

Devops Day-1

Freestyle Jenkins Setup Guide

Step 1: Install Jenkins

- Download and install Jenkins on your system.
- Ensure Java is installed and configured properly.

Step 2: Access Jenkins Dashboard

- Open Jenkins in a web browser (<http://localhost:8080>).
- Unlock Jenkins using the administrator password from the terminal

Step 3: Install Recommended Plugins

- Choose the suggested plugins during setup.
- Wait for the installation to complete.

Step 4: Create a Freestyle Project

- Navigate to Jenkins Dashboard > New Item.
- Select **Freestyle Project** and provide a name.

Step 5: Configure the Build

- In the project settings, add a build step (e.g., Execute Shell or Windows Batch Command).
- Define the commands needed to execute your job.

Step 6: Configure Source Code Management (Optional)

- Select Git under **Source Code Management**.
- Provide the repository URL and credentials if needed.

Step 7: Set Up Build Triggers

- Choose **Poll SCM** or **Build Periodically** for automated builds.
- Configure webhooks for real-time triggering (if applicable).

Step 8: Run and Monitor the Job

- Click **Build Now** to execute the job.
- Monitor console output for real-time logs.

Step 9: View Build History and Results

- Check past builds in the **Build History** panel.
- Review logs and artifacts for debugging.

Screenshots

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0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...

done.
done.
root@Ubuntu:~# java -version
openjdk version "11.0.26" 2025-01-21
OpenJDK Runtime Environment (build 11.0.26+4-post-Ubuntu-1ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.26+4-post-Ubuntu-1ubuntu122.04, mixed mode, sharing)
root@Ubuntu:~#
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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
0 upgraded, 2 newly installed, 0 to remove and 205 not upgraded.
Need to get 95.0 MB of archives.
After this operation, 97.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

```
Unpacking jenkins (2.492.2) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up jenkins (2.492.2) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/sy
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 142.
Processing triggers for man-db (2.10.2-1) ...
root@Ubuntu:~# sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /lib/systemd/systemd-sy
Executing: /lib/systemd/systemd-sysv-install enable jenkins
root@Ubuntu:~#
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Processing triggers for man-db (2.10.2-1) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntu5) ...
Setting up libxcb1-dev:amd64 (1.14-3ubuntu3) ...
Setting up libx11-dev:amd64 (2:1.7.5-1ubuntu0.3) ...
Setting up libxt-dev:amd64 (1:1.2.1-1) ...
root@Ubuntu:~# java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
root@Ubuntu:~#
```

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update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jstat to provide /usr/bi
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jstatd to provide /usr/b
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/serialver to provide /us
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jhssdb to provide /usr/bi
Setting up openjdk-17-jdk:amd64 (17.0.14+7-1-22.04.1) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-amd64/bin/jconsole to provide /usr
Processing triggers for sgml-base (1.30) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Setting up x11proto-dev (2021.5-1) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Setting up libxau-dev:amd64 (1:1.0.9-1build5) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Setting up libice-dev:amd64 (2:1.0.10-1build2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Setting up libsm-dev:amd64 (2:1.2.3-1build2) ...
Processing triggers for man-db (2.10.2-1) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntu5) ...
Setting up libxcb1-dev:amd64 (1.14-3ubuntu3) ...
Setting up libx11-dev:amd64 (2:1.7.5-1ubuntu0.3) ...
Setting up libxt-dev:amd64 (1:1.2.1-1) ...
root@Ubuntu:~# java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
root@Ubuntu:~# sudo update-alternatives --config java
There are 2 choices for the alternative java (providing /usr/bin/java).

   Selection    Path
-----
* 0            /usr/lib/jvm/java-17-openjdk-amd64/bin/java
  1            /usr/lib/jvm/java-11-openjdk-amd64/bin/java
  2            /usr/lib/jvm/java-17-openjdk-amd64/bin/java

Priority       Status
-----
0              auto mode
1              manual mode
2              manual mode

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

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Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Hit:6 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:7 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
205 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@Ubuntu:~# sudo apt install -y jenkins
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
jenkins is already the newest version (2.492.2).
0 upgraded, 0 newly installed, 0 to remove and 205 not upgraded.
root@Ubuntu:~# sudo systemctl start jenkins
root@Ubuntu:~# 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
root@Ubuntu:~# 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 Mon 2025-03-17 21:05:01 IST; 10min ago
     Main PID: 552 (java)
       Tasks: 38 (limit: 2271)
        Memory: 36.2M
         CPU: 10.280s
    CGroup: /system.slice/jenkins.service
            └─552 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpP

Mar 17 21:04:50 Ubuntu jenkins[552]: Jenkins initial setup is required. An admin user has been created and a password generated.
Mar 17 21:04:50 Ubuntu jenkins[552]: Please use the following password to proceed to installation:
Mar 17 21:04:50 Ubuntu jenkins[552]: dba3adbba4c430480006ca2db91b853
Mar 17 21:04:50 Ubuntu jenkins[552]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Mar 17 21:04:50 Ubuntu jenkins[552]: *****
Mar 17 21:04:50 Ubuntu jenkins[552]: *****
Mar 17 21:05:01 Ubuntu jenkins[552]: 2025-03-17 15:35:01.791+0000 [id=30] INFO jenkins.InitReactorRunner$1onAttained:
Mar 17 21:05:01 Ubuntu jenkins[552]: 2025-03-17 15:35:01.718+0000 [id=23] INFO hudson.lifecycle.Lifecycle#onReady: Je
Mar 17 21:05:01 Ubuntu systemd[1]: Started Jenkins Continuous Integration Server.
lines 1-20/20 (END)

```













