Trigger –** Github hook

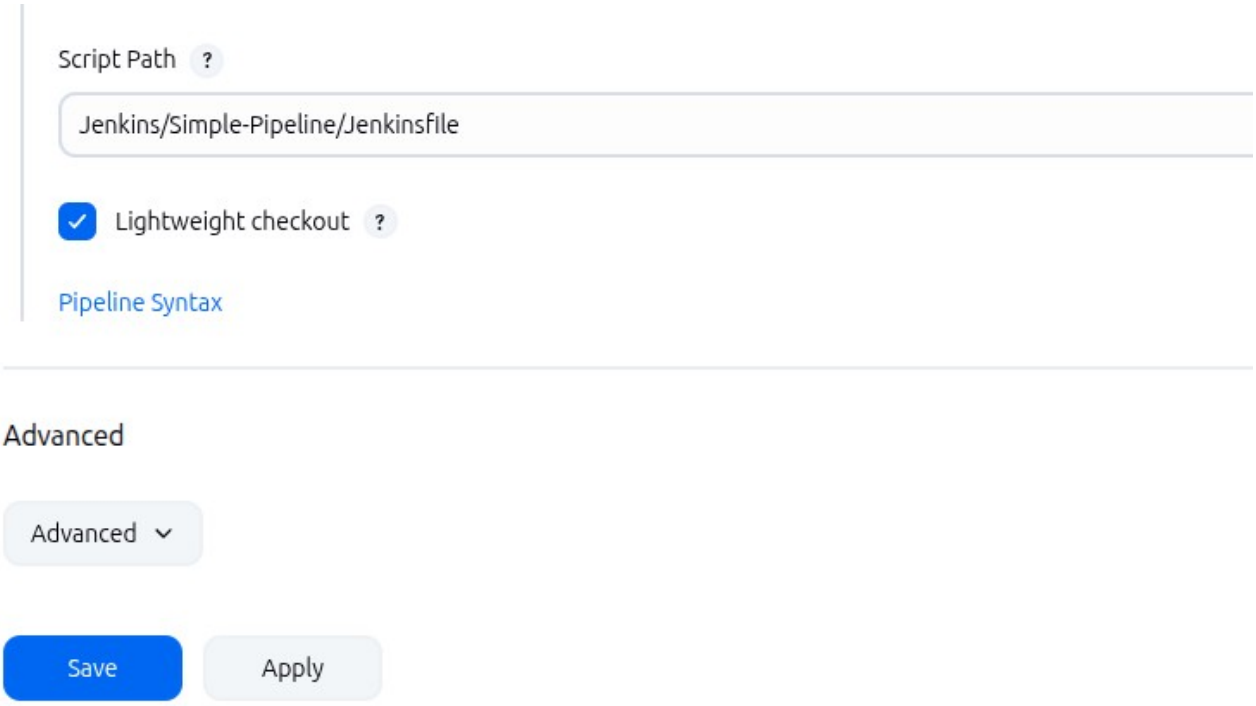


- In the pipeline groovy content choose the SCM as **Git** and add the **Repo URL** , also add the Git Credentials.

- Change the branches from Master to Main as below



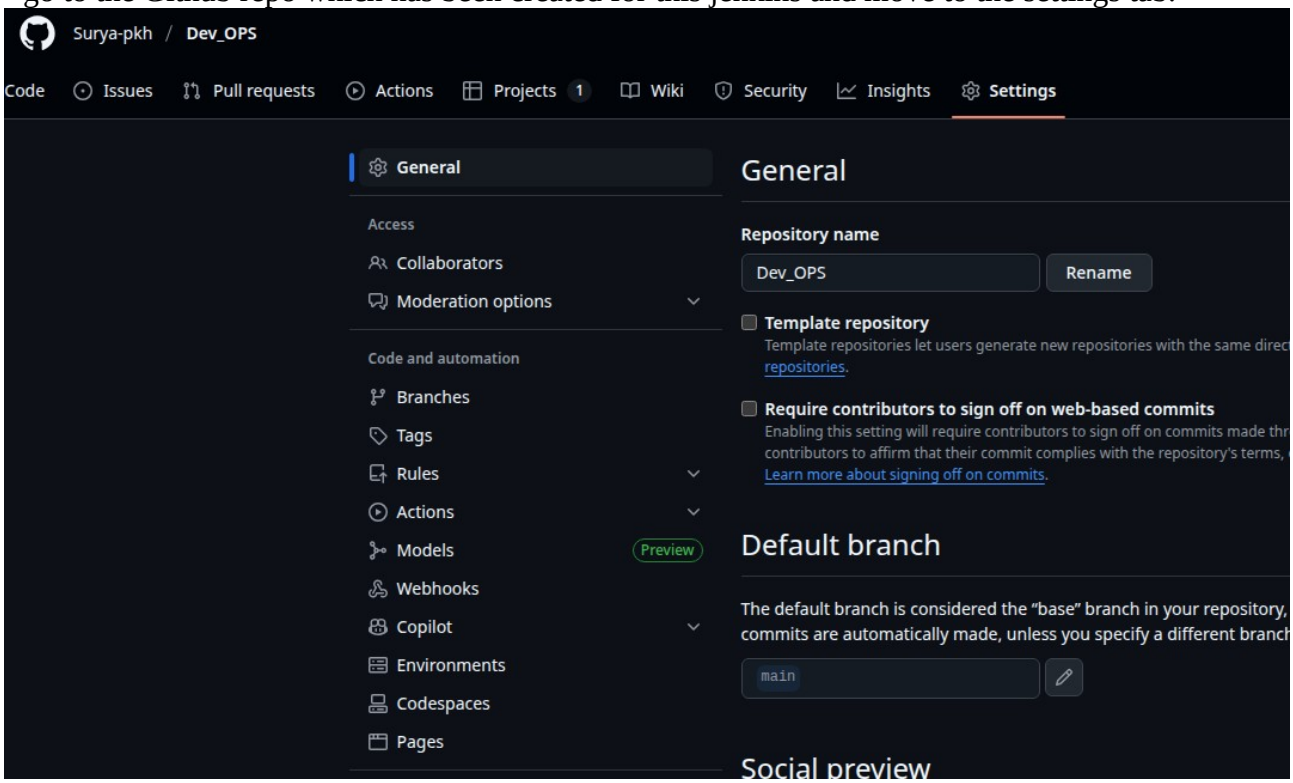
- Then at last copy the **Jenkinfile** (groovy file) path and paste it the script path



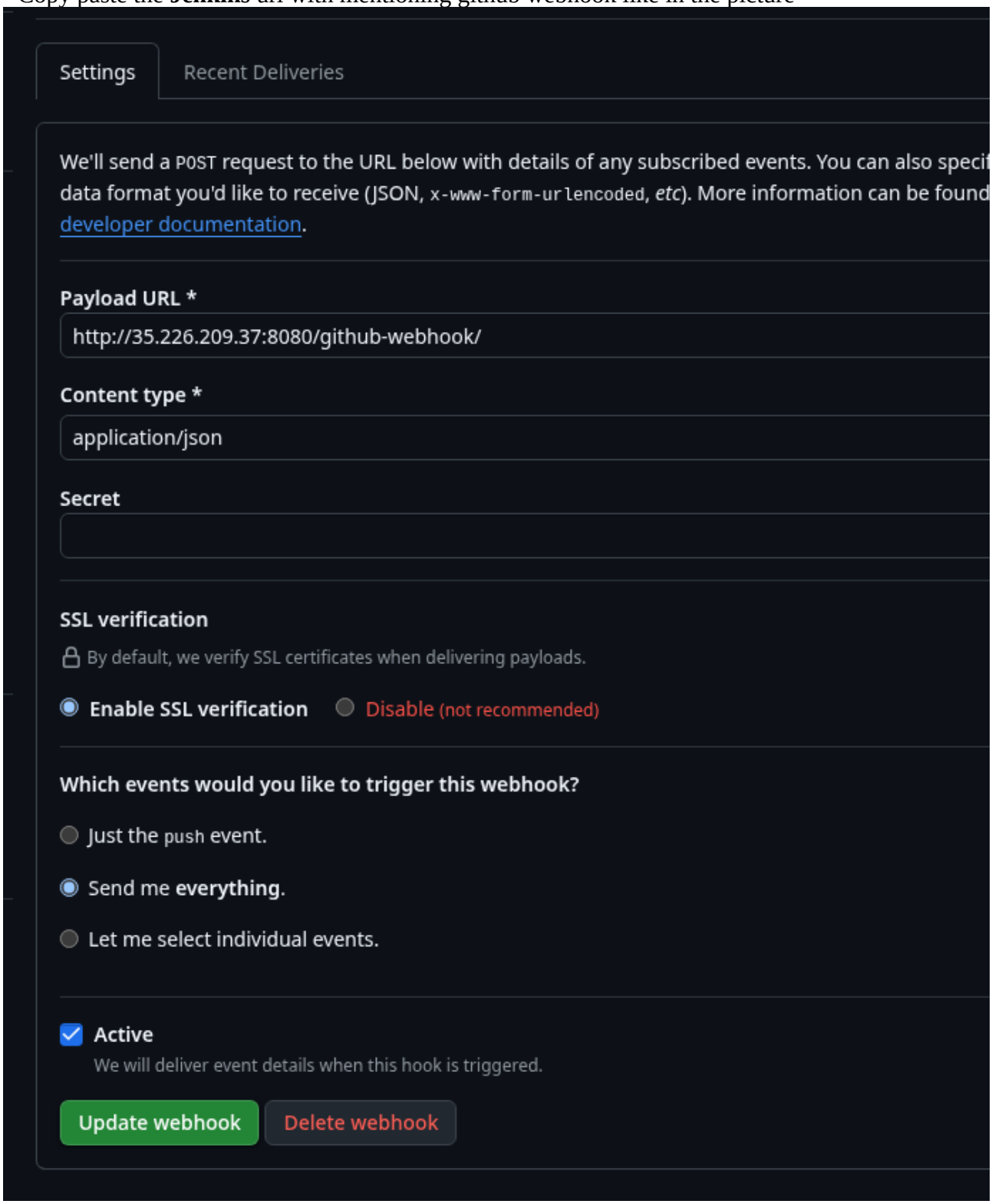
- Then **Save** the configuration.

GitHub WebHook Configuration:

- go to the Github repo which has been created for this jenkins and move to the settings tab.



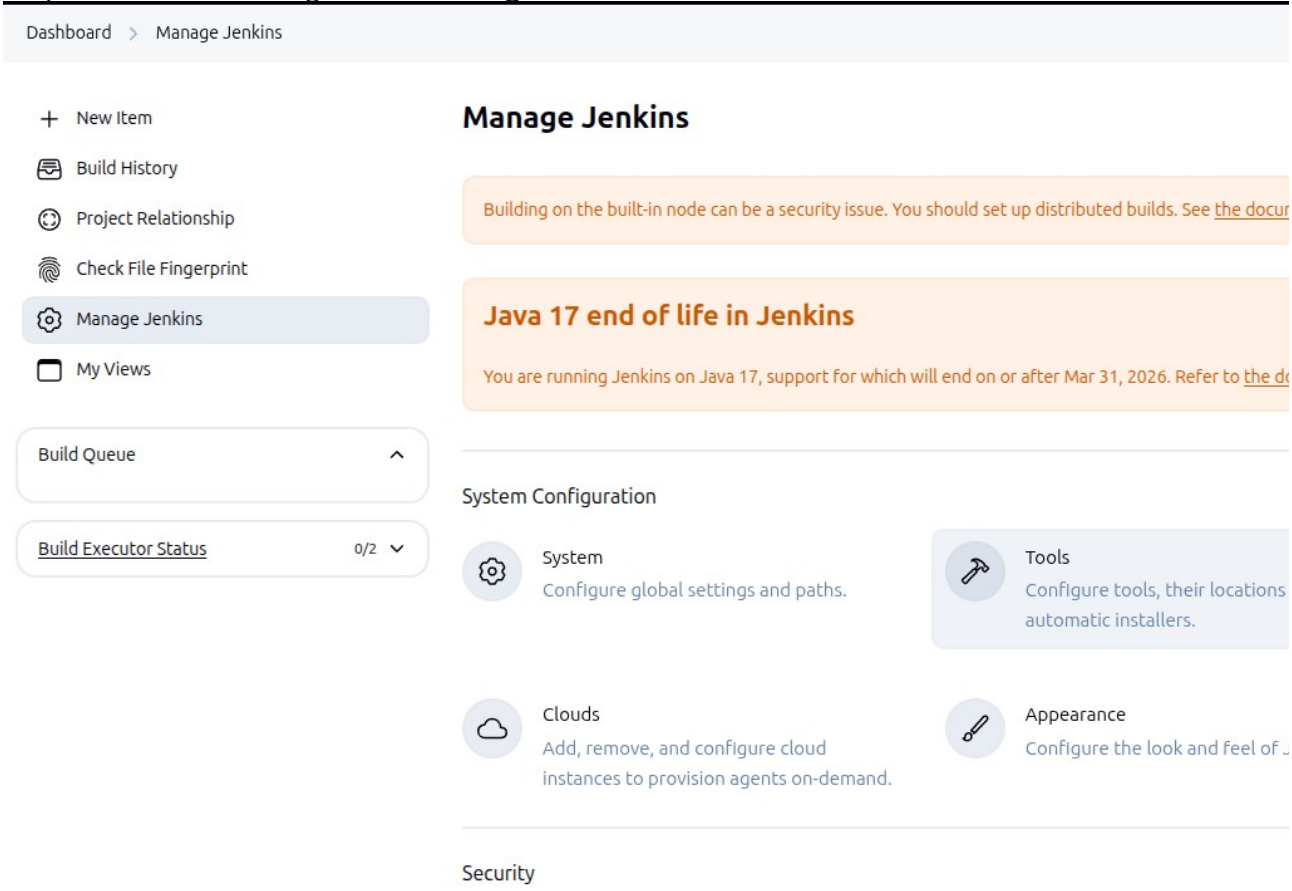
- Click on the **Webhooks**.
- Copy paste the **Jenkins** url with mentioning github webhook like in the picture



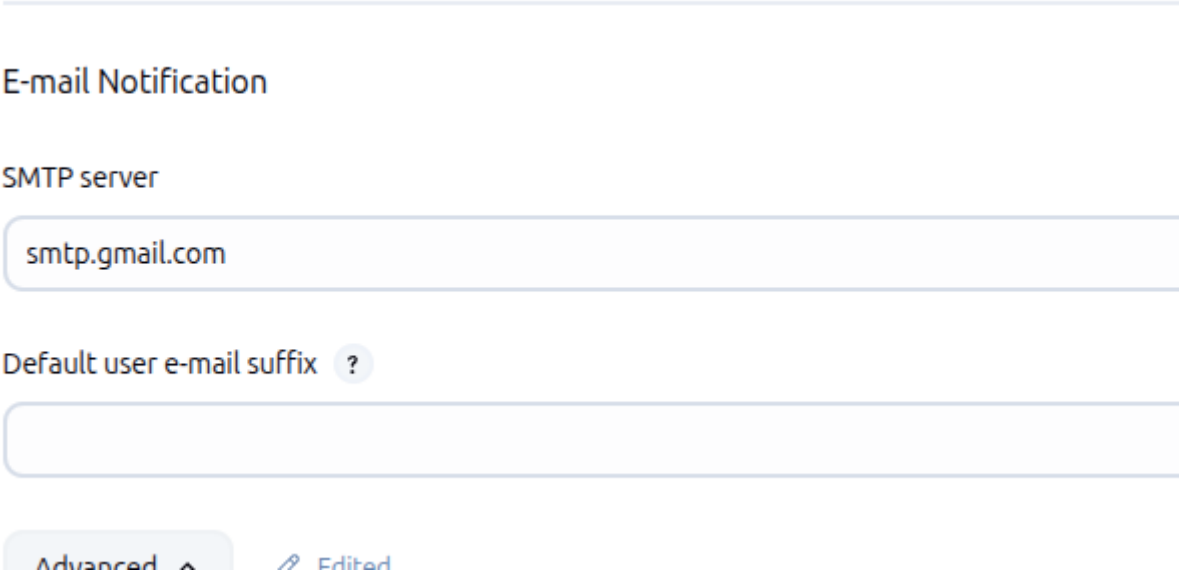
- Change the **Content Type** to json. And save it.

Email Notification Configuration on Jenkins:

- Open the Jenkins and go to the **Manage Jenkins.**



- Open the **System**
- go the **Email Notification** Setting

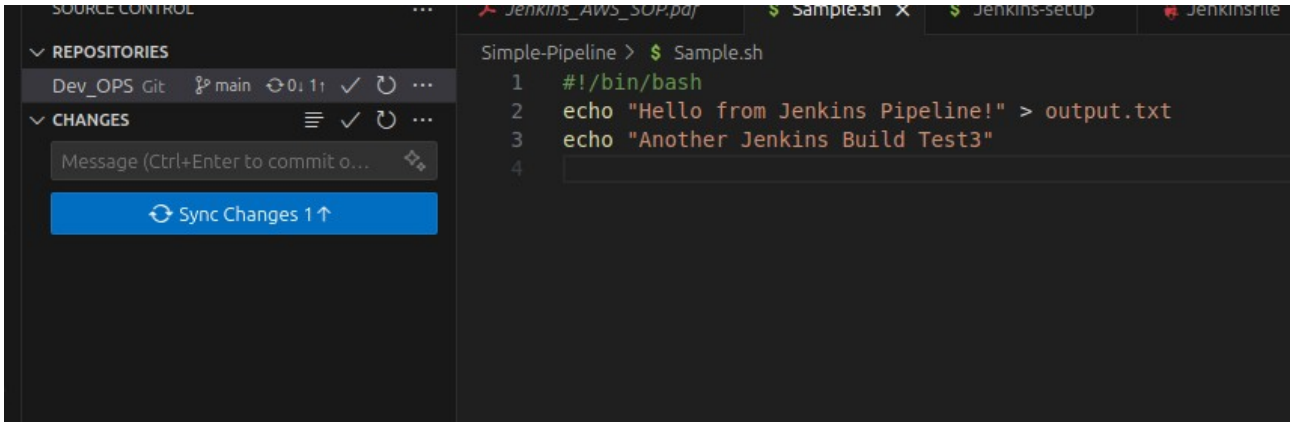


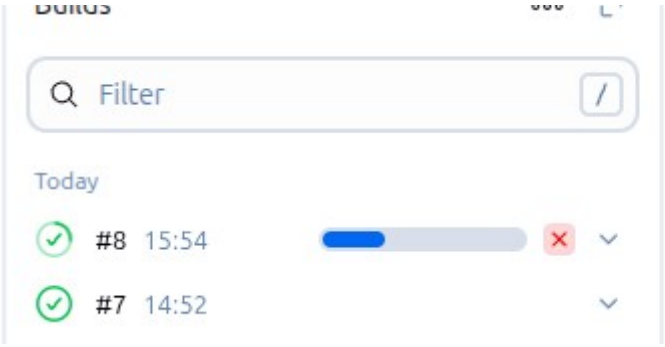
SMTP server: `smtp.gmail.com`

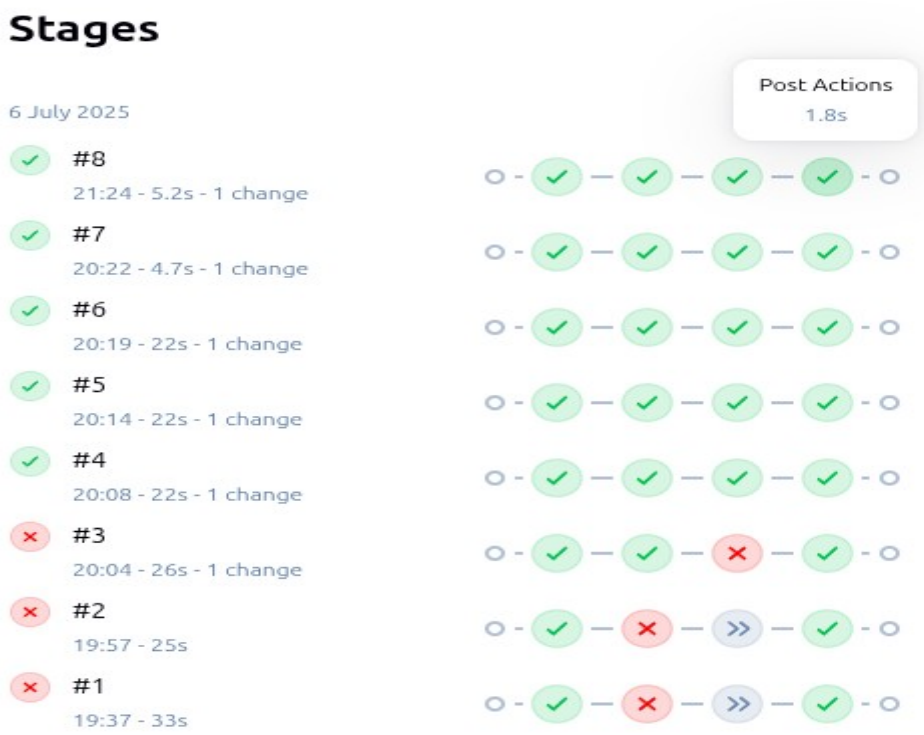
- Use SMTP Authentication: ✓

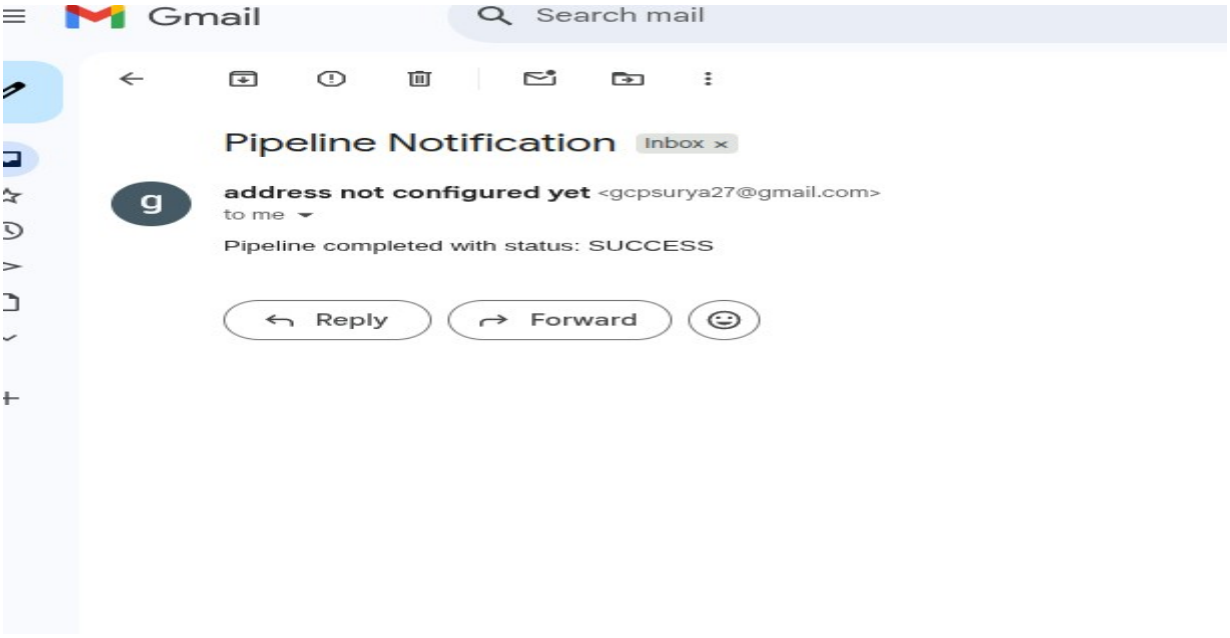
- Username: `your Gmail address`
- Password: **App password**
- SMTP Port: `587`
- Use TLS: ✅
- Default Recipients: `gcpsurya27@gmail.com`
- Test configuration and **Save**

Now Trigger the by Committing changes on the Git Repo:






Stages
6 July 2025
Post Actions
1.8s
#8
21:24 - 5.2s - 1 change
#7
20:22 - 4.7s - 1 change
#6
20:19 - 22s - 1 change
#5
20:14 - 22s - 1 change
#4
20:08 - 22s - 1 change
#3
20:04 - 26s - 1 change
#2
19:57 - 25s
#1
19:37 - 33s


Gmail
Search mail
Pipeline Notification
Inbox ×
g
address not configured yet <gcpsurya27@gmail.com>
to me
Pipeline completed with status: SUCCESS
Reply
Forward