

JENKINS AND NGNIX

STEP 1 : Install Ubuntu and use the Ubuntu OS

STEP 2 : 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

```

poojashree@poojashree-virtual-machine:~$ sudo apt install openjdk-17-jre-headless
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  ca-certificates-java java-common
Suggested packages:
  default-jre fonts-dejavu-extra fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei
The following NEW packages will be installed:
  ca-certificates-java java-common openjdk-17-jre-headless
0 upgraded, 3 newly installed, 0 to remove and 549 not upgraded.
Need to get 0 B/48.3 MB of archives.
After this operation, 193 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Selecting previously unselected package java-common.
(Reading database ... 198130 files and directories currently installed.)
Preparing to unpack .../java-common_0.72build2_all.deb ...
Unpacking java-common (0.72build2) ...
Selecting previously unselected package openjdk-17-jre-headless:amd64.
Preparing to unpack .../openjdk-17-jre-headless_17.0.14+7-1.22.04.1_amd64.deb ...
Unpacking openjdk-17-jre-headless:amd64 (17.0.14+7-1.22.04.1) ...
Selecting previously unselected package ca-certificates-java.
Preparing to unpack .../ca-certificates-java_20190909ubuntu1.2_all.deb ...
Unpacking ca-certificates-java (20190909ubuntu1.2) ...
Setting up java-common (0.72build2) ...

```

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
```

```

GNU nano 6.2
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

```

jenkins@jenkins-virtual-machine:~$ bash jenkins.sh
-2025-03-19 16:43:17- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.66.133, 151.101.130.133, 151.101.194.133, ...
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.66.133|: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.asc          100%[=====]  3.10K  --.-KB/s  in 0s

2025-03-19 16:43:21 (8.34 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]

Hit:1 https://fn.archive.ubuntu.com/ubuntu jenny InRelease
Get:2 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Hit:3 https://fn.archive.ubuntu.com/ubuntu jenny-updates InRelease
Get:4 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,211 B]
Hit:5 https://security.ubuntu.com/ubuntu jenny-security InRelease
Hit:6 https://fn.archive.ubuntu.com/ubuntu jenny-backports InRelease
Ign:7 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:8 https://pkg.jenkins.io/debian-stable binary/ Release [2,044 B]
Get:9 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:10 https://pkg.jenkins.io/debian-stable binary/ Packages [28.7 KB]
Fetched 34.4 kB in 0s (6,548 B/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwdb
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  net-tools
The following NEW packages will be installed:

```

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

```
sudo systemctl enable jenkins
sudo systemctl start jenkins
sudo system status Jenkins
```

```
jenkins@poojashree-virtual-machine:~$ sudo systemctl enable jenkins
Synchronizing state of Jenkins.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable jenkins
jenkins@poojashree-virtual-machine:~$ sudo systemctl status jenkins
● Jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2025-03-19 16:51:30 IST; 5min ago
     Main PID: 17004 (java)
       Tasks: 44 (limit: 2217)
      Memory: 147.7M
         CPU: 14.689%
    CGroup: /system.slice/jenkins.service
            └─17004 java/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins-war --webroot=/var/cache/jenkins/war --httpport=8080

Mar 19 16:51:20 poojashree-virtual-machine jenkins[17004]: 6e2532e8dd451c0eb67ef7a7379d18
Mar 19 16:51:20 poojashree-virtual-machine jenkins[17004]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Mar 19 16:51:20 poojashree-virtual-machine jenkins[17004]: *****
Mar 19 16:51:20 poojashree-virtual-machine jenkins[17004]: *****
Mar 19 16:51:20 poojashree-virtual-machine jenkins[17004]: *****
Mar 19 16:51:30 poojashree-virtual-machine jenkins[17004]: 2025-03-19 11:21:30.955+0000 [Id=31] INFO Jenkins.IntReactorRunner$NonAttained: Completed initialization
Mar 19 16:51:30 poojashree-virtual-machine jenkins[17004]: 2025-03-19 11:21:30.965+0000 [Id=23] INFO Hudson.LifecycleLifecycleReady: Jenkins is fully up and running
Mar 19 16:51:30 poojashree-virtual-machine systemd[1]: Started Jenkins Continuous Integration Server.
Mar 19 16:51:33 poojashree-virtual-machine jenkins[17004]: 2025-03-19 11:21:33.839+0000 [Id=48] INFO hudson.DownloadResourceDownloadableJob: Obtained the updated data file for Hudson tasks
```

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
```

```
poojashree@poojashree-virtual-machine:~$ 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 .

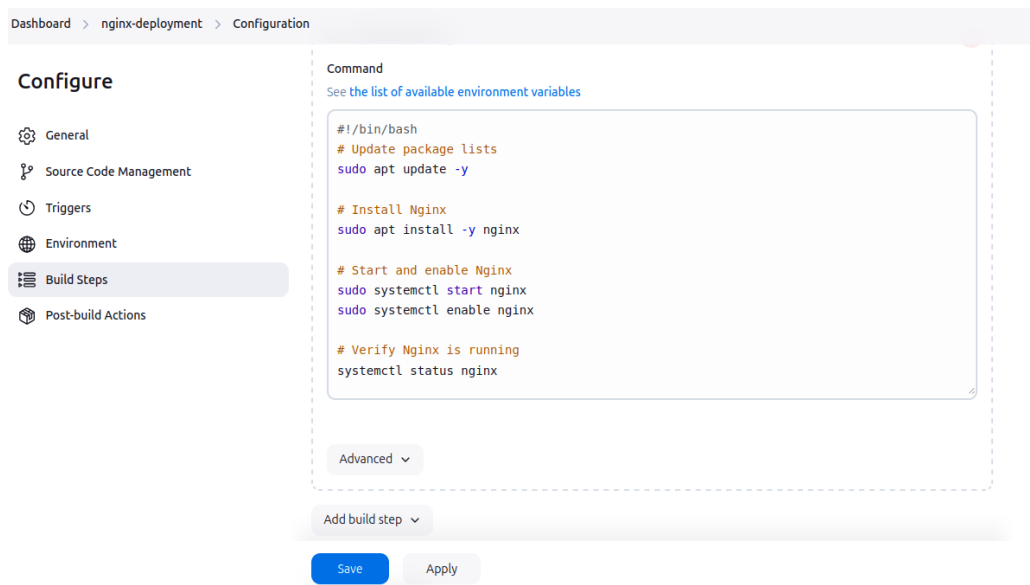
STEP 10: Give your project a name , and in configure in the shell , type in the following commands and save it .

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

# Install Nginx
sudo apt install -y nginx

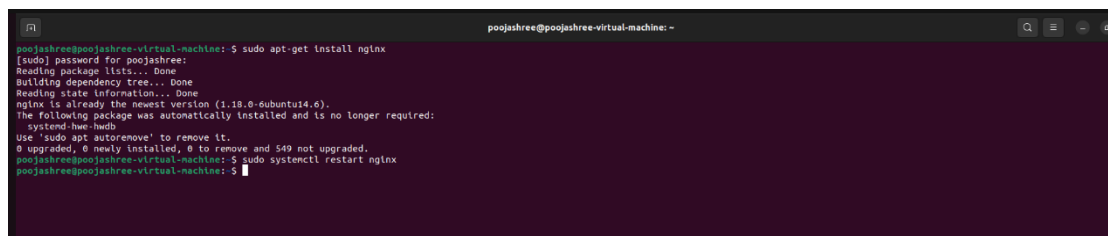
# Start and enable Nginx
sudo systemctl start nginx
sudo systemctl enable nginx

# Verify Nginx is running
systemctl status nginx
```



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 !

Dashboard > Pooja Shree > My Views > All > Task 1 > #1 > Console Output

Status

</> Changes

Console Output

Edit Build Information

Delete build '#1'

Timings

✓ Console Output

DownloadCopyView as plain text

Started by user [Pooja Shree](#)

Running as SYSTEM

Building in workspace /var/lib/jenkins/workspace/Task 1

[Task 1] \$./bin/sh -xe /tmp/jenkins18268759384224130069.sh

Finished: SUCCESS

