

How to Install Jenkins on Ubuntu 24.04

5 minute read

July 8, 2024 by **Jeff Wilson**



In this blog, we will show you how to install Jenkins on Ubuntu 24.04 OS. Jenkins is an open-source automation server developed to automate software development procedures such as building, testing, and deploying the application. Jenkins is written in Java and it runs in servlet containers such as Apache Tomcat. There are many features and plugins offered by this software such as CI/CD, GIT, SSH Build Agents, email extensions, etc. All these plugins and many others are installed very easily in the installation process of Jenkins.

The process to Install Jenkins on Ubuntu 24.04 is a straightforward process that may take up to 10 minutes. Let's get started!

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Prerequisites to Install Jenkins on Ubuntu 24.04

- A server running Ubuntu 24.04 OS
- User privileges: root or non-root user with sudo privileges
- A server with at least 2 GB of RAM (Our NVMe 2 VPS plan)

Step 1. Update the System

Every fresh install of Ubuntu 24.04 needs the packages to be updated to the latest versions available. To do that execute the following command:

```
sudo apt update -y && sudo apt upgrade -y
```

Step 2. Install Java

Since Jenkins is installed in Java we need to install it first so we can proceed with the Jenkins process of installation. Execute the command below to install Java:

```
sudo apt install openjdk-21-jdk -y
```

Once installed, we can check the Java version with the command below:

```
java -version
```

You should receive the following output:

```
root@host:~# java -version
openjdk version "21.0.3" 2024-04-16
OpenJDK Runtime Environment (build 21.0.3+9-Ubuntu-1ubuntu1)
```

Step 3. Add Jenkins GPG key and Repository

Next step is to add the Jenkins GPG key with the following command:

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

Then add the Jenkins repository because it is not added by default in the Ubuntu 24.04 sources list:

```
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
```

Once, the key and the repo are added update the system again and move to the next step of the installation.

```
sudo apt update -y
```

Step 4. Install Jenkins on Ubuntu 24.04

To install Jenkins execute the following command:

```
sudo apt install jenkins -y
```

Once installed, start and enable the Jenkins service:

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

To check the status of the service:

You should get the following output:

```
root@host:~# sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled;
   preset: enabled)
   Active: active (running) since Tue 2024-06-11 09:39:02 CDT; 15s ago
     Main PID: 11666 (java)
        Tasks: 52 (limit: 4613)
      Memory: 1.1G (peak: 1.2G)
         CPU: 1min 24.854s
       CGroup: /system.slice/jenkins.service
               └─11666 /usr/bin/java -Djava.awt.headless=true -jar
                 /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --
                 httpPort=8080
```

Step 5. Install Apache And Create Apache Configuration

The Apache web server is required, so we can create a reverse proxy in the next step. To install the Apache web server execute the following command:

```
sudo apt install apache2 -y
```

Once installed start and enable the service:

```
sudo systemctl enable apache2 && sudo systemctl start apache2
```

Check if the service is up and running:

```
sudo systemctl status apache2
```

You should receive the following output:

```
Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled;
preset: enabled)
Active: active (running) since Tue 2024-06-11 09:56:04 CDT; 4s ago
Docs: https://httpd.apache.org/docs/2.4/
Process: 12142 ExecStart=/usr/sbin/apachectl start (code=exited,
status=0/SUCCESS)
Main PID: 12145 (apache2)
Tasks: 6 (limit: 4613)
Memory: 10.5M (peak: 10.8M)
CPU: 139ms
CGroup: /system.slice/apache2.service
```

We need to create an Apache virtual host file and set it up with the reverse proxy directive in order can access the Jenkins via domain name.

Create an Apache configuration file with the following command:

```
touch /etc/apache2/sites-available/jenkins.conf
```

Open it with your favorite text editor and paste the following lines of code:

```
<Virtualhost *:80>
    ServerName        yourdomain.com
    ProxyRequests      Off
    ProxyPreserveHost On
    AllowEncodedSlashes NoDecode

    Order deny,allow
    Allow from all

    ProxyPass          / http://localhost:8080/ nocanon
    ProxyPassReverse   / http://localhost:8080/
    ProxyPassReverse   / http://yourdomain.com/
</Virtualhost>
```

Save and close the file. Then you need to execute the following commands to enable the Jenkins configuration and some Apache modules:

```
sudo a2ensite jenkins
sudo a2enmod headers
sudo a2enmod rewrite
sudo a2enmod proxy
```

After these commands, if everything is OK, you will be able to access Jenkins via your domain at <http://YourDomain.com>

Step 6. Finalize Install Jenkins on Ubuntu 24.04

On the first screen, you will be asked for the password to unlock Jenkins. The password can be found by executing the following command on the server:

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

You should receive the password as shown below:

```
root@host:~# cat /var/lib/jenkins/secrets/initialAdminPassword  
24598462a23846c58060fd15ceeb6abe
```

Enter the password and click on the continue button.

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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](#)

Then click on the “Install suggested plugins” tab.

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 2.452.1

<https://www.rosehosting.com/blog/how-to-install-jenkins-on-ubuntu-24-04/>

7/13

Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding	<div><div>** Script Security</div><div>** JavaBeans Activation Framework (JAF) API</div><div>** JAXB</div><div>** SnakeYAML API</div><div>** JSON Api</div><div>** Jackson 2 API</div><div>** commons-text API</div><div>** Pipeline: Supporting APIs</div><div>** Plugin Utilities API</div><div>** Font Awesome API</div><div>** Bootstrap 5 API</div><div>** JQuery3 API</div><div>** ECharts API</div><div>** Display URL API</div><div>** Checks API</div><div>** JUnit</div><div>** Matrix Project</div><div>** Resource Disposer</div><div>Workspace Cleanup</div><div>Ant</div><div>** JavaMail API</div><div>** Durable Task</div><div>** - required dependency</div></div>
✓ Timestamper	✓ Workspace Cleanup	✓ Ant	⚙ Gradle	
⚙ Pipeline	⚙ GitHub Branch Source	⚙ Pipeline: GitHub Groovy Libraries	⚙ Pipeline Graph View	
⚙ Git	⚙ SSH Build Agents	⚙ Matrix Authorization Strategy	⚙ PAM Authentication	
⚙ LDAP	⚙ Email Extension	⚙ Mailer	⚙ Dark Theme	

Jenkins 2.452.1

Once the installation is complete, you will be asked to enter your username, password, full name, and the email.

Create First Admin User

Username

administrator

Password

.....

Confirm password

.....

Full name

Administrator

E-mail address

admin@yourdomain.com

Jenkins 2.452.1

[Skip and continue as admin](#)[Save and Continue](#)

After saving these credentials the next window will be for the URL of your application. This window is to confirm if the domain is correct in the Apache configuration. Click on the “Save and Finish” button.

Instance Configuration

Jenkins URL:

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps.

The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Jenkins 2.452.1

Not now

[Save and Finish](#)

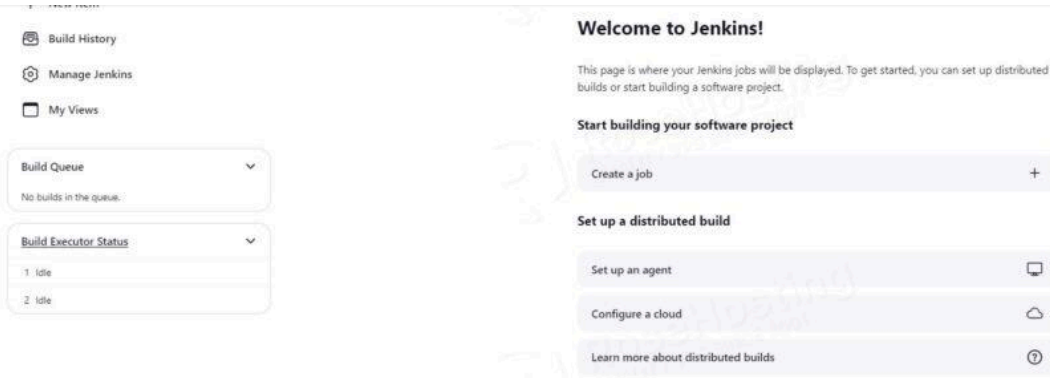
After this, there will be a button for “Start using Jenkins”. Click on that button and you will be redirected to the Administrator website of Jenkins.

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

[Start using Jenkins](#)



That's it. You learned how to successfully install Jenkins on Ubuntu 24.04. Of course, you do not have to do this on your own. You only need to sign up for one of our NVMe **Ubuntu hosting** plans and submit a support ticket. Our admins will help you with any aspect of the Jenkins installation and configuration on your server.

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