

# Task For DevOps

## 1) Installation of Java is required for Jenkins

### Command:

sudo apt update

sudo apt install fontconfig openjdk-17-jre

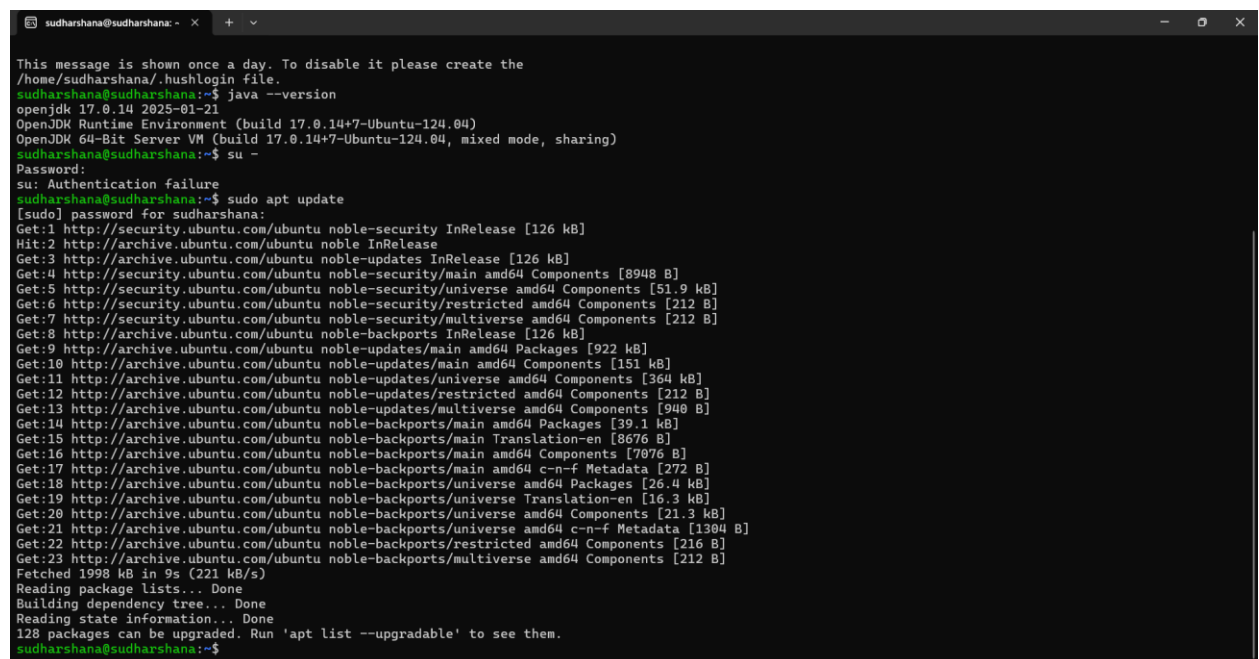
java -version

openjdk version "17.0.13" 2024-10-15

OpenJDK Runtime Environment (build 17.0.13+11-Debian-2)

OpenJDK 64-Bit Server VM (build 17.0.13+11-Debian-2, mixed mode, sharing)

### ScreenShot:



```
sudharshana@sudharshana: ~$ java --version
openjdk 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)
sudharshana@sudharshana:~$ su -
Password:
su: Authentication failure
sudharshana@sudharshana:~$ sudo apt update
[sudo] password for sudharshana:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8948 B]
Get:5 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [51.9 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:7 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [922 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [364 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:14 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Packages [39.1 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-backports/main Translation-en [8676 B]
Get:16 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7076 B]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [272 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [26.4 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble-backports/universe Translation-en [16.3 kB]
Get:20 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [21.3 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 c-n-f Metadata [1304 B]
Get:22 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:23 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 1998 kB in 9s (221 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
128 packages can be upgraded. Run 'apt list --upgradable' to see them.
sudharshana@sudharshana:~$
```

The Java JDK has been successfully installed

## 2) Install Jenkins

### Command:

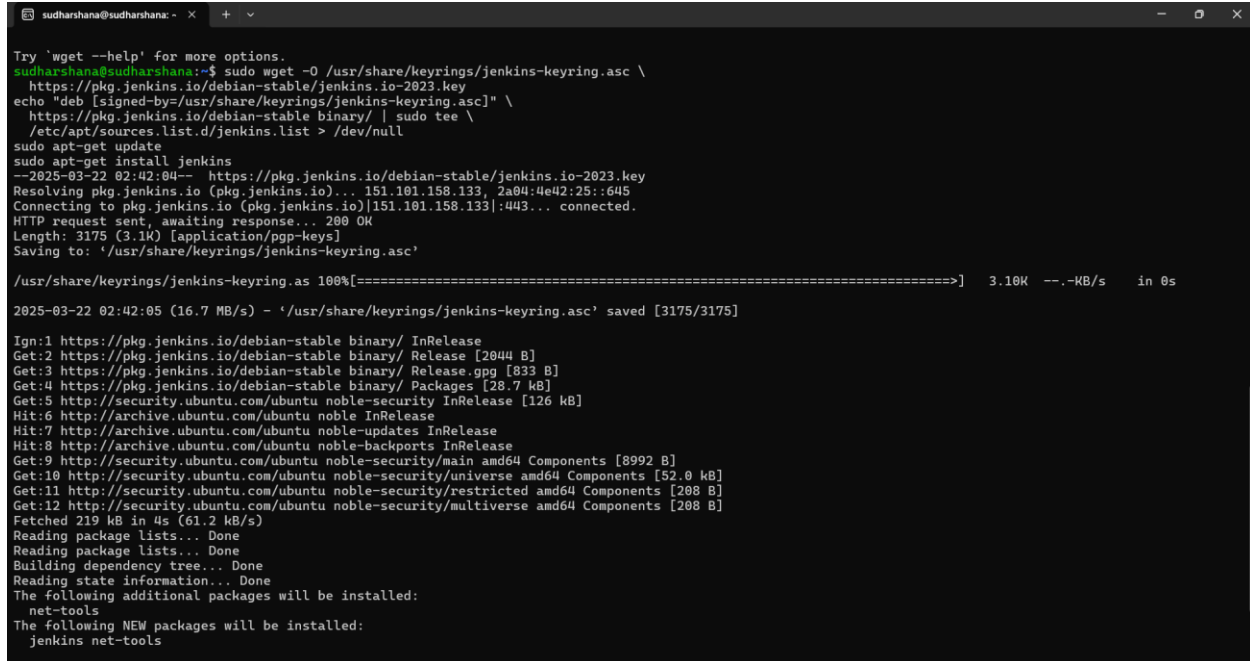
sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
<https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key>

```
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
```

## ScreenShot:



```
sudharshana@sudharshana: ~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Try 'wget --help' for more options.
sudharshana@sudharshana:~$ 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
--2025-03-22 02:42:04-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.158.133, 2a04:4e42:25::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 0s

2025-03-22 02:42:05 (16.7 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]

Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:2 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:3 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:4 https://pkg.jenkins.io/debian-stable binary/ Packages [28.7 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:6 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:7 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8992 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [208 B]
Get:12 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Fetched 219 kB in 4s (61.2 kB/s)
Reading package lists... Done
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
```

JenKins has been successfully installed

Now, Go to the Jenkins page in the Browser running in Localhost:8080 and login with your credentials

Getting Started

# Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

```
/var/lib/jenkins/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

**Administrator password**

.....|

Continue

Install the Suggested plugins required

Getting Started

×

## Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

### Install suggested plugins

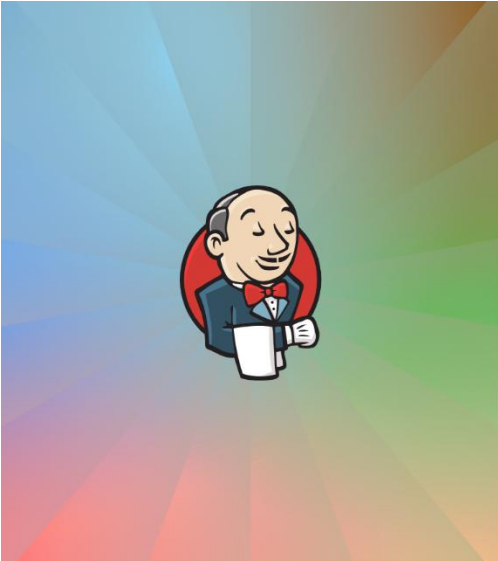
Install plugins the Jenkins community finds most useful.

### Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.492.2

Proceed by Creating the First Admin User



### Sign in to Jenkins

Username

Sudharshana

Password

\*\*\*\*\*

☐ Keep me signed in

Sign in

Now Jenkins is ready to use

## Getting Started


# Jenkins is ready!




Your Jenkins setup is complete.

Start using Jenkins

Jenkins 2.492.2


Now create a new item


 **Jenkins**


  


Dashboard >

+ New Item


 Build History

 Manage Jenkins

 My Views

Build Queue 

No builds in the queue.


Build Executor Status 

0/2


### Welcome to Jenkins!


This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.


#### Start building your software project

Create a job 

#### Set up a distributed build

Set up an agent 

Configure a cloud 

Learn more about distributed builds 

Give an item name and select the item type as free-style project

## New Item

Enter an item name

Select an item type



### Freestyle project

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.



### Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.



### Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

## Build the steps using the commands

Dashboard > nginx > Configuration

### Configure

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

☐ Add timestamps to the console output

☐ Inspect build log for published build scans

☐ Terminate a build if it's stuck

☐ With Ant ?

#### Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Execute shell ?

Command

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

```
echo "sudharshana" | sudo apt install nginx -y
echo "sudharshana" | sudo systemctl start nginx
echo "sudharshana" | sudo systemctl enable nginx
echo "sudharshana" | sudo systemctl status nginx
```

Advanced ▾

Save

Apply

After the successful compilation of the build, Nginx will be opened in localhost, once the ip address is given

# Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to [nginx.org](http://nginx.org).  
Commercial support is available at [nginx.com](http://nginx.com).

*Thank you for using nginx.*