Jenkins

Demonstration 2 – Jenkins Installation on AWS

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Installation Steps:

Connect to an EC2 instance (Ubuntu).

Step 1: Update the Ubuntu repository and install the Java OpenJDK with apt command. Commands:

apt-get update

apt-get install openjdk-8-jdk

```
root@ip-172-31-84-165:/home/ubuntu# sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial-updates InRelease [
09 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial-backports InRelease
[107 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial/main Sources [868 k
]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial/restricted Sources
4,808 B]
Get:6 http://security.ubuntu.com/ubuntu xenial-security InRelease [107 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial/universe Sources [7
728 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial/multiverse Sources
179 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial/universe amd64 Packa
```

```
root@ip-172-31-84-165:/home/ubuntu# sudo apt-get install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  ca-certificates-java fontconfig fontconfig-config fonts-dejavu-core
  fonts-dejavu-extra hicolor-icon-theme java-common libasound2 libasound2-data
  libasyncns0 libatk1.0-0 libatk1.0-data libavahi-client3 libavahi-common-data
  libavahi-common3 libcairo2 libcups2 libdatriel libdrm-amdgpul libdrm-intell
  libdrm-nouveau2 libdrm-radeonl libflac8 libfontconfigl libgdk-pixbuf2.0-0
  libgdk-pixbuf2.0-common libgif7 libgll-mesa-dri libgll-mesa-glx
  libglapi-mesa libgraphite2-3 libgtk2.0-0 libgtk2.0-bin libgtk2.0-common
  libharfbuzz0b libice-dev libice6 libjbig0 libjpeg-turbo8 libjpeg8 liblcms2-2
  libllvm6.0 libnspr4 libnss3 libnss3-nssdb libogg0 libpango-1.0-0
  libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclitel
  libpixman-1-0 libpthread-stubs0-dev libpulse0 libsensors4 libsm-dev libsm6
  libsndfile1 libthai-data libthai0 libtiff5 libtxc-dxtn-s2tc0 libvorbis0a
  libvorbisenc2 libx11-dev libx11-doc libx11-xcb1 libxau-dev libxcb-dri2-0
  libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-render0 libxcb-shm0
```


```
root@ip-172-31-84-165:/home/ubuntu# sudo apt-get install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  ca-certificates-java fontconfig fontconfig-config fonts-dejavu-core
  fonts-dejavu-extra hicolor-icon-theme java-common libasound2 libasound2-data
  libasyncns0 libatk1.0-0 libatk1.0-data libavahi-client3 libavahi-common-data
  libavahi-common3 libcairo2 libcups2 libdatriel libdrm-amdgpul libdrm-intell
  libdrm-nouveau2 libdrm-radeonl libflac8 libfontconfigl libgdk-pixbuf2.0-0
  libgdk-pixbuf2.0-common libgif7 libgll-mesa-dri libgll-mesa-glx
  libglapi-mesa libgraphite2-3 libgtk2.0-0 libgtk2.0-bin libgtk2.0-common
  libharfbuzz0b libice-dev libice6 libjbig0 libjpeg-turbo8 libjpeg8 liblcms2-2
  libllvm6.0 libnspr4 libnss3 libnss3-nssdb libogg0 libpango-1.0-0
  libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclitel
  libpixman-1-0 libpthread-stubs0-dev libpulse0 libsensors4 libsm-dev libsm6
  libsndfile1 libthai-data libthai0 libtiff5 libtxc-dxtn-s2tc0 libvorbis0a
  libvorbisenc2 libx11-dev libx11-doc libx11-xcb1 libxau-dev libxcb-dri2-0
  libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-render0 libxcb-shm0
```


Step 2: Verify the installation by typing the command below:

Command: **java –version**

```
root@ip-172-31-84-165:/home/ubuntu# java -version
openjdk version "1.8.0_181"
OpenJDK Runtime Environment (build 1.8.0_181-8u181-b13-0ubuntu0.16.04.1-b13)
OpenJDK 64-Bit Server VM (build 25.181-b13, mixed mode)
root@ip-172-31-84-165:/home/ubuntu#
```

Step 3: Add Jenkins key and repository to the system with the command below:

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

```
root@ip-172-31-84-165:/home/ubuntu# wget -q -O - https://pkg.jenkins.io/debian/j
enkins-ci.org.key | sudo apt-key add -
OK
```

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

```
root@ip-172-31-84-165:/home/ubuntu# sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
root@ip-172-31-84-165:/home/ubuntu#
```

Step 4: Installing Jenkins: sudo apt-get update

sudo apt-get install jenkins

```
root@ip-172-31-84-165:/home/ubuntu# sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu xenial-backports InRelease
Ign:4 http://pkg.jenkins.io/debian-stable binary/ InRelease
Get:5 http://pkg.jenkins.io/debian-stable binary/ Release [2,042 B]
Get:6 http://pkg.jenkins.io/debian-stable binary/ Release.gpg [181 B]
Hit:7 http://security.ubuntu.com/ubuntu xenial-security InRelease
Get:8 http://pkg.jenkins.io/debian-stable binary/ Packages [13.4 kB]
Fetched 15.6 kB in 0s (50.4 kB/s)
Reading package lists... Done
root@ip-172-31-84-165:/home/ubuntu#
```

Step 5: **Starting Jenkins**

sudo systemctl start Jenkins

sudo systemctl status Jenkins

```
root@ip-172-31-84-165:/home/ubuntu# sudo systemctl start jenkins
root@ip-172-31-84-165:/home/ubuntu# sudo systemctl status jenkins
● jenkins.service - LSB: Start Jenkins at boot time
   Loaded: loaded (/etc/init.d/jenkins; bad; vendor preset: enabled)
   Active: active (exited) since Fri 2018-09-28 15:11:26 UTC; 1min 41s ago
     Docs: man:systemd-sysv-generator(8)

Sep 28 15:11:25 ip-172-31-84-165 systemd[1]: Starting LSB: Start Jenkins at boot time...
Sep 28 15:11:25 ip-172-31-84-165 jenkins[9178]: Correct java version found
Sep 28 15:11:25 ip-172-31-84-165 jenkins[9178]:  * Starting Jenkins Automation Server jenkins
Sep 28 15:11:25 ip-172-31-84-165 su[9212]: Successful su for jenkins by root
Sep 28 15:11:25 ip-172-31-84-165 su[9212]: + ??? root:jenkins
Sep 28 15:11:25 ip-172-31-84-165 su[9212]: pam_unix(su:session): session opened for user jenkins by (uid=0)
Sep 28 15:11:26 ip-172-31-84-165 jenkins[9178]:    ...done.
Sep 28 15:11:26 ip-172-31-84-165 systemd[1]: Started LSB: Start Jenkins at boot time.
Sep 28 15:12:49 ip-172-31-84-165 systemd[1]: Started LSB: Start Jenkins at boot time.
root@ip-172-31-84-165:/home/ubuntu#
```

Step 6: Please make sure you have enable the following security ports in your AWS instance

Type	Protocol	Port Range	Source
SSH	TCP	22	Anywhere 0.0.0.0/0, ::/0
HTTP	TCP	80	Anywhere 0.0.0.0/0, ::/0
All TCP	TCP	0 - 65535	Anywhere 0.0.0.0/0, ::/0
All UDP	UDP	0 - 65535	Anywhere 0.0.0.0/0, ::/0
HTTPS	TCP	443	Anywhere 0.0.0.0/0, ::/0

Add Rule

Step 7: You can access Jenkins using **your AWS instance Public IP.**

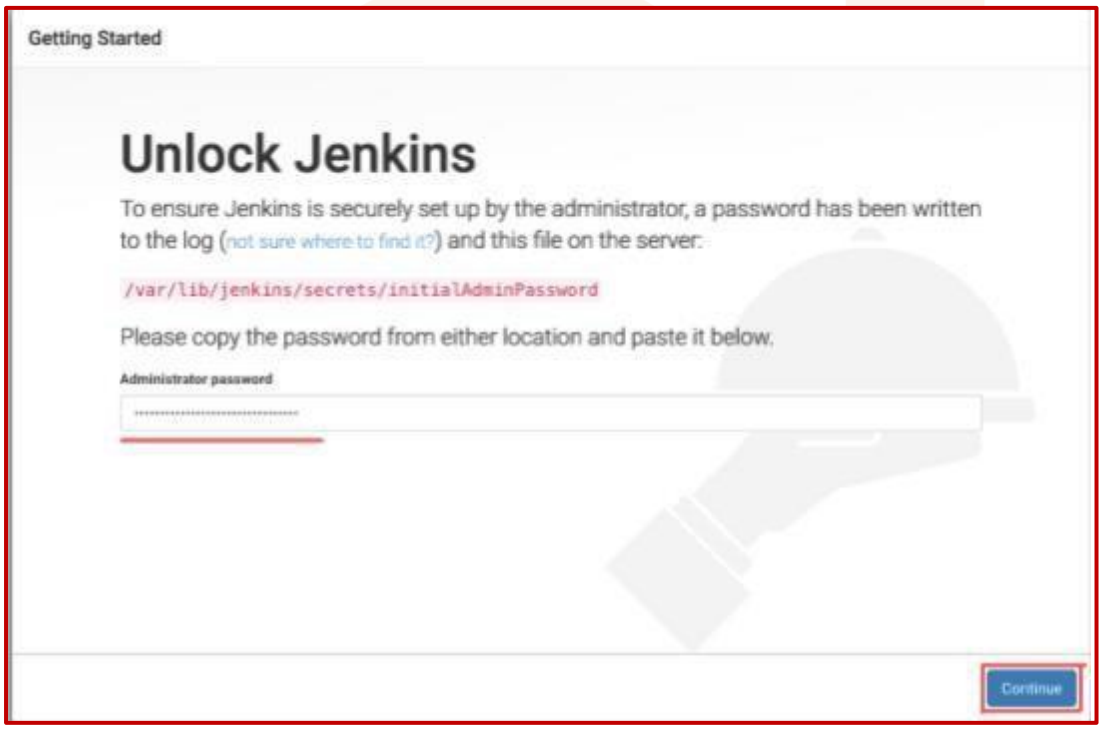
http://<public_ip_of_instance>:8080

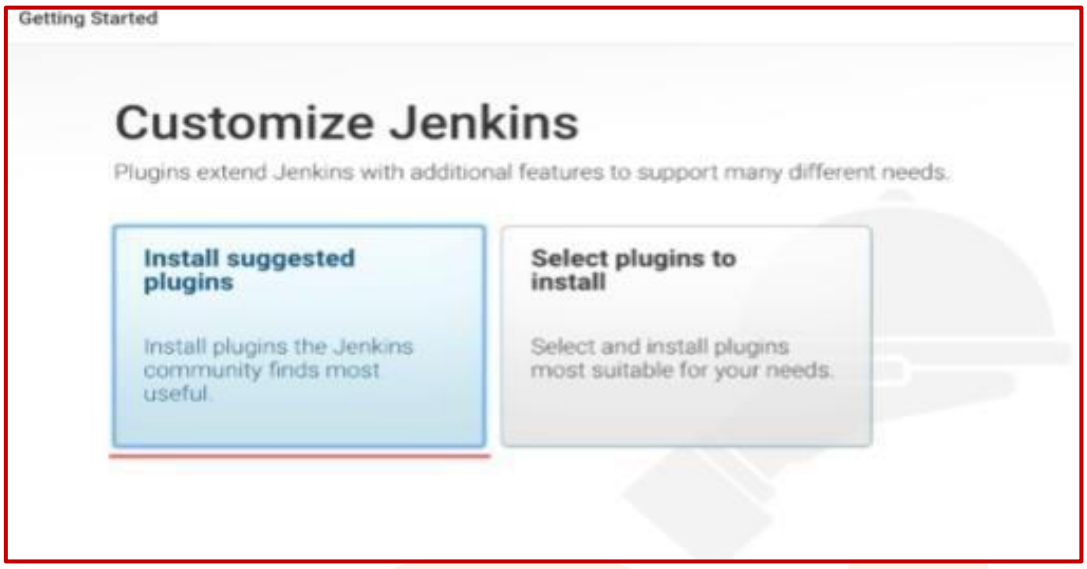
Step 8: Configure Jenkins

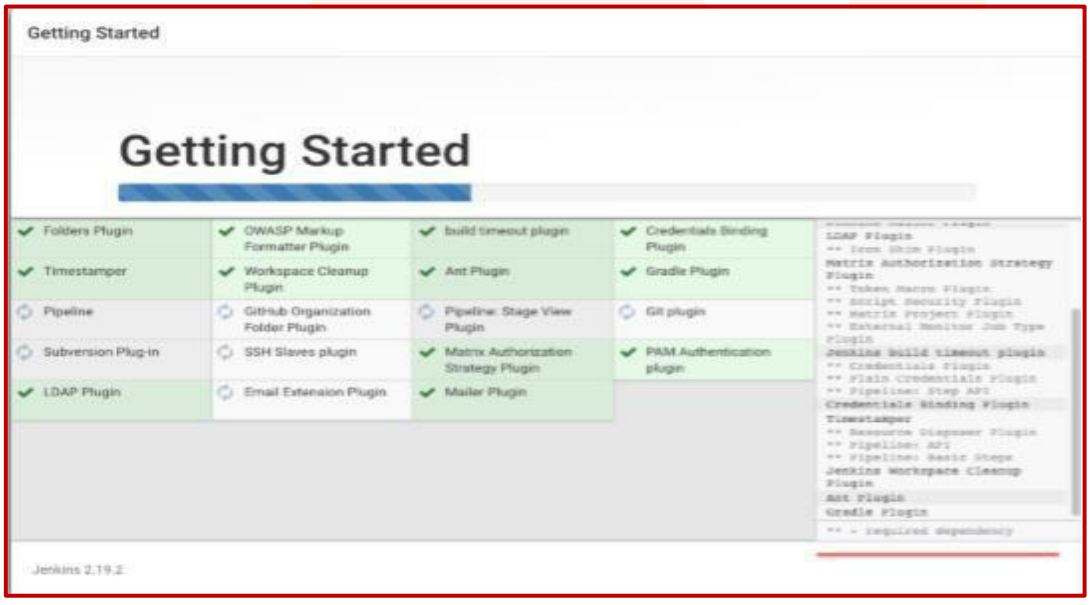
To get administrator password, please run the below command: sudo

```
root@ip-172-31-84-165:/home/ubuntu# sudo cat /var/lib/jenkins/secrets/initialAdminPassword
7d3993a423cc4e6181854450f0cd8891
root@ip-172-31-84-165:/home/ubuntu#
```

Copy the password from terminal and paste it







Now you can start working on Jenkins.

Conclusion

We have successfully installed Jenkins on AWS