

## 1. Connecting the ec2 instance using putty:

```
ubuntu@ip-172-31-12-10: ~
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-172-31-12-10:~$ sudo apt-get update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
```

## 2. Installing Java in ec2 instance.

```
ubuntu@ip-172-31-12-10: ~
Reading state information... Done
The following additional packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-core ca-certificat
  hicolor-icon-theme humanity-icon-theme java-common libasound2 libasound2-data
  libavahi-common3 libcairo-gobject2 libcairo2 libcups2 libdatriel libdconf1 lib
  libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libglib2.0-bin libglib2.0-c
  libjpeg-turbo8 libjpeg8 liblcms2-2 libl10n libl10n-data libl10n-utils libl10n
  libwebp7 libx11-xcb1 libxaw7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-pr
  libxinerama libxkbfile libxmu6 libxpm4 libxrandr2 libxrender1 libxshmfence1
Suggested packages:
  default-jre libasound2-plugins alsa-utils cups-common gvfs liblcms2-utils pcsc
The following NEW packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-core ca-certificat
  gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libas
  libavahi-common-data libavahi-common3 libcairo-gobject2 libcairo2 libcups2 lib
  libgdk-pixbuf2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl
  libice6 libjpeg-turbo8 libjpeg8 liblcms2-2 libl10n libl10n-data libl10n-utils
  libthai0 libtiff5 libwebp7 libx11-xcb1 libxaw7 libxcb-dri2-0 libxcb-dri3-0 lib
  libxfixes3 libxft2 libxi6 libxinerama libxkbfile libxmu6 libxpm4 libxrandr2
  x11-utils
0 upgraded, 114 newly installed, 0 to remove and 40 not upgraded.
Need to get 106 MB of archives.
After this operation, 440 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

## 3. Java -version

```
ubuntu@ip-172-31-12-10: ~
done.
done.
Processing triggers for libgl1-2.0-0:amd64 (2.72.4-0ubuntu2.2) ...
Processing triggers for libc-bin (2.35-0ubuntu3.4) ...
Setting up at-spi2-core (2.44.0-3) ...
Processing triggers for libgdk-pixbuf2.0-0:amd64 (2.42.8+dfsg-1ubuntu0.2) ...
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-172-31-12-10:~$ java -version
openjdk version "17.0.9" 2023-10-17
OpenJDK Runtime Environment (build 17.0.9+9-Ubuntu-122.04)
OpenJDK 64-Bit Server VM (build 17.0.9+9-Ubuntu-122.04, mixed mode, sharing)
ubuntu@ip-172-31-12-10:~$
```

#### 4. Installing Jenkins in ec2 instance.

```
ubuntu@ip-172-31-12-10: ~  
ubuntu@ip-172-31-12-10:~$ ^M  
: command not found  
ubuntu@ip-172-31-12-10:~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \  
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key  
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \  
https://pkg.jenkins.io/debian-stable binary/ | sudo tee \  
/etc/apt/sources.list.d/jenkins.list > /dev/null  
sudo apt-get update  
sudo apt-get install jenkins  
--2024-01-18 04:40:50-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.ke  
y  
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::645  
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 3175 (3.1K) [application/pgp-keys]  
Saving to: '/usr/share/keyrings/jenkins-keyring.asc'  
  
/usr/share/keyrings 100%[=====>] 3.10K --.-KB/s in 0s  
  
2024-01-18 04:40:50 (42.8 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' save  
d [3175/3175]  
  
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
```

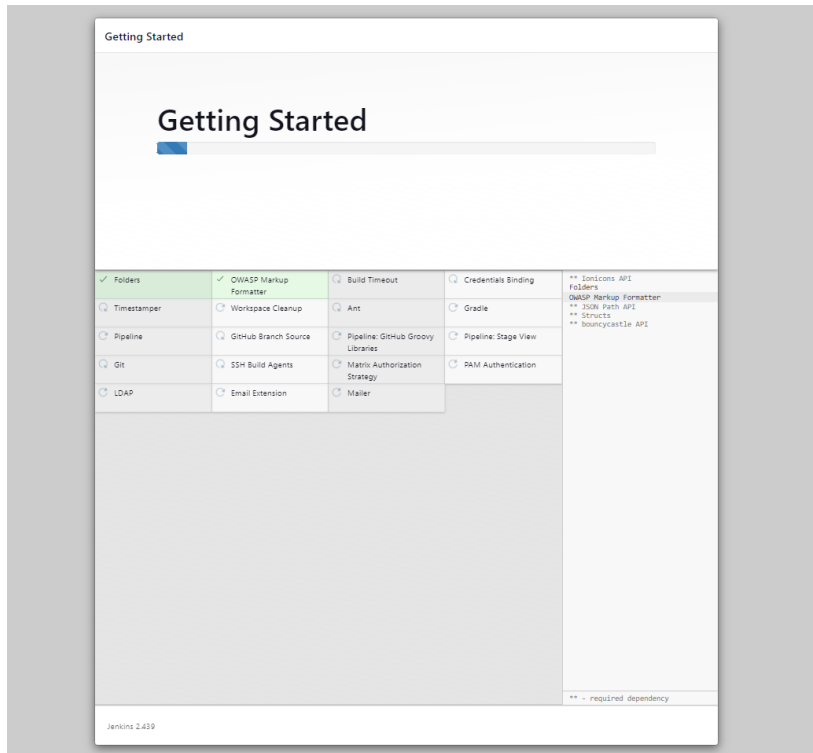
#### 5. Jenkins service status.

```
ubuntu@ip-172-31-12-10: ~  
ubuntu@ip-172-31-12-10:~$ sudo systemctl status jenkins  
● jenkins.service - Jenkins Continuous Integration Server  
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor prese  
   Active: active (running) since Thu 2024-01-18 04:42:11 UTC; 50s ago  
     Main PID: 5077 (java)  
       Tasks: 44 (limit: 1121)  
      Memory: 295.7M  
         CPU: 39.117s  
    CGroup: /system.slice/jenkins.service  
            └─5077 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java  
  
Jan 18 04:41:40 ip-172-31-12-10 jenkins[5077]: 2ee57542c3754e40996bbb8d9353d6c7  
Jan 18 04:41:40 ip-172-31-12-10 jenkins[5077]: This may also be found at: /var/><br>Jan 18 04:41:40 ip-172-31-12-10 jenkins[5077]: *****<br>Jan 18 04:41:40 ip-172-31-12-10 jenkins[5077]: *****<br>Jan 18 04:41:40 ip-172-31-12-10 jenkins[5077]: *****<br>Jan 18 04:42:11 ip-172-31-12-10 jenkins[5077]: 2024-01-18 04:42:11.952+0000 [id<br>Jan 18 04:42:11 ip-172-31-12-10 jenkins[5077]: 2024-01-18 04:42:11.976+0000 [id<br>Jan 18 04:42:11 ip-172-31-12-10 systemd[1]: Started Jenkins Continuous Integrat<br>Jan 18 04:42:12 ip-172-31-12-10 jenkins[5077]: 2024-01-18 04:42:12.886+0000 [id<br>Jan 18 04:42:12 ip-172-31-12-10 jenkins[5077]: 2024-01-18 04:42:12.889+0000 [id<br>lines 1-20/20 (END)
```

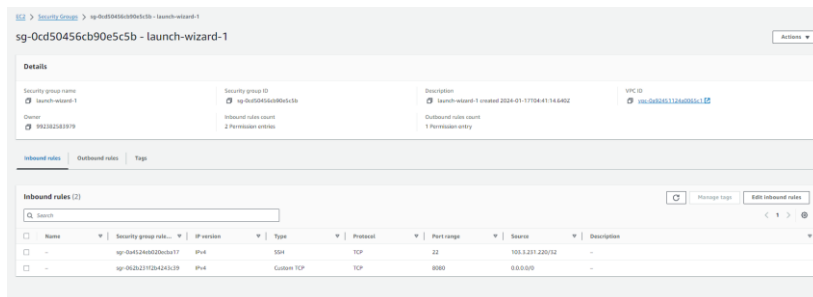
#### 6. Jenkins admin password:

```
ubuntu@ip-172-31-12-10: ~  
ubuntu@ip-172-31-12-10:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword  
2ee57542c3754e40996bbb8d9353d6c7  
ubuntu@ip-172-31-12-10:~$
```

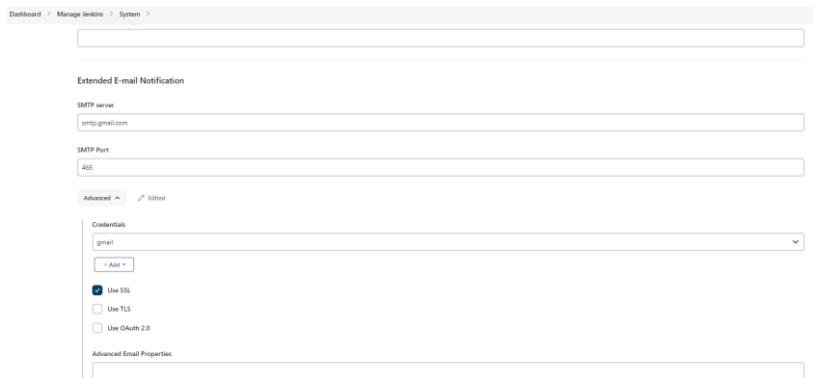
## 7. Started installing Jenkins pugins:



## 8. In Ec2 security groups, Allowing port custom TCP 8080 .



## 9. In Jenkins, configuring “Extended Email notification”



## 10. In Jenkins, configuring “Email notification”

The screenshot shows the Jenkins 'SMTP server' configuration page. The 'SMTP server' field is set to 'smtp.gmail.com'. The 'Default user e-mail suffix' is 'gmail'. Under 'Advanced', 'Use SMTP Authentication' is checked, with 'User Name' as 'jayprabhu10@gmail.com' and 'Password' as 'Concealed'. 'Use SSL' is also checked, and 'SMTP Port' is '465'. The 'Reply-To Address' is 'jayprabhu10@gmail.com' and the 'Charset' is 'UTF-8'. 'Save' and 'Apply' buttons are at the bottom.

## 11. In GITHUB, Creating Webhooks for GIT hook trigger.

The screenshot shows the GitHub 'Webhooks / Manage webhook' page. The 'Payload URL' is 'http://3.110.174.242:8080/github-webhook/'. The 'Content type' is 'application/json'. The 'Secret' field is empty. Under 'Which events would you like to trigger this webhook?', 'Just the push event.' is selected. The 'Active' checkbox is checked. 'Update webhook' and 'Delete webhook' buttons are at the bottom.

## 12. In Ec2 instance , creating directory→creating script file→Execute permissions given to file.

```
ubuntu@ip-172-31-12-10: ~/task
ubuntu@ip-172-31-12-10:~$ mkdir task
ubuntu@ip-172-31-12-10:~$ cd task
ubuntu@ip-172-31-12-10:~/task$ vi script.sh
ubuntu@ip-172-31-12-10:~/task$ chmod +x script.sh
ubuntu@ip-172-31-12-10:~/task$ ./script.sh
hostname is ip-172-31-12-10
username is ubuntu
RAM usage:
total      used      free     shared  buff/cache   avail
Mem:      949Mi   561Mi    79Mi     0.0Ki    309Mi     223Mi
Swap:      0B      0B       0B
Thankyou
ubuntu@ip-172-31-12-10:~/task$ cat script.sh
#!/bin/bash

host=$(hostname)
user=$(whoami)
mem=$(free -h)
echo "hostname is $host"
echo "username is $user"
echo "RAM usage: $mem"
echo "Thankyou"
ubuntu@ip-172-31-12-10:~/task$
```

13. Initializing GIT inside the directory→git config→git add→git commit→git push to origin.

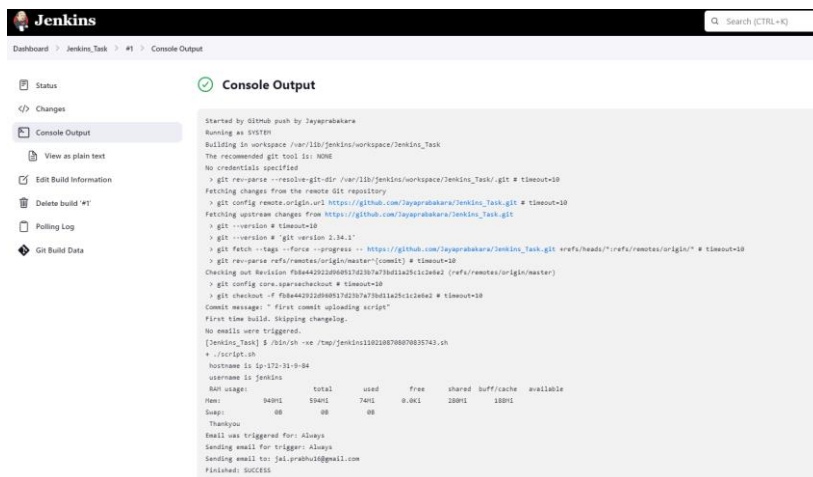
```
ubuntu@ip-172-31-9-84: ~/task
e available
Mem: 949Mi 588Mi 77Mi 0.0Ki 283Mi 195Mi
Swap: 0B 0B 0B
Thankyou
ubuntu@ip-172-31-9-84:~/task$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint: git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint: git branch -m <name>
Initialized empty Git repository in /home/ubuntu/task/.git/
ubuntu@ip-172-31-9-84:~/task$ git config --global user.name "Jayaprabakara"
ubuntu@ip-172-31-9-84:~/task$ git config --global user.email jai.prabhul6@gmail.com
ubuntu@ip-172-31-9-84:~/task$ git add script.sh
ubuntu@ip-172-31-9-84:~/task$ git commit -m " first commit uploading script"
[master (root-commit) fb8e442] first commit uploading script
1 file changed, 9 insertions(+)
create mode 100755 script.sh
ubuntu@ip-172-31-9-84:~/task$ git remote add origin https://github.com/Jayaprabakara/Jenkins_Task.git
git branch -M master
git push -u origin master
Username for 'https://github.com': Jayaprabakara
Password for 'https://Jayaprabakara@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 337 bytes | 337.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Jayaprabakara/Jenkins_Task.git
 * [new branch] master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
ubuntu@ip-172-31-9-84:~/task$
```

14. Git Hook triggered successfully.



The screenshot shows the Jenkins Dashboard with the 'Last GitHub Push' event highlighted. The event details indicate that a push was received from a GitHub repository, and Jenkins successfully built the project, creating a new commit and pushing it back to the repository.

15. Jenkins build successfully and triggered email notification.



The screenshot shows the Jenkins Console Output for a successful build. The output includes the git command sequence, build status, and email notification details. The build was triggered by a push to the 'master' branch, and the email notification was successfully sent to the user.

## 16. Jenkins build post action email notification received successfully.

