

## INSTALLING JENKINS SERVER ON EC2

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## INSTALLING JENKINS SERVER

- Launch an ubuntu AMI
- SSH into your instance

```
ubuntu@ip-172-31-89-121:~$ ssh -i "ansible.pem" ubuntu@ec2-3-88-234-204.compute-1.amazonaws.com
The authenticity of host 'ec2-3-88-234-204.compute-1.amazonaws.com (3.88.234.204)' can't be established.
ED25519 key fingerprint is SHA256:XIX/DI/k+V43y3tOm/OL+SF+09h1ssbcYYv3EgF5RJI.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-88-234-204.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-1060-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information disabled due to load higher than 1.0
0 updates can be applied immediately.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-89-121:~$
```

- Update the apt repository  
Sudo apt update
- Install java jdk  
Sudo apt install openjdk-8-jdk -y
- Check the java version to ensure installation  
Java -version

```

ubuntu@ip-172-31-89-121:~$ sudo apt-get install -y openjdk-8-jdk-headless
Setting up openjdk-8-jdk-headless:amd64 (8u112-b07-0ubuntu1-18.04) ...
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/pack200 to provide /usr/bin/pack200 (pack200) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/rmiregistry to provide /usr/bin/rmiregistry (rmiregistry) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/unpack200 to provide /usr/bin/unpack200 (unpack200) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/orbd to provide /usr/bin/orbd (orbd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/hservtool to provide /usr/bin/hservtool (hservtool) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/tnameserv to provide /usr/bin/tnameserv (tnameserv) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/jexec to provide /usr/bin/jexec (jexec) in auto mode
Processing triggers for mime-support (3.6ubuntu1) ...
Setting up openjdk-8-jdk-headless:amd64 (8u112-b07-0ubuntu1-18.04) ...
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/d13 to provide /usr/bin/d13 (d13) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jdeps to provide /usr/bin/jdeps (jdeps) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/ocimport to provide /usr/bin/ocimport (ocimport) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/rmic to provide /usr/bin/rmic (rmic) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/infoc to provide /usr/bin/infoc (infoc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jasdebug to provide /usr/bin/jasdebug (jasdebug) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/native2ascii to provide /usr/bin/native2ascii (native2ascii) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jstat to provide /usr/bin/jstat (jstat) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jstatd to provide /usr/bin/jstatd (jstatd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/javah to provide /usr/bin/javah (javah) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/ehadb to provide /usr/bin/ehadb (ehadb) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jps to provide /usr/bin/jps (jps) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jstack to provide /usr/bin/jstack (jstack) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jrunscript to provide /usr/bin/jrunscript (jrunscript) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/javadoc to provide /usr/bin/javadoc (javadoc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/javap to provide /usr/bin/javap (javap) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jar to provide /usr/bin/jar (jar) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jc to provide /usr/bin/jc (jc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jcsh to provide /usr/bin/jcsh (jcsh) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jcshrc to provide /usr/bin/jcshrc (jcshrc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jstatd to provide /usr/bin/jstatd (jstatd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jdb to provide /usr/bin/jdb (jdb) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jhat to provide /usr/bin/jhat (jhat) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jfr to provide /usr/bin/jfr (jfr) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jps to provide /usr/bin/jps (jps) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jcmd to provide /usr/bin/jcmd (jcmd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jrunscript to provide /usr/bin/jrunscript (jrunscript) in auto mode
Setting up openjdk-8-jre:amd64 (8u112-b07-0ubuntu1-18.04) ...
Setting up openjdk-8-jdk:amd64 (8u112-b07-0ubuntu1-18.04) ...
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/appletviewer to provide /usr/bin/appletviewer (appletviewer) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode
Processing triggers for libc-bin (2.27-0ubuntu1) ...
ubuntu@ip-172-31-89-121:~$ java -version
openjdk version "1.8.0_112"
OpenJDK Runtime Environment (build 1.8.0_112-8u112-b07-0ubuntu1-18.04-b07)
OpenJDK 64-Bit Server VM (build 25.31-b07, mixed mode)
ubuntu@ip-172-31-89-121:~$

```

f. Install maven and git

Sudo apt-get install -y maven git

g. Check the Version of Git & Maven

For Git: git --version

For Maven: mvn -version

```

ubuntu@ip-172-31-89-121:~$ sudo apt-get install -y maven git
Setting up libplexus-interpolation-java (1.24-1) ...
Setting up libplexus-component-annotations-java (1.7.1-7) ...
Setting up libplexus-utils2-java (3.0.24-3) ...
Setting up libwagon-provider-api-java (3.0.0-2) ...
Setting up libjsr305-java (0.1-1ubuntu4) ...
Setting up libgeronimo-interceptor-3.0-spec-java (1.0.1-4fakesync) ...
Setting up libmaven-resolver-java (1.3.1-1-18.04) ...
Setting up libjansi-native-java (1.7-1) ...
Setting up libwagon-http-shaded-java (3.0.0-2) ...
Setting up libaache-pom-java (1.8-1) ...
Setting up libatinject-jsr330-api-java (1.0+ds1-5) ...
Setting up libmaven-parent-java (3.1-2-18.04) ...
Setting up libaopalliance-java (20070526-6) ...
Setting up libgeronimo-annotation-1.3-spec-java (1.0-1) ...
Setting up libcommons-cli-java (1.4-1) ...
Setting up libplexus-sec-dispatcher-java (1.4-3) ...
Setting up libjansi-java (1.16-1) ...
Setting up libguava-java (19.0-1) ...
Setting up libwagon-file-java (3.0.0-2) ...
Setting up libcommons-parent-java (43-1) ...
Setting up libcdi-api-java (1.2-2) ...
Setting up libcommons-lang3-java (3.8-1-18.04.2) ...
Setting up libcommons-io-java (2.6-2ubuntu0.18.04.1) ...
Setting up libguice-java (4.0-4) ...
Setting up libmaven-shared-utils-java (3.3.0-1-18.04) ...
Setting up libsisu-inject-java (0.3.2-2) ...
Setting up libsisu-plexus-java (0.3.3-3) ...
Setting up libmaven3-core-java (3.6.0-1-18.04.1) ...
Setting up maven (3.6.0-1-18.04.1) ...
update-alternatives: using /usr/share/maven/bin/mvn to provide /usr/bin/mvn (mvn) in auto mode
ubuntu@ip-172-31-89-121:~$ git --version
git version 2.17.0
ubuntu@ip-172-31-89-121:~$ mvn -version
Apache Maven 3.6.0
Java version: 1.8.0_112, vendor: Private Build, runtime: /usr/lib/jvm/java-8-openjdk-amd64/jre
Default locale: en, platform encoding: UTF-8
OS name: 'linux', version: '5.4.0-1060-aws', arch: 'amd64', family: 'unix'
ubuntu@ip-172-31-89-121:~$

```

Download & install Jenkins

Open Jenkins website

(<https://jenkins.io/download/>)

h. Go to Long Term Support

## Select Generic Java Package (.war)

We are selecting generic java package file because jenkins will install on those machines where java is already installed. If we have java

install in windows machine jenkins will work. Only pre requirement is java needs to be installed.

For Windows we just need to click on the file and it will download automatically.

For Linux machine enter command wget and paste the url to download the file.

To get the URL right click on generic java package and click on copy link address.

```
(wget http://mirrors.jenkins.io/war-  
stable/latest/jenkins.war)
```

```
wget https://get.jenkins.io/war-  
stable/2.277.2/jenkins.war
```

i. Start the Jenkins.war file

```
java -jar jenkins.war
```

Every day if we want to run the jenkins we need to run this command.

```
ubuntu@ip-172-31-89-121: ~  
ubuntu@ip-172-31-89-121:~$ java -jar jenkins.war  
Running from: /home/ubuntu/.jenkins.war  
webroot: $user.home/.jenkins  
2022-02-15 19:01:48.649+0000 [id=1] INFO org.eclipse.jetty.util.log.Log#initialized: Logging initialized @1077ms to org.eclipse.jetty.util.log.JavaUtilLog  
2022-02-15 19:01:48.801+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file  
2022-02-15 19:01:50.781+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath  
2022-02-15 19:01:50.913+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-9.4.43.v20210629; built: 2021-06-30T11:07:22.254Z; git: 526006ecf3af77f1a27ef3a2882bef7ea9dd7e8; jvm 1.8.0_322-b07-ubuntu18.04-b07  
2022-02-15 19:01:51.538+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet  
2022-02-15 19:01:51.640+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: DefaultSessionIdManager workerName=node0  
2022-02-15 19:01:51.641+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: No SessionScavenger set, using defaults  
2022-02-15 19:01:51.643+0000 [id=1] INFO o.e.j.server.session.HouseKeeper#startScavenging: node0 Scavenging every 660000ms  
2022-02-15 19:01:52.434+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: /home/ubuntu/.jenkins found at: $user.home/.jenkins  
2022-02-15 19:01:52.710+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.041c07648[Jenkins v2.319.3,/,file:///home/ubuntu/.jenkins/war/,AVAILABLE]{/home/ubuntu/.jenkins/war/}  
2022-02-15 19:01:52.765+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@383dc82c{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}  
2022-02-15 19:01:52.766+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started @519ms  
2022-02-15 19:01:52.777+0000 [id=21] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled  
2022-02-15 19:01:54.375+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization  
2022-02-15 19:01:54.449+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins  
2022-02-15 19:01:57.026+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins  
2022-02-15 19:01:57.038+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins  
2022-02-15 19:01:57.069+0000 [id=27] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions  
2022-02-15 19:01:58.214+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded  
2022-02-15 19:01:58.214+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted  
2022-02-15 19:01:58.215+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs  
2022-02-15 19:01:58.215+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated  
2022-02-15 19:01:58.321+0000 [id=40] INFO hudson.model.AsyncPeriodicWork$lambda$doRun$1: Started Download metadata  
2022-02-15 19:01:58.357+0000 [id=40] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server  
2022-02-15 19:01:59.517+0000 [id=26] INFO jenkins.install.SetupWizard#init:  
  
===== Jenkins initial setup is required. An admin user has been created and a password generated. Please use the following password to proceed to installation:  
7199c67d410f4448a0cc400c5bcbd30f  
  
This may also be found at: /home/ubuntu/.jenkins/secrets/initialAdminPassword  
  
===== 2022-02-15 19:02:24.979+0000 [id=27] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization  
2022-02-15 19:02:25.018+0000 [id=20] INFO hudson.WebAppMain$3$run: Jenkins is fully up and running  
2022-02-15 19:02:25.113+0000 [id=40] INFO h.w.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller  
2022-02-15 19:02:25.114+0000 [id=40] INFO hudson.model.AsyncPeriodicWork$lambda$doRun$1: Started Download metadata  
2022-02-15 19:02:25.116+0000 [id=40] INFO hudson.model.AsyncPeriodicWork$lambda$doRun$1: Finished Download metadata. 26,791 ms
```

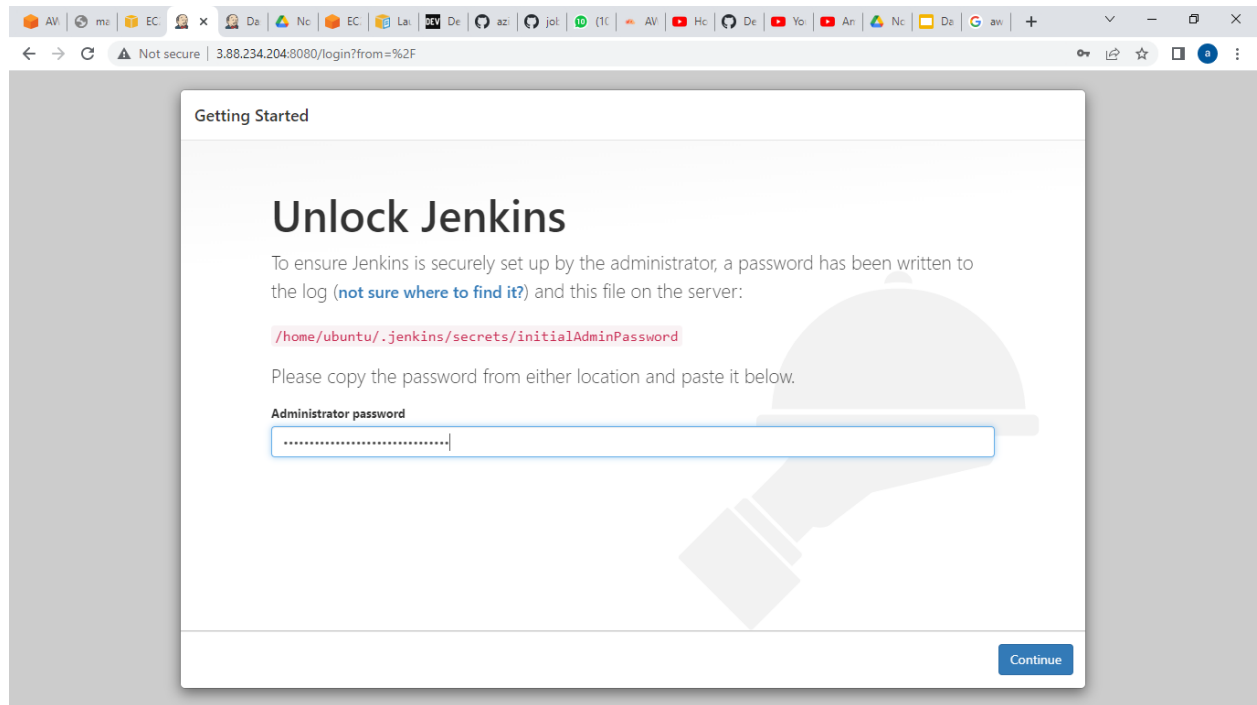
j. Access jenkins homepage using the public IP of the instance  
IP\_address:8080  
Jenkins runs on port 8080 by default  
Make sure your all traffic is open on your security group for testing purposes

## k. Unclock Jenkins

When we are installing jenkins it will automatically give you the password in the github terminal.

Copy the password and paste the browser.

You will get the password on the step i



- l. Press Install Suggested Plugins
- m. Create First admin user

- n. The first user which we create here is the admin user of the Jenkins.

Click on save and continue.

Click on save and finish

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