

Installing Jenkins

This document covers the steps to install Jenkins. So let's see these steps one by one. Login to your Ubuntu instance and once you reach the terminal, perform the following steps.

1. First you need to install Java, as it is a prerequisite to run Jenkins. Type the following command **sudo apt install -y openjdk-11-jdk** and hit enter.

```
ubuntu@ip-172-31-27-198:~$ sudo apt install -y openjdk-11-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
```

2. Once Java is installed, run the following command **java --version** to check the version of Java installed in our system.

```
ubuntu@ip-172-31-27-198:~$ java --version
openjdk 11.0.10 2021-01-19
OpenJDK Runtime Environment (build 11.0.10+9-Ubuntu-0ubuntu1.20.04)
OpenJDK 64-Bit Server VM (build 11.0.10+9-Ubuntu-0ubuntu1.20.04, mixed mode, sharing)
ubuntu@ip-172-31-27-198:~$
```

3. Once Java is installed, you need to install Jenkins. After that, run the following command to add the repository key to the system.

wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key |
sudo apt-key add -

```
ubuntu@ip-172-31-27-198:~$ wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo apt-key add -
OK
ubuntu@ip-172-31-27-198:~$
```

4. Then run the following command,

sudo sh -c 'echo deb https://pkg.jenkins.io/debian-stable binary/ >
/etc/apt/sources.list.d/jenkins.list'

```
ubuntu@ip-172-31-27-198:~$ sudo sh -c 'echo deb https://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
```

- After that, run the following command to update your packages: **sudo apt-get update**

```
ubuntu@ip-172-31-27-198:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
```

- Then finally install Jenkins by running the following command: **sudo apt-get install jenkins**

```
ubuntu@ip-172-31-27-198:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  daemon net-tools
The following NEW packages will be installed:
  daemon jenkins net-tools
```

- Once Jenkins is installed, its corresponding version can be checked by running the following command: **vim /var/lib/jenkins/config.xml**.

```
<?xml version='1.1' encoding='UTF-8'?>
<hudson>
  <disabledAdministrativeMonitors/>
  <version>2.277.1</version>
  <numExecutors>2</numExecutors>
  <mode>NORMAL</mode>
  <useSecurity>true</useSecurity>
  <authorizationStrategy class="hudson.security.FullControlOnceLoggedInAuthorizationStrategy">
    <denyAnonymousReadAccess>true</denyAnonymousReadAccess>
  </authorizationStrategy>
  <securityRealm class="hudson.security.HudsonPrivateSecurityRealm">
    <disableSignup>true</disableSignup>
```

- To come out of this file, first press the escape key. Then write **:q** and

then press enter.

9. Then to start Jenkins, run the following command: **sudo service jenkins start**.

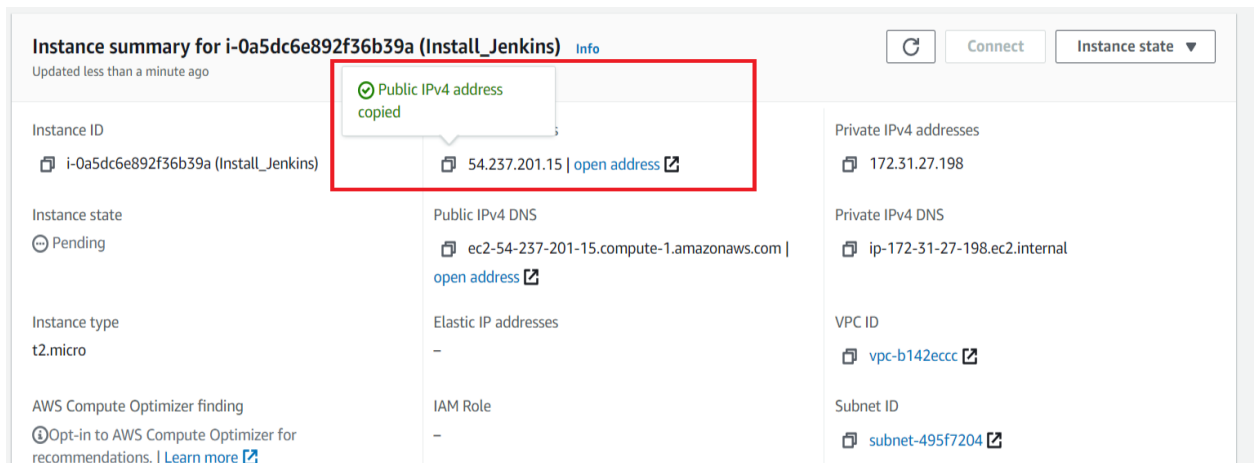
```
ubuntu@ip-172-31-27-198:~$ sudo service jenkins start
ubuntu@ip-172-31-27-198:~$
```

10. Then, you can check the status of Jenkins by running the following command: **sudo service jenkins status**. Here you can see that Jenkins is in a running state.

```
ubuntu@ip-172-31-27-198:~$ sudo service jenkins status
• jenkins.service - LSB: Start Jenkins at boot time
   Loaded: loaded (/etc/init.d/jenkins; generated)
   Active: active (exited) since Fri 2021-04-02 19:58:01 UTC; 18min ago
     Docs: man:systemd-sysv-generator(8)
    Tasks: 0 (limit: 1160)
   Memory: 0B
    CGroup: /system.slice/jenkins.service

Apr 02 19:58:00 ip-172-31-27-198 systemd[1]: Starting LSB: Start Jenkins at boot time...
Apr 02 19:58:00 ip-172-31-27-198 jenkins[16462]: Correct java version found
```

11. Now, go to your instance console and copy the public IP address of the instance.



Instance summary for i-0a5dc6e892f36b39a (Install_Jenkins) [Info](#)

Updated less than a minute ago

Instance ID: i-0a5dc6e892f36b39a (Install_Jenkins)

Instance state: Pending

Instance type: t2.micro

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | [Learn more](#)

Public IPv4 address: 54.237.201.15 | [open address](#)

Public IPv4 DNS: ec2-54-237-201-15.compute-1.amazonaws.com | [open address](#)

Elastic IP addresses: -

IAM Role: -

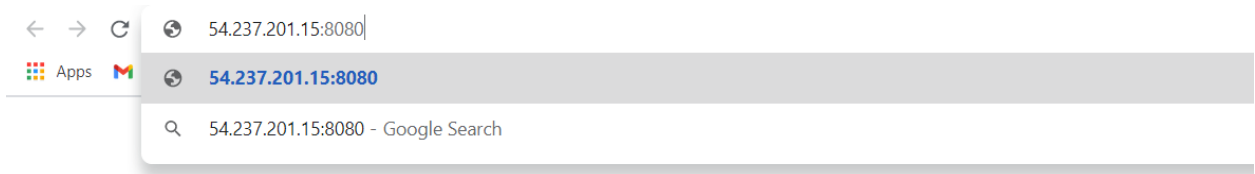
Private IPv4 addresses: 172.31.27.198

Private IPv4 DNS: ip-172-31-27-198.ec2.internal

VPC ID: vpc-b142eccc

Subnet ID: subnet-495f7204

12. After copying the IP address, open your browser and in the address, paste the IP address followed by port number 8080, i.e., **<ip_address:8080>**. Then press enter.



54.237.201.15:8080

54.237.201.15:8080

54.237.201.15:8080 - Google Search

13. A window will appear asking to enter the **InitialAdminPassword**. Therefore, enter the password that we have copied over to the text editor.

Getting Started

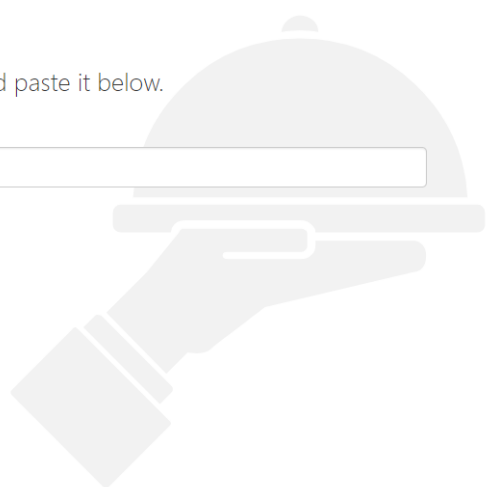
Unlock Jenkins

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

14. Now, run the following command to get the default password provided by Jenkins: **sudo cat /var/lib/jenkins/secrets/initialAdminPassword**

```
ubuntu@ip-172-31-27-198:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
486d353a73a64a1284dcdd7f8c1e48f8
ubuntu@ip-172-31-27-198:~$ █
```

15. Copy this password and paste it into the **Administrator password**. After that, click on the **Continue** option.

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

16. Then the **Customize Jenkins** window will appear. Here, click on **Install suggested plugins**.

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.

17. Now, the plugins will be installed as shown in the figure below.

Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding	Folders
✓ Timestamper	Workspace Cleanup	Ant	Gradle	** Trilead API
Pipeline	GitHub Branch Source	Pipeline: GitHub Groovy Libraries	Pipeline: Stage View	OWASP Markup Formatter
Git	SSH Build Agents	Matrix Authorization Strategy	PAM Authentication	** Structs
LDAP	Email Extension	Mailer		** Pipeline: Step API
				** Token Macro
				Build Timeout
				** JAXB
				** Credentials
				** Plain Credentials
				** SSH Credentials
				Credentials Binding
				** SCM API
				** Pipeline: API
				Timestamper
				** Script Security
				** Plugin Utilities API
				** Font Awesome API
				** Popper.js API
				** JQuery3 API
				** Bootstrap 4 API
				** - required dependency

18. Then, a window will appear asking to create the first admin user. For now, select **Skip and continue as admin** option.

Getting Started

Create First Admin User

Username:

Password:

Confirm password:

Full name:

E-mail address:

Jenkins 2.277.1

Skip and continue as admin
Save and Continue

19. Then, the **Instance Configuration** window will appear showing **Jenkins URL**. Click on **Save and Finish**.

Getting Started

Instance Configuration

Jenkins URL:

http://54.237.201.15:8080/

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 2.277.1

Not now

Save and Finish

20. After that, click on **Start using Jenkins** option.

Getting Started

Jenkins is ready!


You have skipped the **setup of an admin user**.


To log in, use the username: "admin" and the administrator password you used to access the setup wizard.

Your Jenkins setup is complete.


Start using Jenkins


21. After that, you can see the **Jenkins Dashboard** as shown below.


 Jenkins


admin  log out


Dashboard


 New Item


 People

 Build History

 Manage Jenkins

 My Views

 Lockable Resources

 New View

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 ↗