

Install Jenkins on Ubuntu 22.04

Introduction

Jenkins is a robust tool that enables continuous integration and continuous project delivery. Any type of build or continuous integration can be handled by this free source program. Jenkins can be integrated with a variety of deployment and testing tools. We will go over how to use Jenkins to continuously develop and test your software projects in this lesson.

Step 1 — Installing Jenkins

```
wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo gpg --dearmor -o /usr/share/keyrings/jenkins.gpg
```

```
sudo sh -c 'echo deb [signed-by=/usr/share/keyrings/jenkins.gpg] http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
```

```
sudo apt update
sudo apt install jenkins
```

We'll launch the Jenkins server now that Jenkins and its dependencies are installed.

Step 2 — Starting Jenkins

Use systemctl to launch Jenkins now that it has been installed.

```
sudo systemctl status jenkins
```

To confirm that Jenkins launched correctly, we'll use the status command as systemctl doesn't show status output:

```
sudo systemctl status jenkins
```

If all went according to plan, the status output's first line indicates that the service is operational and set up to launch at boot:

```
root@jenkins:~# systemctl start jenkins.service
root@jenkins:~# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2024-11-10 00:10:26 CET; 55s ago
     Main PID: 6816 (java)
       Tasks: 52 (limit: 9375)
      Memory: 1.1G
         CPU: 22.644s
    CGroup: /system.slice/jenkins.service
            └─6816 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Nov 10 00:10:21 Jenkins.mhc jenkins[6816]: 680468d7a39d449188f096434a33d7d6
Nov 10 00:10:21 Jenkins.mhc jenkins[6816]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Nov 10 00:10:21 Jenkins.mhc jenkins[6816]: *****
Nov 10 00:10:21 Jenkins.mhc jenkins[6816]: *****
Nov 10 00:10:21 Jenkins.mhc jenkins[6816]: *****
Nov 10 00:10:26 Jenkins.mhc jenkins[6816]: 2024-11-09 23:10:26.433+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
Nov 10 00:10:26 Jenkins.mhc jenkins[6816]: 2024-11-09 23:10:26.450+0000 [id=24] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
Nov 10 00:10:26 Jenkins.mhc systemd[1]: Started Jenkins Continuous Integration Server.
Nov 10 00:10:27 Jenkins.mhc jenkins[6816]: 2024-11-09 23:10:27.415+0000 [id=53] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data
Nov 10 00:10:27 Jenkins.mhc jenkins[6816]: 2024-11-09 23:10:27.416+0000 [id=53] INFO hudson.util.Retrier#start: Performed the action check updates s
```

Step 3 — Opening the Firewall

To configure a UFW firewall, go to Initial Server Setup for Ubuntu 22.04, Step 4 - Configuring a Basic Firewall. Jenkins operates on port 8080 by default. Utilize ufw to open that port:

```
sudo ufw allow 8080
```

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Note: If the firewall is not active, the subsequent commands will permit OpenSSH and activate the firewall:

```
sudo ufw allow OpenSSH
sudo ufw enable
```

Verify the status of ufw to ensure the new rules are in place:

```
sudo ufw status
```

You will observe that access to port 8080 is permitted from any location:

```
root@Jenkins:~# ufw status
Status: active

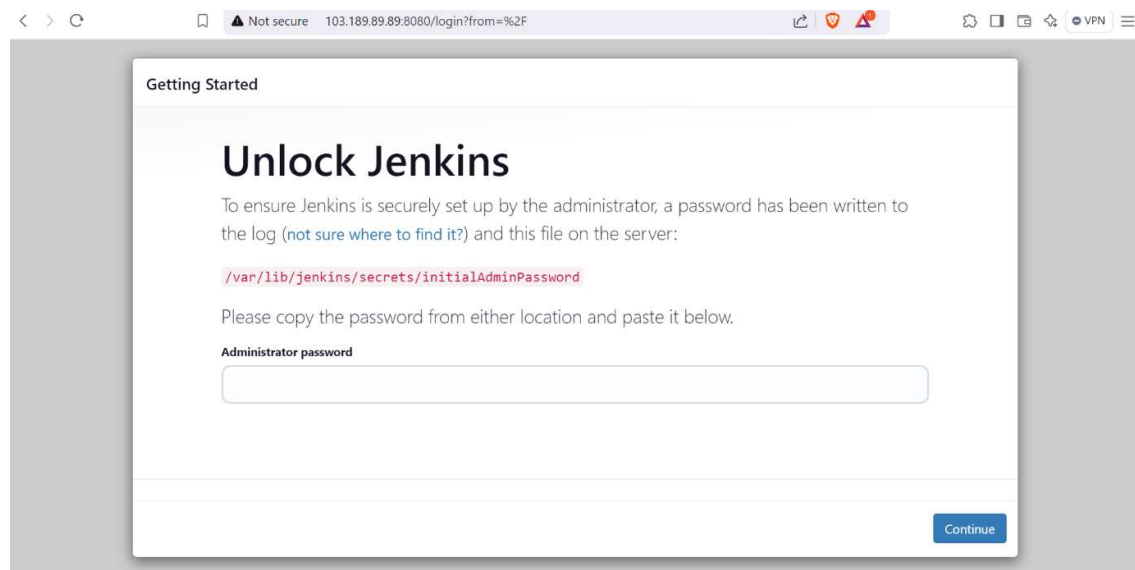
To Action From
--
8080 ALLOW Anywhere
OpenSSH ALLOW Anywhere
8080 (v6) ALLOW Anywhere (v6)
OpenSSH (v6) ALLOW Anywhere (v6)
```

After installing Jenkins and configuring a firewall, you have finished the installation phase and can move on to setting up Jenkins.

Step 4 — Setting Up Jenkins

To configure your installation, access Jenkins on its standard port, 8080, by using your server's domain name or IP address: `http://your_server_ip_or_domain:8080`

You will see the Unlock Jenkins screen, showing where to find the initial password:



In the terminal window, utilize the cat command to show the password:

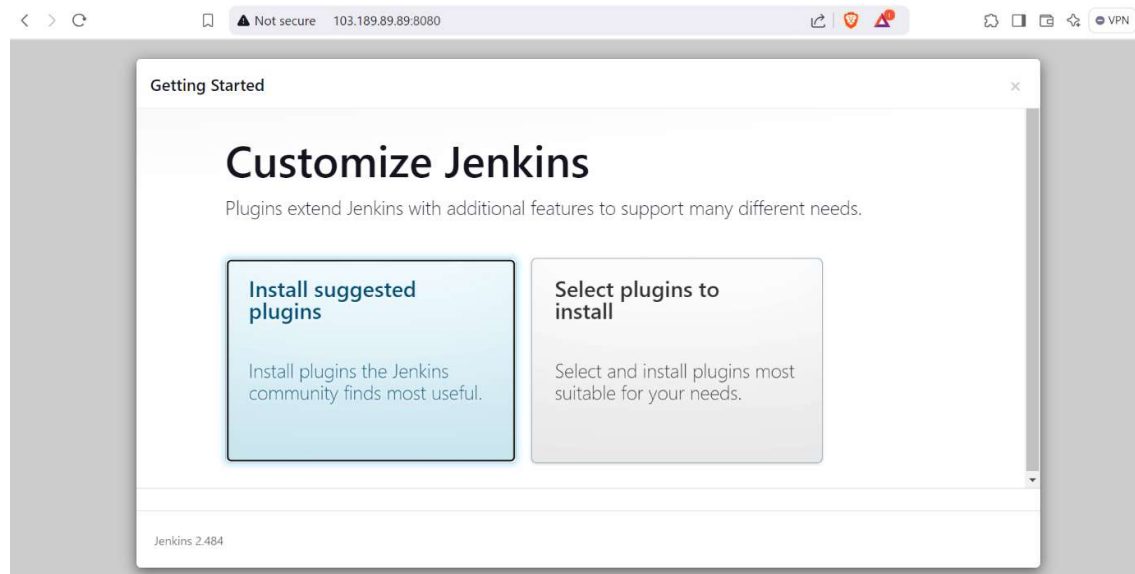
```
sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```

Copy the alphanumeric password of 32 characters from the terminal and paste it into the Administrator password box, then click Continue.

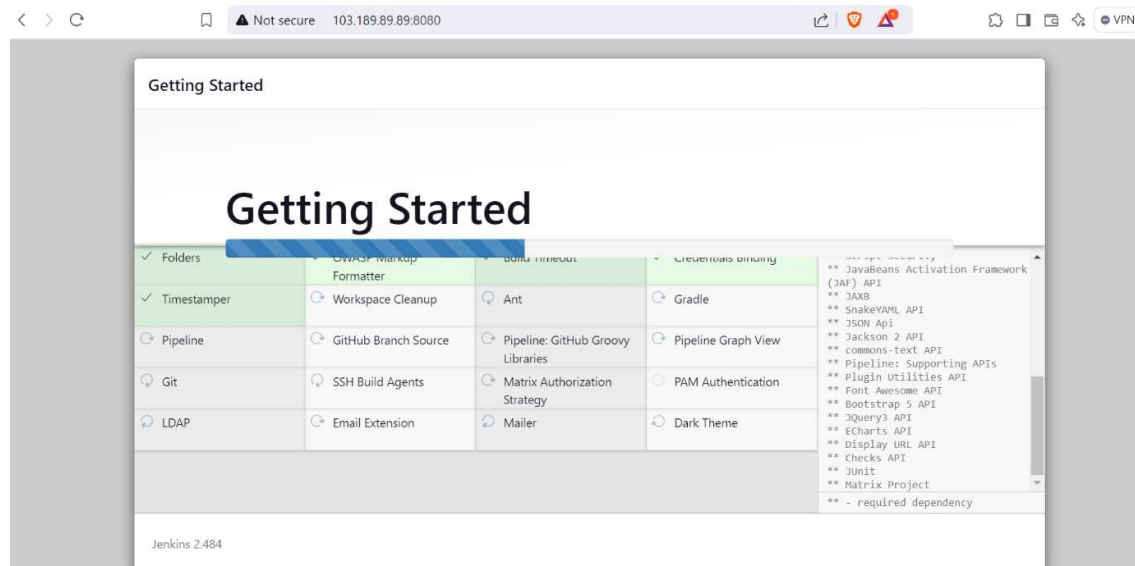
```
root@Jenkins:~# cat /var/lib/jenkins/secrets/initialAdminPassword
680468d7a39d449188f096434a33d7d6
```

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The following screen offers the choice to install recommended plugins or to choose particular plugins:



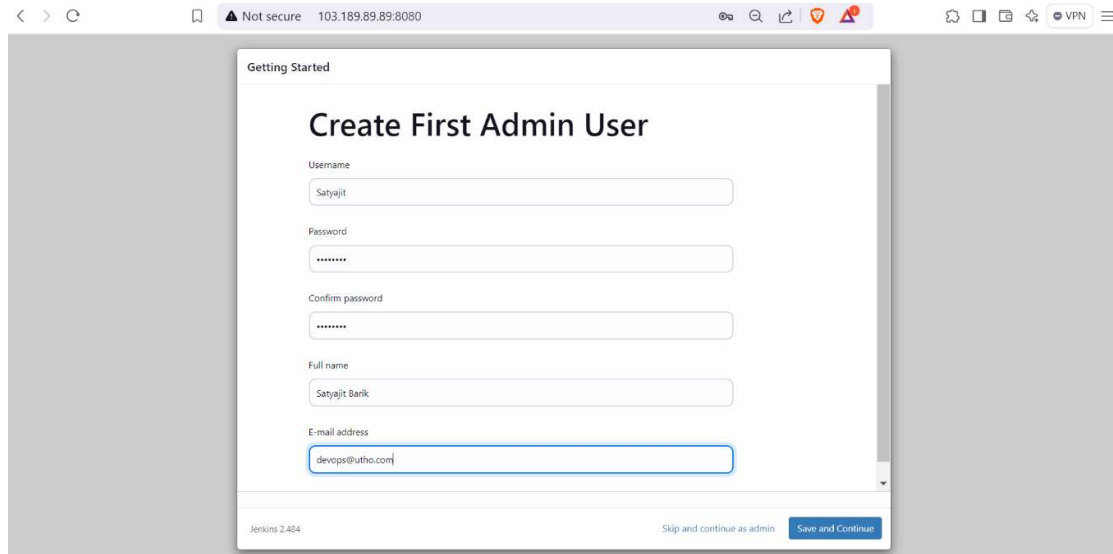
We will select the Install recommended plugins option, which will promptly start the installation process.



Once the installation finishes, you'll be asked to create the initial administrative user. You can bypass this step and proceed as admin with the initial password provided earlier, but we will take a moment to set up the user.

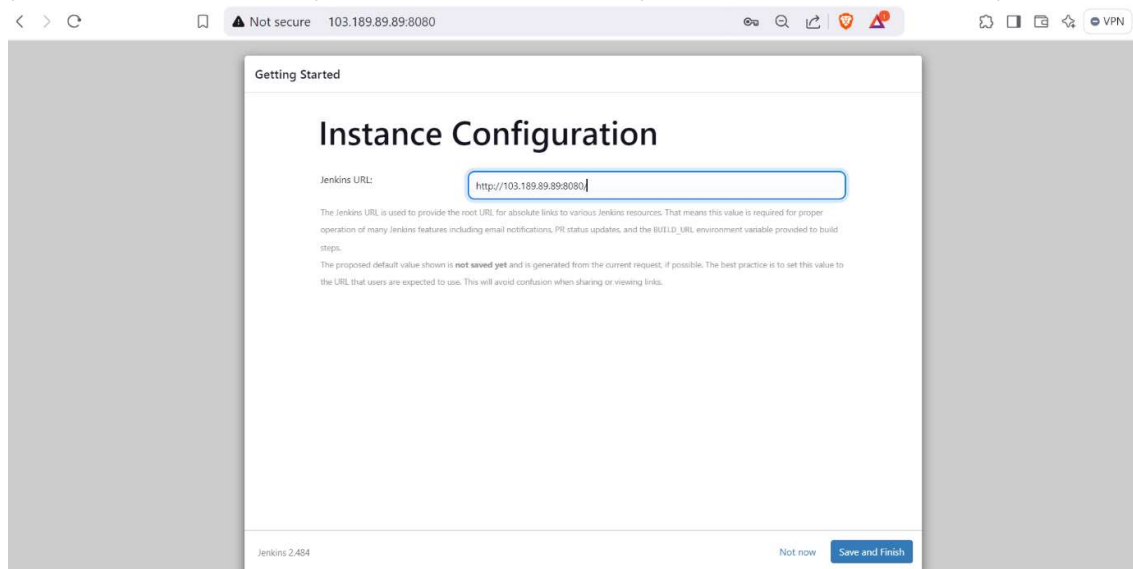
Provide your username and password and User name accordingly:

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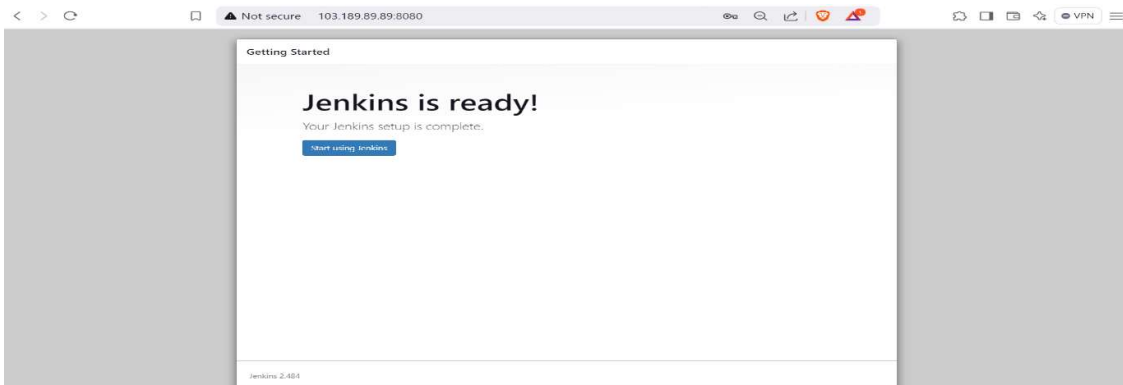
The screenshot shows the 'Getting Started' page of Jenkins with the 'Create First Admin User' form. The form includes fields for Username (Satyajit), Password (masked with dots), Confirm password (masked with dots), Full name (Satyajit Bank), and E-mail address (devops@utho.com). At the bottom, there are two buttons: 'Skip and continue as admin' and 'Save and Continue'.

You will get an Instance Configuration page that requests your confirmation of the desired URL for your Jenkins instance. Verify either the domain name of your server or the IP address of your server:



The screenshot shows the 'Getting Started' page of Jenkins with the 'Instance Configuration' form. The 'Jenkins URL' field is pre-filled with 'http://103.189.89.8080'. Below the field, there is a note explaining that the Jenkins URL is used for absolute links to various Jenkins resources. At the bottom, there are two buttons: 'Not now' and 'Save and Finish'.

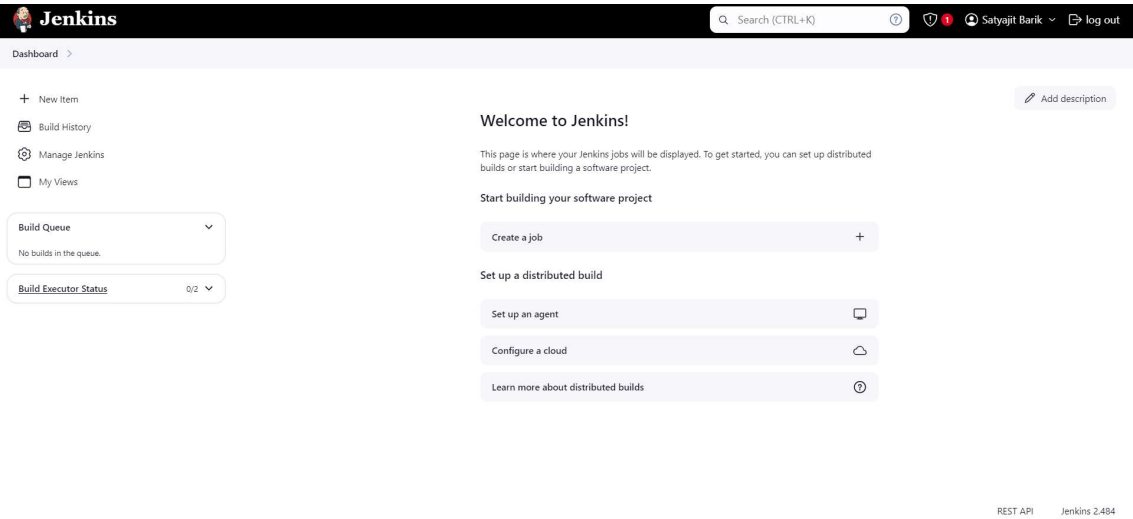
Once you verify the correct details, press Save and Complete. You will see a confirmation page stating that "Jenkins is Ready!":



The screenshot shows the 'Getting Started' page of Jenkins with the 'Jenkins is ready!' confirmation message. The message states 'Your Jenkins setup is complete.' and includes a button labeled 'Start using Jenkins'.

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Click **Start using Jenkins** to visit the main Jenkins dashboard:



At this stage, you have finished a successful installation of Jenkins.

Congratulations