

Task For DevOps

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1) Installation of Java is required for Jenkins

Command:

```
sudo apt update
```

```
sudo apt install fontconfig openjdk-17-jre
```

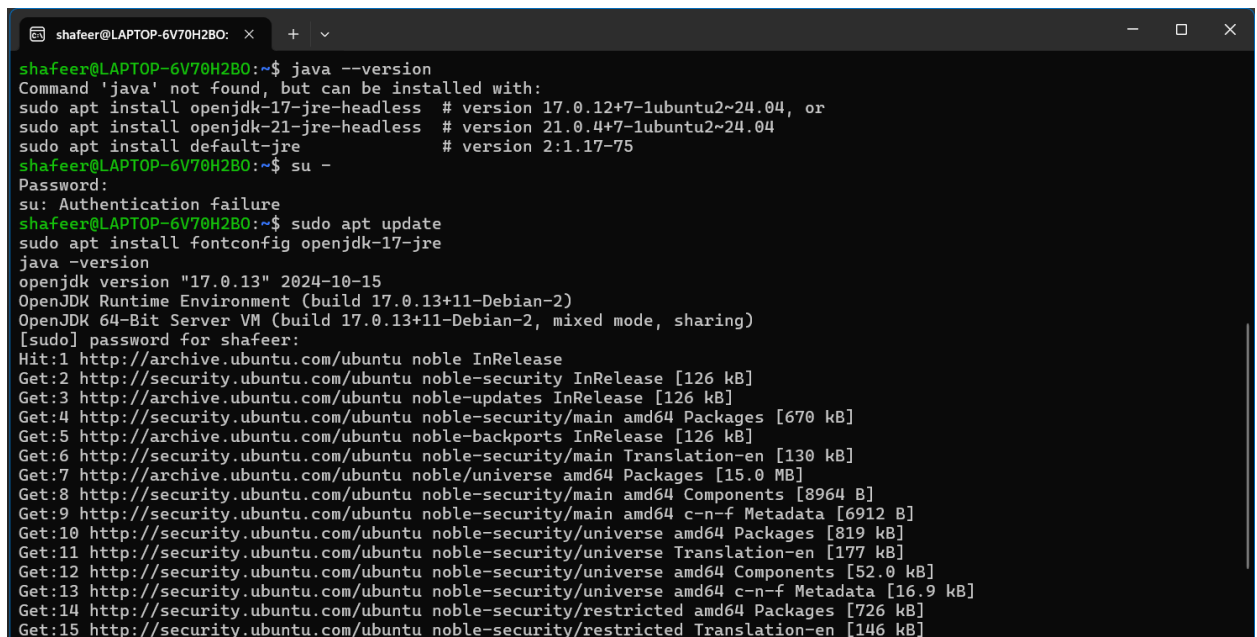
```
java -version
```

```
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:



```
shafeer@LAPTOP-6V70H2B0: ~$ java --version
Command 'java' not found, but can be installed with:
sudo apt install openjdk-17-jre-headless # version 17.0.12+7-1ubuntu2~24.04, or
sudo apt install openjdk-21-jre-headless # version 21.0.4+7-1ubuntu2~24.04
sudo apt install default-jre # version 2:1.17-75
shafeer@LAPTOP-6V70H2B0: ~$ su -
Password:
su: Authentication failure
shafeer@LAPTOP-6V70H2B0: ~$ 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)
[sudo] password for shafeer:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [670 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [130 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8964 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [6912 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [819 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [177 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [16.9 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [726 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [146 kB]
```

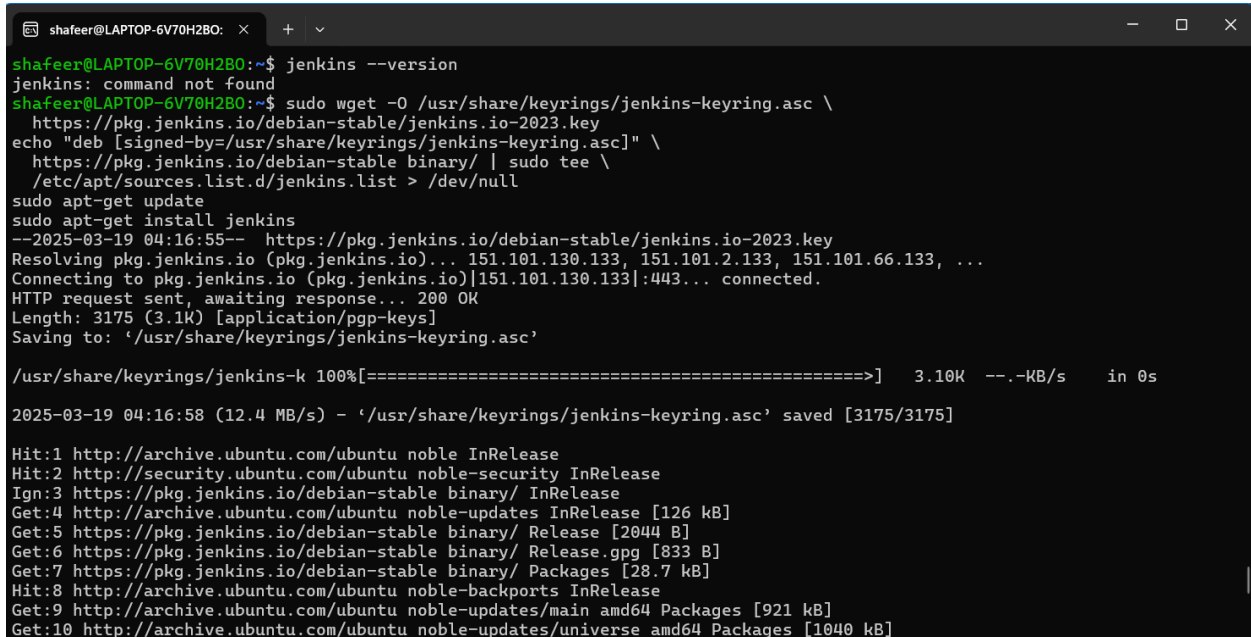
The Java JDK has been successfully installed

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:

A terminal window titled 'shafeer@LAPTOP-6V70H2B0: X' showing the installation of Jenkins. The user runs 'jenkins --version' which fails. Then they run the commands to add the Jenkins repository key, update the sources list, and install Jenkins. The terminal shows the key being downloaded from pkg.jenkins.io, the sources list being updated, and the installation of Jenkins starting. It shows the resolution of the Jenkins repository and the download of various packages including InRelease files and Packages files.

```
shafeer@LAPTOP-6V70H2B0:~$ jenkins --version
jenkins: command not found
shafeer@LAPTOP-6V70H2B0:~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
shafeer@LAPTOP-6V70H2B0:~$ 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
shafeer@LAPTOP-6V70H2B0:~$ sudo apt-get update
Get:1 https://archive.ubuntu.com/ubuntu noble InRelease [126 kB]
Get:2 https://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 https://pkg.jenkins.io/debian-stable binary/ InRelease [2044 B]
Get:4 https://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:5 https://pkg.jenkins.io/debian-stable binary/ Release [833 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 https://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:9 https://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [921 kB]
Get:10 https://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1040 kB]
```

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

Getting Started

Create First Admin User

Username

shafeer

Password

Confirm password

Full name

shafeerahamed

E-mail address

Jenkins 2.492.2

[Skip and continue as admin](#)

[Save and Continue](#)

Now Jenkins is ready to use

Getting Started

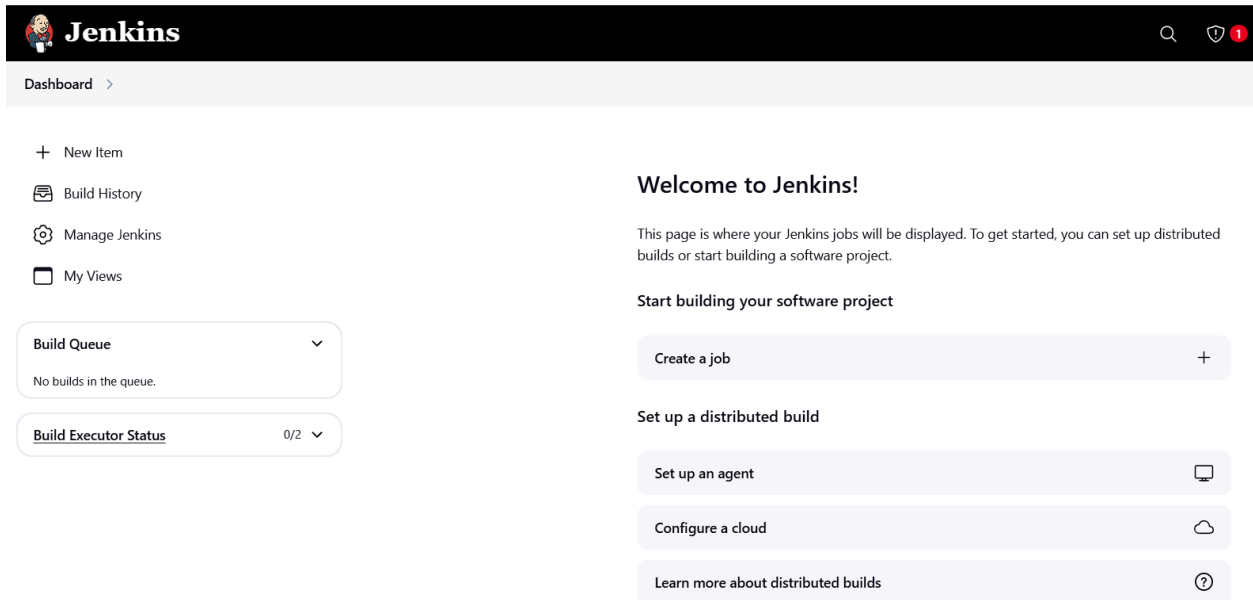
Jenkins is ready!

Your Jenkins setup is complete.

[Start using Jenkins](#)

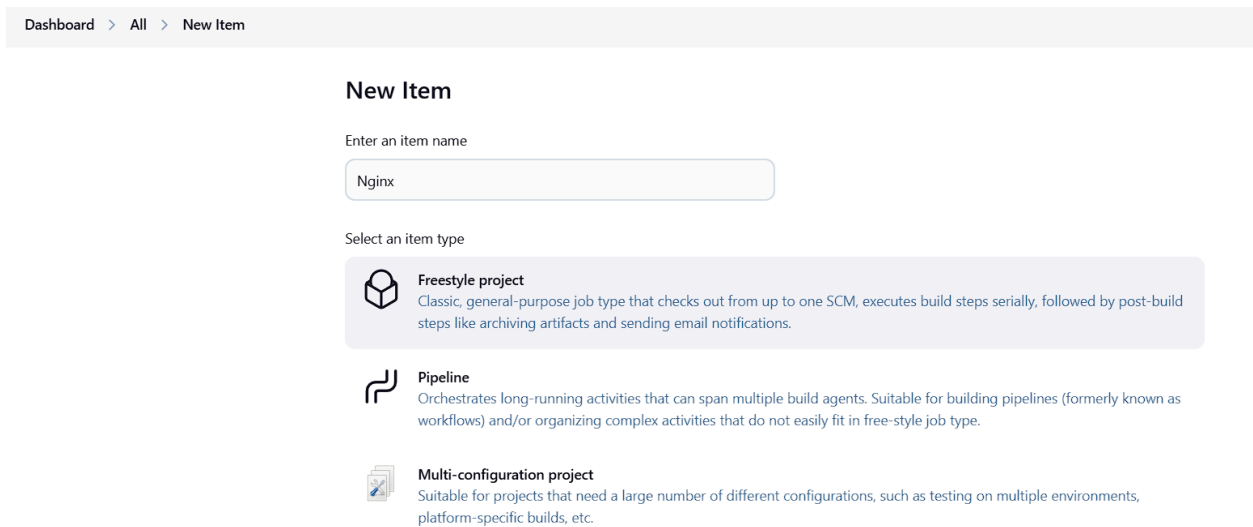
Jenkins 2.492.2

Now create a new item



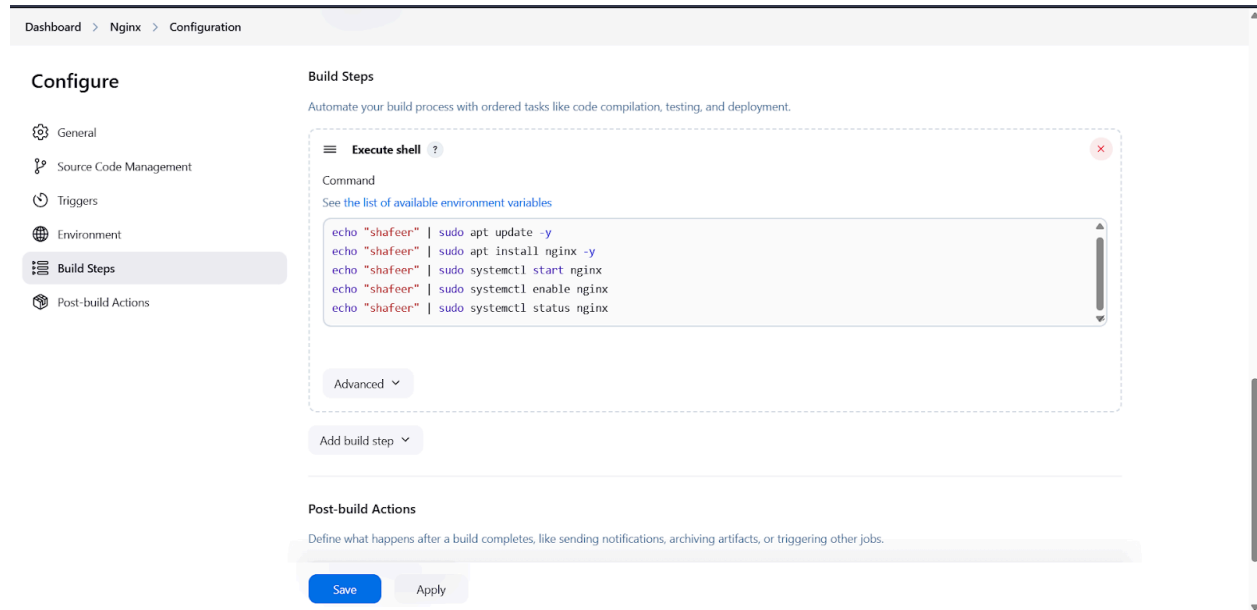
The screenshot shows the Jenkins Dashboard. At the top is a black header with the Jenkins logo and name on the left, and search, shield, and notification icons on the right. Below the header is a light gray bar with 'Dashboard >'. The main content area is divided into two columns. The left column contains a sidebar with links: '+ New Item', 'Build History', 'Manage Jenkins', and 'My Views'. Below these are two expandable panels: 'Build Queue' (showing 'No builds in the queue.') and 'Build Executor Status' (showing '0/2'). The right column features a 'Welcome to Jenkins!' message, followed by 'Start building your software project' with a 'Create a job' button. Below that is 'Set up a distributed build' with buttons for 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'.

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



The screenshot shows the 'New Item' form in Jenkins. At the top is a breadcrumb trail: 'Dashboard > All > New Item'. The main heading is 'New Item'. Below it is a text input field labeled 'Enter an item name' with the value 'Nginx'. Underneath is a section titled 'Select an item type' with three options: 'Freestyle project' (described as a classic, general-purpose job type), 'Pipeline' (described as orchestrating long-running activities), and 'Multi-configuration project' (described as suitable for projects needing many configurations).

Build the steps using the commands



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

