

Jenkins Installation

1. Create a VM machine

Note: Configure security group settings to allow traffic on port 8080 (for Jenkins) and 22 (for SSH).

2. Start VM machine on cmd

```
ssh <user-name>@<vm-ip>
```

3. Update the System

Make sure your system is up-to-date:

```
sudo apt update
```

```
Prathamesh@pd-vm-jenkins:~$ sudo apt update
Hit:1 http://azure.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://azure.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://azure.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
```

4. Install Java

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

```
Prathamesh@pd-vm-jenkins:~$ sudo apt install fontconfig openjdk-17-jre
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-common at-spi2-core ca-certificates-java
  dconf-gsettings-backend dconf-service fontconfig-config fonts-dejavu-core fonts-dejavu-extra fonts-dejavu-mono
  gsettings-desktop-schemas gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libasound2-data
  libasound2t64 libatk-bridge2.0-0t64 libatk-wrapper-java libatk-wrapper-java-jni libatk1.0-0t64 libatspi2.0-0t64
  libavahi-client3 libavahi-common-data libavahi-common3 libcairo-gobject2 libcairo2 libcups2t64 libdatatr1 libdconf1
  libdeflate0 libdrm-amdgpu1 libdrm-intel1 libdrm-nouveau2 libdrm-radeon1 libfontconfig1 libgail-common libgail1t64
  libgdk-pixbuf-2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl1 libgl1-amdber-dri libgl1-mesa-dri
```

Once the java is installed on your system, run beneath command to its version

```
java --version
```

```
Prathamesh@pd-vm-jenkins:~$ java --version
openjdk 17.0.13 2024-10-15
OpenJDK Runtime Environment (build 17.0.13+11-Ubuntu-2ubuntu124.04)
OpenJDK 64-Bit Server VM (build 17.0.13+11-Ubuntu-2ubuntu124.04, mixed mode, sharing)
Prathamesh@pd-vm-jenkins:~$
```

5. Add Jenkins APT Repository

```
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
```

```
Prathamesh@pd-vm-jenkins:~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
--2024-11-30 08:27:19-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.30.133, 2a04:4e42:7::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.30.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3175 (3.1K) [application/pgp-keys]
Saving to: '/usr/share/keyrings/jenkins-keyring.asc'

/usr/share/keyrings/jenkins-k 100%[=====>] 3.10K --.-KB/s in 0s
2024-11-30 08:27:19 (37.4 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]
```

6. Install Jenkins on Ubuntu 24.04

sudo apt update

```
Prathamesh@pd-vm-jenkins:~$ sudo apt update
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu noble InRelease
Get:3 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:4 http://azure.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:5 http://azure.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:6 http://azure.archive.ubuntu.com/ubuntu noble-security InRelease
Get:7 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:8 https://pkg.jenkins.io/debian-stable binary/ Packages [28.2 kB]
Fetched 157 kB in 1s (189 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
42 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

sudo apt install jenkins -y

```
Prathamesh@pd-vm-jenkins:~$ sudo apt install jenkins -y
Reading package lists... Done
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 42 not upgraded.
Need to get 94.3 MB of archives.
After this operation, 96.9 MB of additional disk space will be used.
Get:1 http://azure.archive.ubuntu.com/ubuntu noble/main amd64 net-tools amd64
Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.479.2 [94.1 MB]
Fetched 94.3 MB in 6s (16.2 MB/s)
Selecting previously unselected package net-tools.
(Reading database ... 123456789 ...)
```

7. Start and Enable Jenkins

```
sudo systemctl start jenkins
```

```
sudo systemctl enable jenkins
```

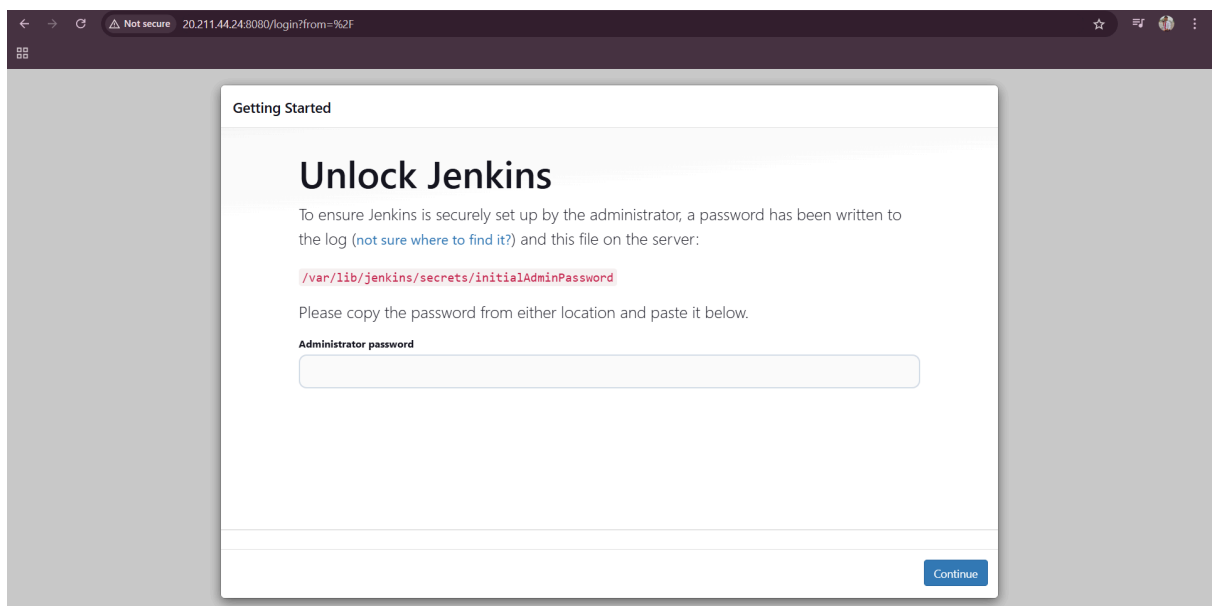
```
Prathamesh@pd-vm-jenkins:~$ sudo systemctl start jenkins
Prathamesh@pd-vm-jenkins:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
```

8. Verify Installation

```
sudo systemctl status jenkins
```

9. Access Jenkins

Open a browser and navigate to <http://<your-server-ip>:8080>. Use the initial password from </var/lib/jenkins/secrets/initialAdminPassword> to log in.

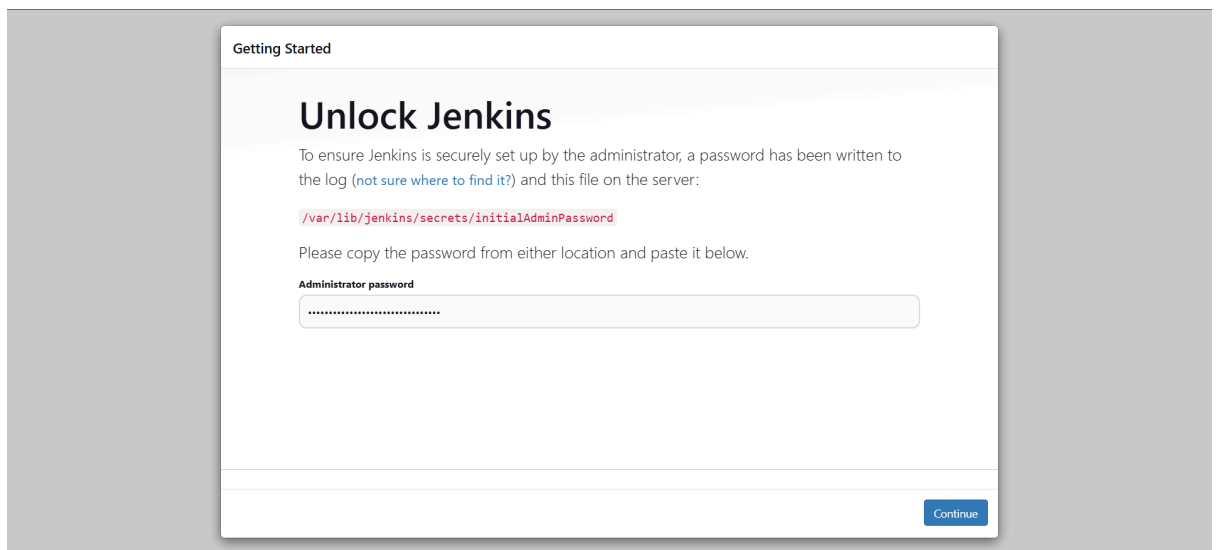


To view the password, use the cat command as shown:

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

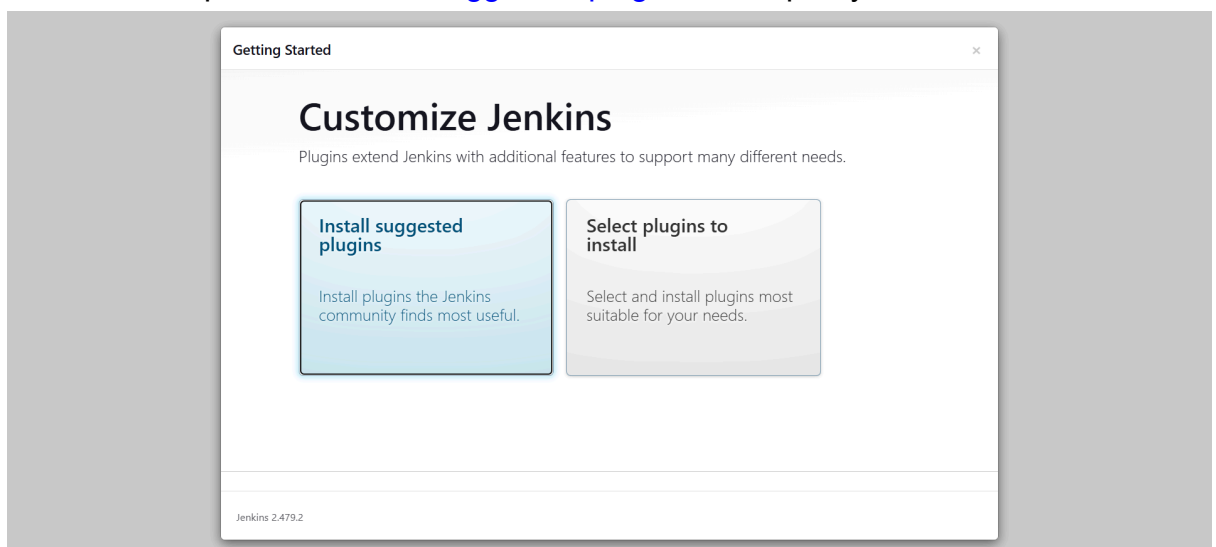
```
Prathamesh@pd-vm-jenkins:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
f767025031084422958c8f2c01e9cbae
Prathamesh@pd-vm-jenkins:~$
```

Copy the password and paste it in the text field shown and click the “Continue” button.

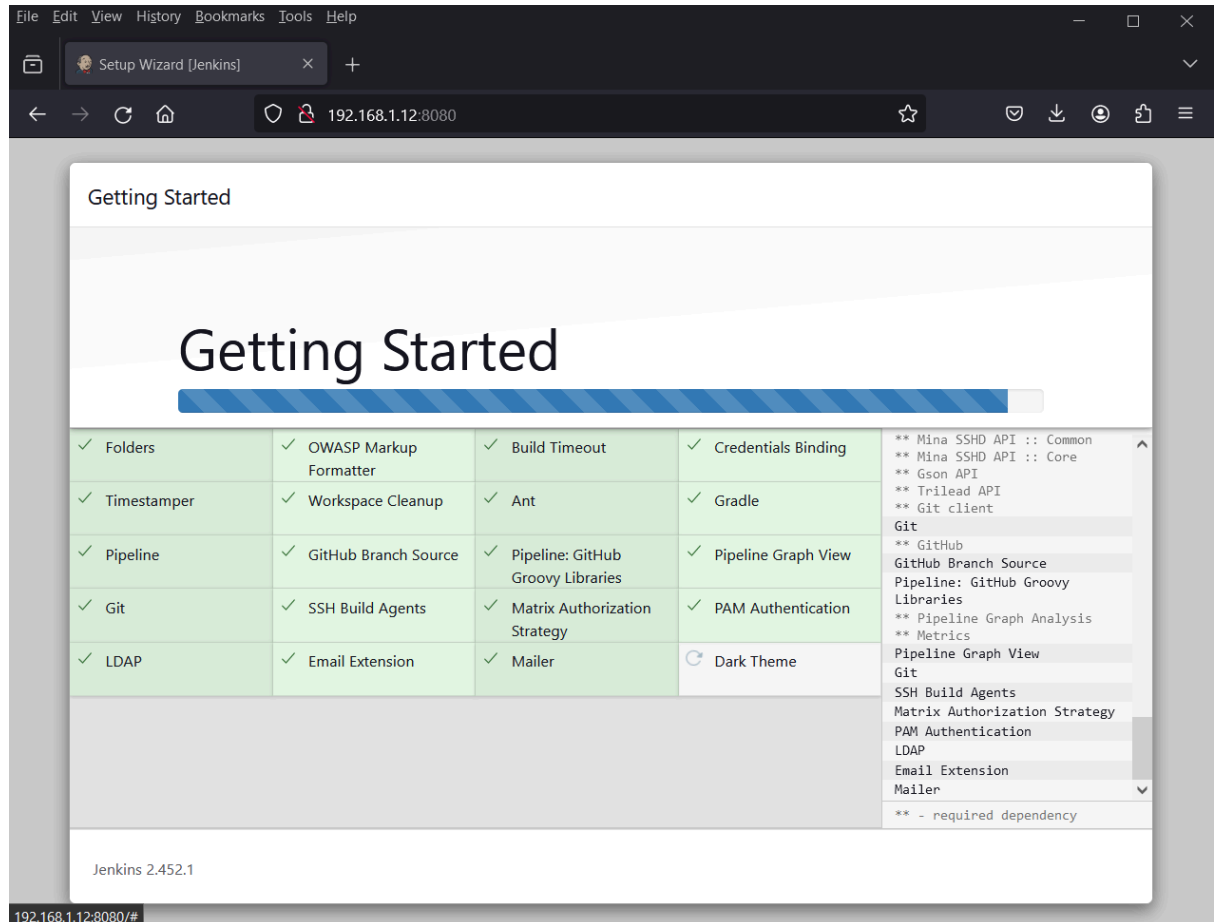


10. Finish Jenkins Initial Setup

In the next step, select ‘[Install suggested plugin](#)’ for simplicity’s sake.



Thereafter, the installation of the necessary plugin required by Jenkins will commence.



When the installation of plugins is complete, the installer will take you to the next section where you will be required to create an Admin user and click on the 'Save and Continue' button.

The screenshot shows the Jenkins Setup Wizard 'Create First Admin User' screen. The page title is 'Create First Admin User'. Below the title, there are four input fields: Username (admin), Password (masked with dots), Confirm password (masked with dots), and Full name (Devops Admin). At the bottom of the screen, there are two buttons: 'Skip and continue as admin' and 'Save and Continue'. The bottom of the screen displays 'Jenkins 2.479.2'.

Username: admin

Password:

Confirm password:

Full name: Devops Admin

Buttons: Skip and continue as admin, Save and Continue

Jenkins 2.479.2

The next step will populate the default URL for your Jenkins's instance. No action is required, simply click '[Save and Finish](#)'.

Getting Started

Instance Configuration

Jenkins URL:

<http://20.211.44.24:8080/>

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 2.479.2

[Not now](#)

[Save and Finish](#)

Finally, click on the '[Start using Jenkins](#)' button to gain access to Jenkins dashboard.

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

[Start using Jenkins](#)

Jenkins 2.479.2

This ushers you to Jenkins dashboard as shown.

Dashboard >

+ New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

Add description

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job

Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds