

## JENKINS AND NGNIX

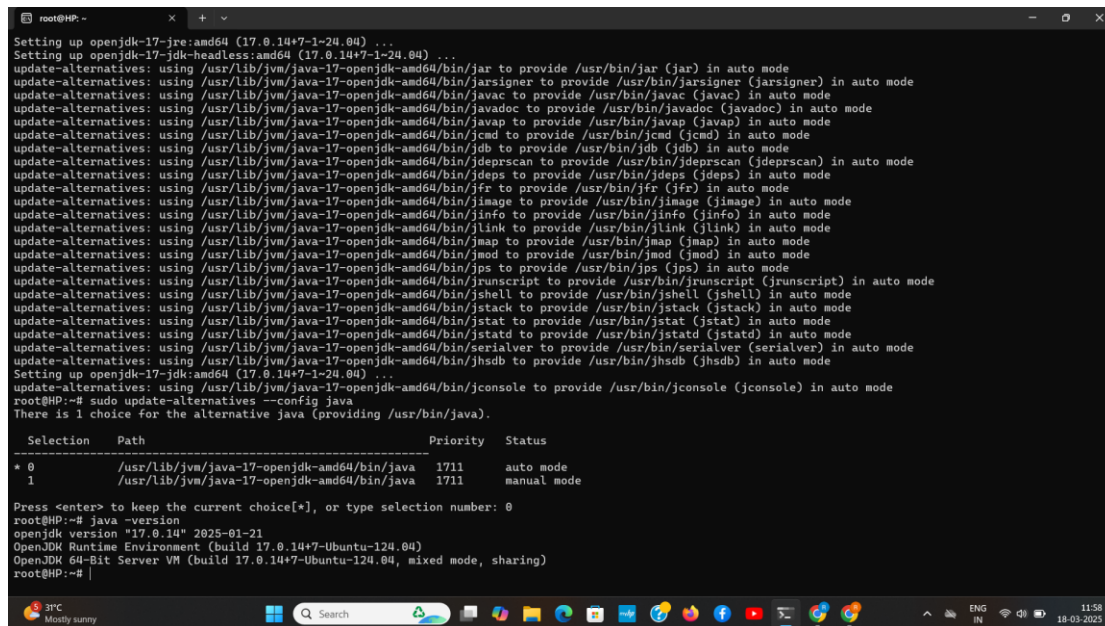
**STEP 1:** Install Ubuntu and use the Ubuntu OS

**STEP2 :** Open the terminal in the Ubuntu

**STEP 3:** Make sure your Ubuntu has java . If not install java using

**sudo apt install openjdk-17-jdk -y**

Once you install java , check the version like this below image



```
root@HP:~# sudo apt install openjdk-17-jdk -y
Setting up openjdk-17-jre:amd64 (17.0.14+7-1-24.04) ...
Setting up openjdk-17-jdk-headless:amd64 (17.0.14+7-1-24.04) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jar to provide /usr/bin/jar (jar) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jarsigner to provide /usr/bin/jarsigner (jarsigner) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/javac to provide /usr/bin/javac (javac) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/javadoc to provide /usr/bin/javadoc (javadoc) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/javap to provide /usr/bin/javap (javap) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jcmd to provide /usr/bin/jcmd (jcmd) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jdb to provide /usr/bin/jdb (jdb) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jdeps to provide /usr/bin/jdeps (jdeps) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jfr to provide /usr/bin/jfr (jfr) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jimage to provide /usr/bin/jimage (jimage) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jinfo to provide /usr/bin/jinfo (jinfo) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jlink to provide /usr/bin/jlink (jlink) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jmap to provide /usr/bin/jmap (jmap) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jmod to provide /usr/bin/jmod (jmod) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jps to provide /usr/bin/jps (jps) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jrunscript to provide /usr/bin/jrunscript (jrunscript) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jshell to provide /usr/bin/jshell (jshell) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jstack to provide /usr/bin/jstack (jstack) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jstat to provide /usr/bin/jstat (jstat) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jstatd to provide /usr/bin/jstatd (jstatd) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/serialver to provide /usr/bin/serialver (serialver) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jhsdb to provide /usr/bin/jhsdb (jhsdb) in auto mode
Setting up openjdk-17-jdk:amd64 (17.0.14+7-1-24.04) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode
root@HP:~# sudo update-alternatives --config java
There is 1 choice for the alternative java (providing /usr/bin/java).

Selection Path Priority Status
-----
* 0 /usr/lib/jvm/java-17-openjdk-amd64/bin/java 1711 auto mode
  1 /usr/lib/jvm/java-17-openjdk-amd64/bin/java 1711 manual mode

Press <enter> to keep the current choice[*], or type selection number: 0
root@HP:~# java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-124.04)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-124.04, mixed mode, sharing)
root@HP:~#
```

**STEP 4:** Now install jenkins , create a **nano filename.sh** file and add the following commands

**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**

```
Mar 17 20:37
swetha@swetha-VMware-Virtual-Platform: ~
GNU nano 7.2 installJenkins.sh
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
```

## STEP 5 : Run the file using bash filename.sh

You will get the following terminal window like below

```
root@HP: ~# sudo wget -O /usr/share/keyrings/jenkins-keyring.asc
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
wget: missing URL
Usage: wget [OPTION]... [URL]...

Try 'wget --help' for more options.
-bash: https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key: No such file or directory
root@HP:~# sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
--2025-03-18 06:40:18-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.158.133, 2a04:0e42:25::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)[151.101.158.133]: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/jenkins-keyring.as 100%[=====>] 3.10K --.-KB/s in 0.004s

2025-03-18 06:40:19 (794 KB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]

root@HP:~#
root@HP:~# 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
root@HP:~# sudo apt-get update
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Ign:4 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:5 https://pkg.jenkins.io/debian-stable binary/ Release [2844 B]
Get:6 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:7 https://pkg.jenkins.io/debian-stable binary/ Packages [28.7 kB]
Hit:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 158 kB in 13s (12.2 kB/s)
Reading package lists... Done
root@HP:~# sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
libllvm17t64
```

## STEP 6: After step 5 , run the follwing commands to run the jenkins

```
sudo systemctl enable jenkins
sudo systemctl start jenkins
sudo systemctl status jenkins
```

```
root@HP: ~  
* 0 /usr/lib/jvm/java-17-openjdk-amd64/bin/java 1711 auto mode  
1 /usr/lib/jvm/java-17-openjdk-amd64/bin/java 1711 manual mode  
  
Press <enter> to keep the current choice[+], or type selection number: 0  
root@HP:~# java -version  
openjdk version "17.0.14" 2025-01-21  
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-124.04)  
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-124.04, mixed mode, sharing)  
root@HP:~# nano jenkins.sh  
root@HP:~# bash jenkins.sh  
wget: missing URL  
Usage: wget [OPTION]... [URL]...  
  
Try 'wget --help' for more options.  
jenkins.sh: line 2: https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key: No such file or directory  
deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]  
jenkins.sh: line 4: https://pkg.jenkins.io/debian-stable: No such file or directory  
jenkins.sh: line 5: /etc/apt/sources.list.d/jenkins.list: No such file or directory  
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease  
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease  
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease  
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease  
Reading package lists... Done  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Package jenkins is not available, but is referred to by another package.  
This may mean that the package is missing, has been obsoleted, or  
is only available from another source  
  
E: Package 'jenkins' has no installation candidate  
root@HP:~# sudo wget -O /usr/share/keyrings/jenkins-keyring.asc  
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key  
wget: missing URL  
Usage: wget [OPTION]... [URL]...  
  
Try 'wget --help' for more options.  
-bash: https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key: No such file or directory  
root@HP:~# sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \\\  
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key  
--2025-03-18 06:48:18-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
```

**STEP 7:** Now your jenkins in run , go to localhost:8080 , you should see the administration page .

**STEP 8 :** In the terminal again type the following command ,

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

**STEP 9:** Now you have your password generated , enter this password in the admin page and enter basic details and finish necessary resources installation and you, ll be taken into the jenkins interface .

**STEP 10:** Give your project a name , and in configure in the shell , type in the following commands and save it .

```
#!/bin/bash  
# Update package lists  
sudo apt update -y  
  
# Install Nginx  
sudo apt install -y nginx  
  
# Start and enable Nginx  
sudo systemctl start nginx  
sudo systemctl enable nginx  
  
# Verify Nginx is running
```

Dashboard > nginx-deployment > Configuration

### Configure

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

Command

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

```
#!/bin/bash
# Update package lists
sudo apt update -y

# Install Nginx
sudo apt install -y nginx

# Start and enable Nginx
sudo systemctl start nginx
sudo systemctl enable nginx

# Verify Nginx is running
systemctl status nginx
```

Advanced ▾

Add build step ▾

Save Apply

**STEP 11:** Go to your terminal and run the following command ,

```
sudo apt-get install nginx
sudo systemctl restart nginx
```

**STEP 12:** If you have a successful build , your console output looks like this !

resreshu (RESHMA A) x devops-getting-started/Install x nginx-demonstration #5 Console x Introducing ChatGPT | OpenAI x Jenkins sudo password issue x +

localhost:8080/job/nginx-demonstration/5/console

## Jenkins

Dashboard > nginx-demonstration > #5 > Console Output

Status Changes Console Output Edit Build Information Delete build '#5' Timings Previous Build

### Console Output

Download Copy View as plain text

```
Started by user RESHMA ALAVUTHEEN
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/nginx-demonstration
[nginx-demonstration] $ /bin/bash /tmp/jenkins14040847716005318034.sh
sudo: a terminal is required to read the password; either use the -S option to read from standard input or configure an askpass helper
sudo: a password is required
sudo: a terminal is required to read the password; either use the -S option to read from standard input or configure an askpass helper
sudo: a password is required
sudo: a terminal is required to read the password; either use the -S option to read from standard input or configure an askpass helper
sudo: a password is required
sudo: a terminal is required to read the password; either use the -S option to read from standard input or configure an askpass helper
sudo: a password is required
• nginx.service - A high performance web server and a reverse proxy server
  Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
  Active: active (running) since Tue 2025-03-18 08:09:23 UTC; 28s ago
  Docs: man:nginx(8)
  Process: 1709 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
  Process: 1710 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
  Main PID: 1712 (nginx)
  Tasks: 13 (limit: 4575)
  Memory: 8.8M ()
  CGroup: /system.slice/nginx.service

1-1712 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
```

91°F Sunny 13:40 18-03-2025