To know the ubuntu version

cat /etc/os-release

Install and Set JDK 17 as Default on Ubuntu 22.04

🔷 Step 1: Check if Java is already installed

```
java -version
```

📜 Possible Output if Java 11 is installed:

```
openjdk version "11.0.22" 2024-04-16
OpenJDK Runtime Environment (build 11.0.22+7-Ubuntu-0ubuntu1.22.04)
OpenJDK 64-Bit Server VM (build 11.0.22+7-Ubuntu-0ubuntu1.22.04, mixed
mode)
```

🔍 This means **JDK 11** is installed.

🔷 Step 2: Install JDK 17

```
sudo apt update
sudo apt install openjdk-17-jdk
```

📜 Expected Output:

```
Reading package lists... Done
...
After this operation, XX MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Type `Y` and press Enter.

🔷 Step 3: Check available Java versions

```
sudo update-alternatives --config java
```

📜 Sample Output:

```
There are 2 choices for the alternative java (providing /usr/bin/java).

  Selection    Path                                            Priority
Status
------------------------------------------------------------
* 0            /usr/lib/jvm/java-11-openjdk-amd64/bin/java     1111
auto mode
  1            /usr/lib/jvm/java-11-openjdk-amd64/bin/java     1111
manual mode
  2            /usr/lib/jvm/java-17-openjdk-amd64/bin/java     1111
manual mode

Press <enter> to keep the current choice[*], or type selection number:
```

Type `2` (or whatever number matches Java 17), then press Enter.

Repeat for `javac`:

```
sudo update-alternatives --config javac
```

🔷 Step 4: Verify Java 17 is now the default

```
java -version
```

📜 Expected Output:

```
openjdk version "17.0.10" 2024-01-16
OpenJDK Runtime Environment (build 17.0.10+7-Ubuntu-0ubuntu1.22.04)
OpenJDK 64-Bit Server VM (build 17.0.10+7-Ubuntu-0ubuntu1.22.04, mixed
mode, sharing)
```

🔷 Step 5: Set JAVA_HOME environment variable (optional but recommended)

1. Open the environment file:

```
sudo nano /etc/environment
```

2. Add this line at the end:

```
JAVA_HOME="/usr/lib/jvm/java-17-openjdk-amd64"
```

3. Save and exit (press `CTRL + O`, `Enter`, then `CTRL + X`)
4. Apply changes:

```
source /etc/environment
echo $JAVA_HOME
```

📜 **Expected Output:**

```
/usr/lib/jvm/java-17-openjdk-amd64
```

Final Check

Command	What to Expect
`java -version`	Should show version 17
`javac -version`	Should show version 17
`$JAVA_HOME`	Should point to `/usr/lib/jvm/java-17...`
`update-alternatives`	Should show Java 17 selected

Install and Run Jenkins on Ubuntu 22.04

🔷 Step 1: Install Java 17 (if not already)

Jenkins requires **Java 11 or 17**, and Java 17 is recommended.

```
sudo apt update
sudo apt install openjdk-17-jdk
```

Verify installation:

```
java -version
```

🔷 Step 2: Add the Jenkins Repository and Key

```
curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo tee \
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
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
```

🔷 Step 3: Update and Install Jenkins

```
sudo apt update
sudo apt install Jenkins
```

🔷 Step 4: Start and Enable Jenkins Service

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

To check status:

```
sudo systemctl status jenkins
```

🔷 Step 5: Open the Firewall (optional, for remote access)

If using UFW (Uncomplicated Firewall):

```
sudo ufw allow 8080
sudo ufw reload
```

🔷 Step 6: Access Jenkins Web Interface

Open your browser and go to:

```
http://localhost:8080
```

Or replace `localhost` with your server's IP if accessing remotely.

🔷 Step 7: Unlock Jenkins

To unlock for the first time, get the initial admin password:

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

Copy and paste that into the web page to proceed.

🔷 Step 8: Install Suggested Plugins and Create Admin User

Follow the UI:

- Click “Install suggested plugins”
- Set up an admin user
- Start using Jenkins

JAVA_HOME

If you skipped this earlier, set `JAVA_HOME` for Jenkins:

1. Edit environment file:

```
sudo nano /etc/environment
```

2. Add:

```
JAVA_HOME="/usr/lib/jvm/java-17-openjdk-amd64"
```

3. Save, exit, then:

```
source /etc/environment
```

Issue	Fix
Jenkins not starting	Check `sudo systemctl status jenkins` and logs in `/var/log/jenkins/jenkins.log`
Port 8080 already in use	Change Jenkins port in `/etc/default/jenkins`
Web page not opening	Ensure firewall allows port 8080 and service is running

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