
JENKINS

Introduction:

Jenkins is an open-source automation server that helps automate parts of the software development process related to building, testing, and deploying, facilitating continuous integration and continuous delivery (CI/CD).

What is Jenkins?

- **Automation Server:** Jenkins is a tool used to automate repetitive tasks in the software development lifecycle.
- **Continuous Integration (CI):** Jenkins allows developers to automatically build and test code every time they commit changes to a version control system.
- **Continuous Delivery (CD):** Jenkins can also automate the deployment of applications to various environments after successful builds and tests.

Installation Steps:

Since we are performing our CI/CD operations on Linux Based Systems, we need to use Linux based commands to install Jenkins on our machines.

As a pre-requisite Java should be installed on your systems.

How to install JAVA:

Here are the steps to install Java in Debian based Linux systems(Ubuntu):

```
sudo apt update
sudo apt install fontconfig openjdk-17-jre
java -version
openjdk version "17.0.8" 2023-07-18
OpenJDK Runtime Environment (build 17.0.8+7-Debian-1deb12u1)
OpenJDK 64-Bit Server VM (build 17.0.8+7-Debian-1deb12u1, mixed mode, sharing)
```

For Red-Hat based systems:

In the above commands use “yum” instead “sudo”

For Fedora systems:

In the above commands use “dnf” instead “sudo”

Jenkins Installation:LTS is preferred than Weekly Release

Here are the steps to install Jenkins in Debian based Linux systems(Ubuntu):

```
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
```

For Red-Hat based systems:

In the above commands use “yum” instead “sudo”

For Fedora systems:

In the above commands use “dnf” instead “sudo”

Start Jenkins

You can enable the Jenkins service to start at boot with the command:

```
sudo systemctl enable jenkins
```

You can start the Jenkins service with the command:

```
sudo systemctl start jenkins
```

You can check the status of the Jenkins service using the command:

```
sudo systemctl status Jenkins
```

Then is you can access Jenkins at default port <http://localhost:8080> in your browser.

At 1st Login you need to login by a temporary password which is stored at the location:

/var/lib/Jenkins/initialAdminPassword

Navigate to the above location and use the password for initial login then you can able to edit your login credentials.

On initial login you need to install necessary plugins suggested by Jenkins then you can install the needed plugins in the future.