

Jenkins Installation Guide

Installation Notes

SUNBEAM

CI/CD pipeline using Jenkins

Installation Notes:

Jenkins installation using Docker:

Step 1: pull Jenkins image

```
docker pull jenkinsci/blueocean
```

Step 2: start Jenkins container

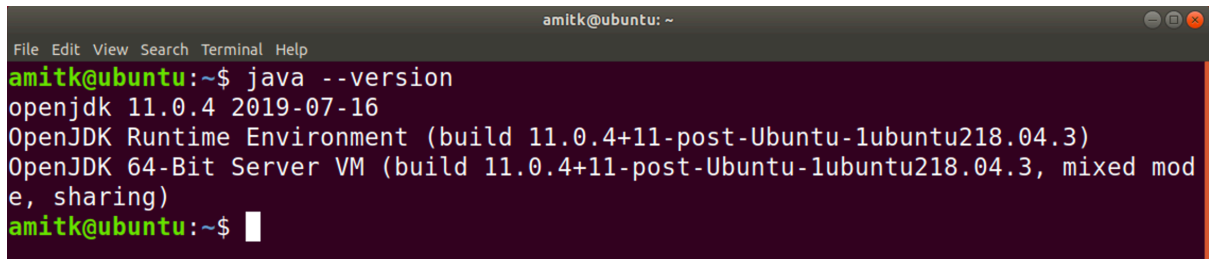
```
docker run \  
  -u root \  
  --rm \  
  -d \  
  -p 8080:8080 \  
  -p 50000:50000 \  
  -v jenkins-data:/var/jenkins_home \  
  -v /var/run/docker.sock:/var/run/docker.sock \  
  jenkinsci/blueocean
```

CI/CD pipeline using Jenkins

Jenkins installation without Docker:

Step 1: check Java version installed on your machine

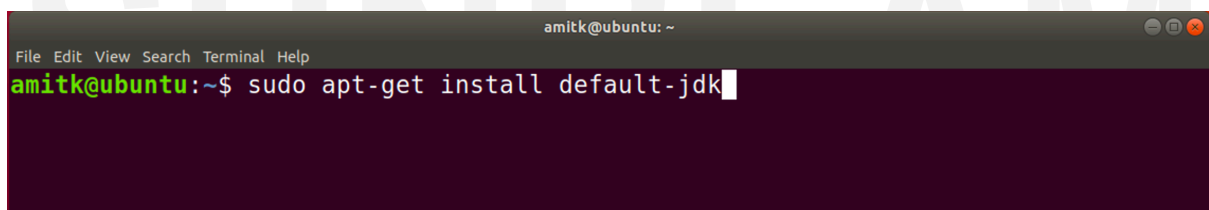
```
java --version
```

A terminal window titled 'amitk@ubuntu: ~' showing the output of the 'java --version' command. The output is: 'openjdk 11.0.4 2019-07-16', 'OpenJDK Runtime Environment (build 11.0.4+11-post-Ubuntu-1ubuntu218.04.3)', and 'OpenJDK 64-Bit Server VM (build 11.0.4+11-post-Ubuntu-1ubuntu218.04.3, mixed mode, sharing)'. The prompt 'amitk@ubuntu:~\$' is visible at the bottom.

```
amitk@ubuntu:~$ java --version
openjdk 11.0.4 2019-07-16
OpenJDK Runtime Environment (build 11.0.4+11-post-Ubuntu-1ubuntu218.04.3)
OpenJDK 64-Bit Server VM (build 11.0.4+11-post-Ubuntu-1ubuntu218.04.3, mixed mode, sharing)
amitk@ubuntu:~$
```

Step 2: Jenkins requires Java 7 or 8 installed on your machine. If the java version is not matching you need to install the required version of java

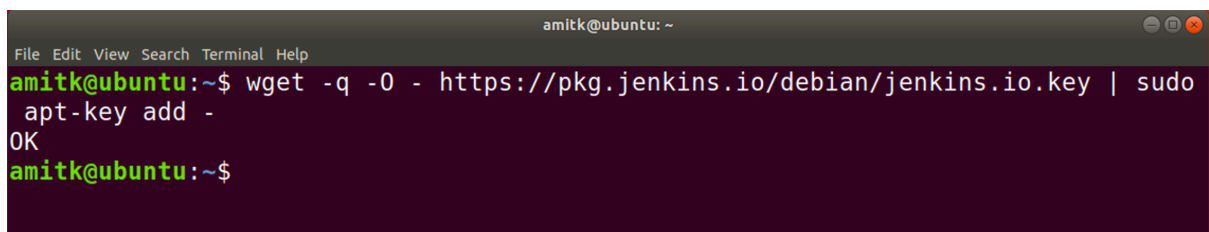
```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install default-jdk
```

A terminal window titled 'amitk@ubuntu: ~' showing the command 'sudo apt-get install default-jdk' being entered. The cursor is at the end of the command line.

```
amitk@ubuntu:~$ sudo apt-get install default-jdk
```

Step 3: Add Jenkins key to apt

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

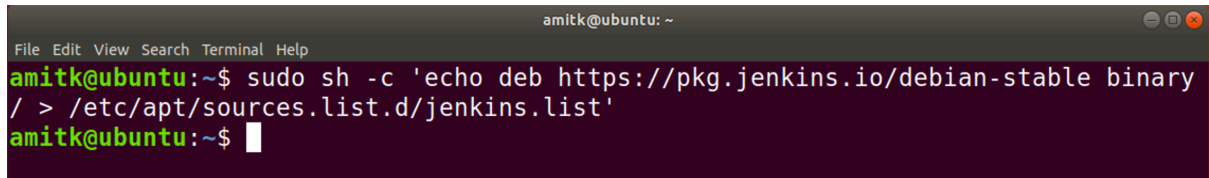
A terminal window titled 'amitk@ubuntu: ~' showing the command 'wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -' being executed. The output is 'OK'. The prompt 'amitk@ubuntu:~\$' is visible at the bottom.

```
amitk@ubuntu:~$ wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
OK
amitk@ubuntu:~$
```

CI/CD pipeline using Jenkins

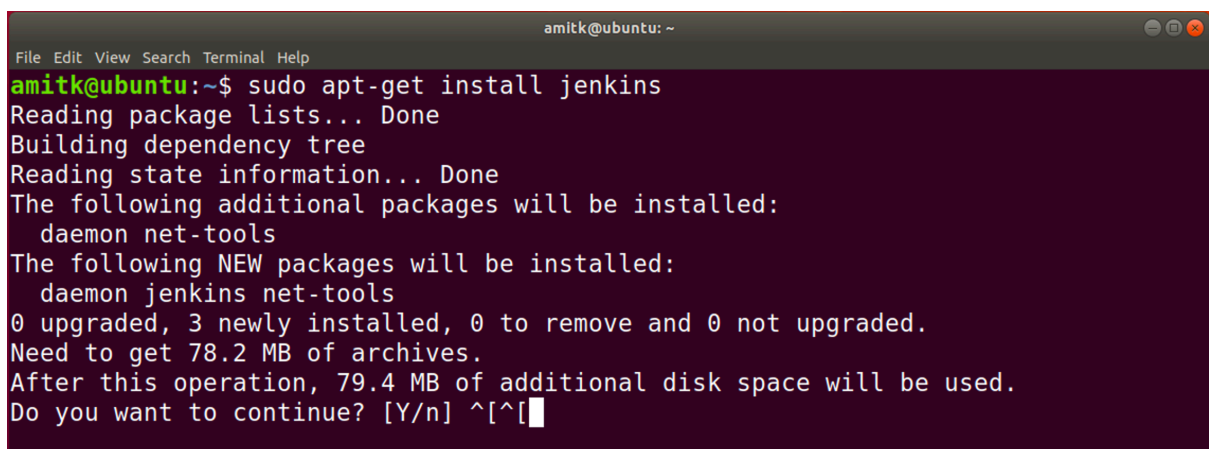
Step 4: Add Jenkins repository into apt sources

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

A terminal window titled 'amitk@ubuntu: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command 'sudo sh -c 'echo deb https://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'' is entered and executed. The prompt returns to 'amitk@ubuntu:~\$'.

Step 5: Update cache and install Jenkins

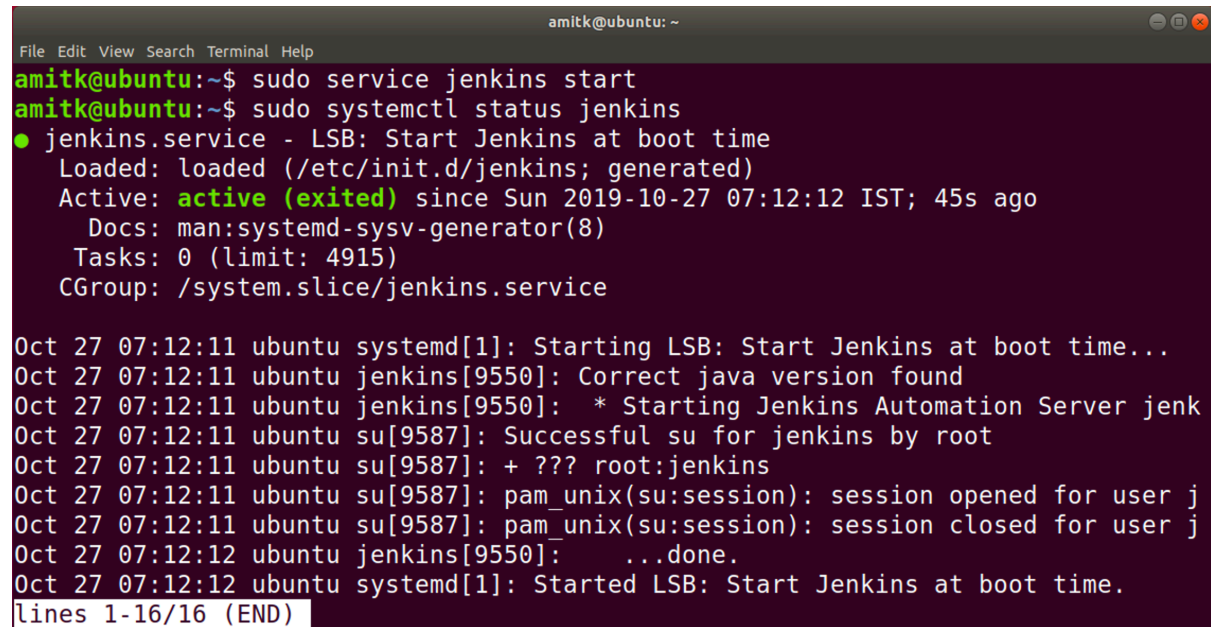
```
sudo apt-get update  
sudo apt-get install jenkins
```

A terminal window titled 'amitk@ubuntu: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command 'sudo apt-get install jenkins' is entered and executed. The output shows: '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', '0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.', 'Need to get 78.2 MB of archives.', 'After this operation, 79.4 MB of additional disk space will be used.', and 'Do you want to continue? [Y/n] ^^[', with the cursor on the second line of the prompt.

CI/CD pipeline using Jenkins

Step 6: Start the Jenkins service and make sure the status is started

```
sudo service jenkins start
sudo systemctl status jenkins
```

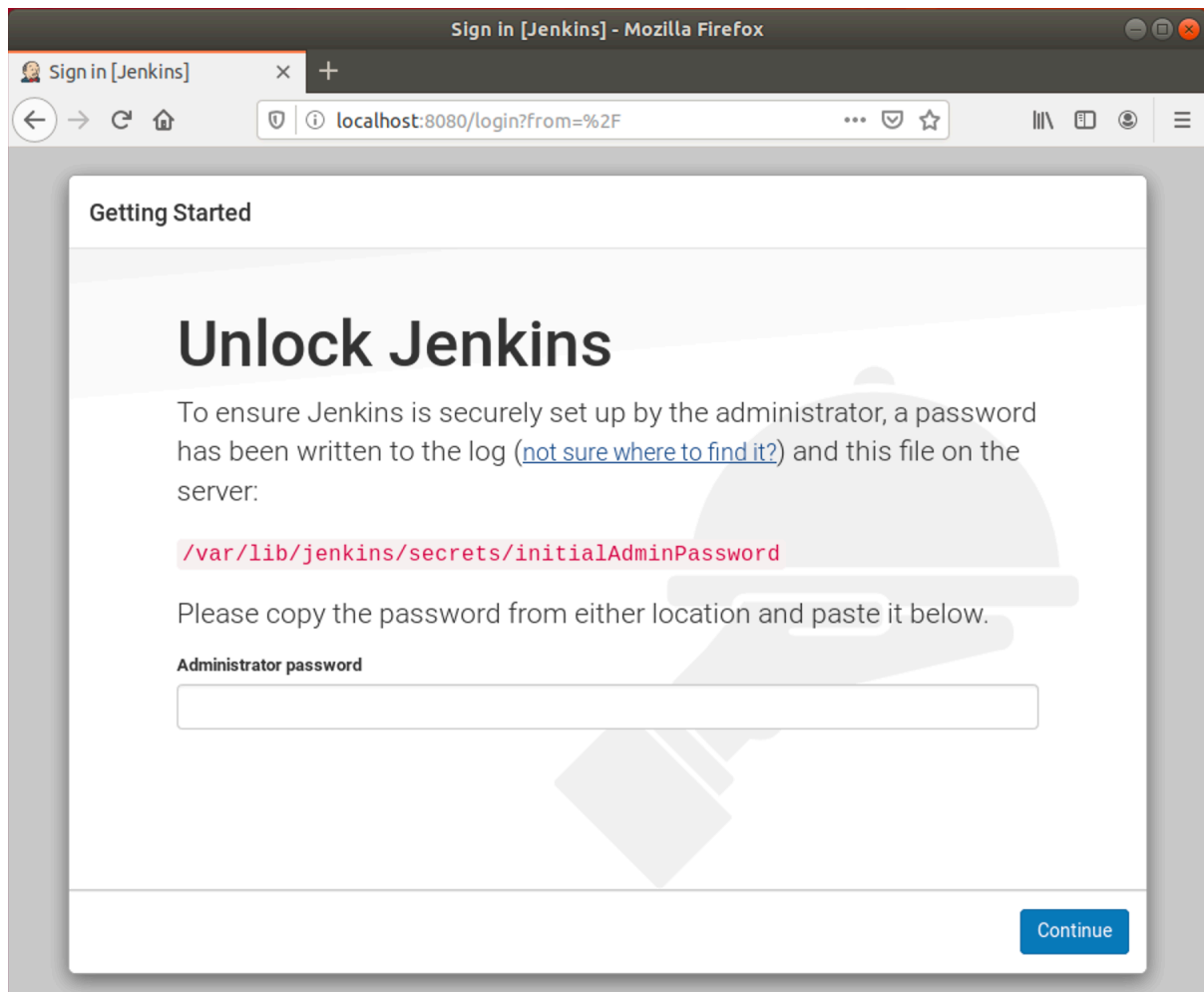
A terminal window titled 'amitk@ubuntu: ~' showing the execution of 'sudo service jenkins start' and 'sudo systemctl status jenkins'. The output shows that Jenkins is active (exited) and started at 07:12:12 IST on Sun 2019-10-27. Log messages show the service starting, finding the correct Java version, and starting the Jenkins Automation Server. The terminal also shows a successful su for jenkins by root and session management for user j. The output ends with 'lines 1-16/16 (END)'.

```
amitk@ubuntu:~$ sudo service jenkins start
amitk@ubuntu:~$ sudo systemctl status jenkins
● jenkins.service - LSB: Start Jenkins at boot time
   Loaded: loaded (/etc/init.d/jenkins; generated)
   Active: active (exited) since Sun 2019-10-27 07:12:12 IST; 45s ago
     Docs: man:systemd-sysv-generator(8)
    Tasks: 0 (limit: 4915)
   CGroup: /system.slice/jenkins.service

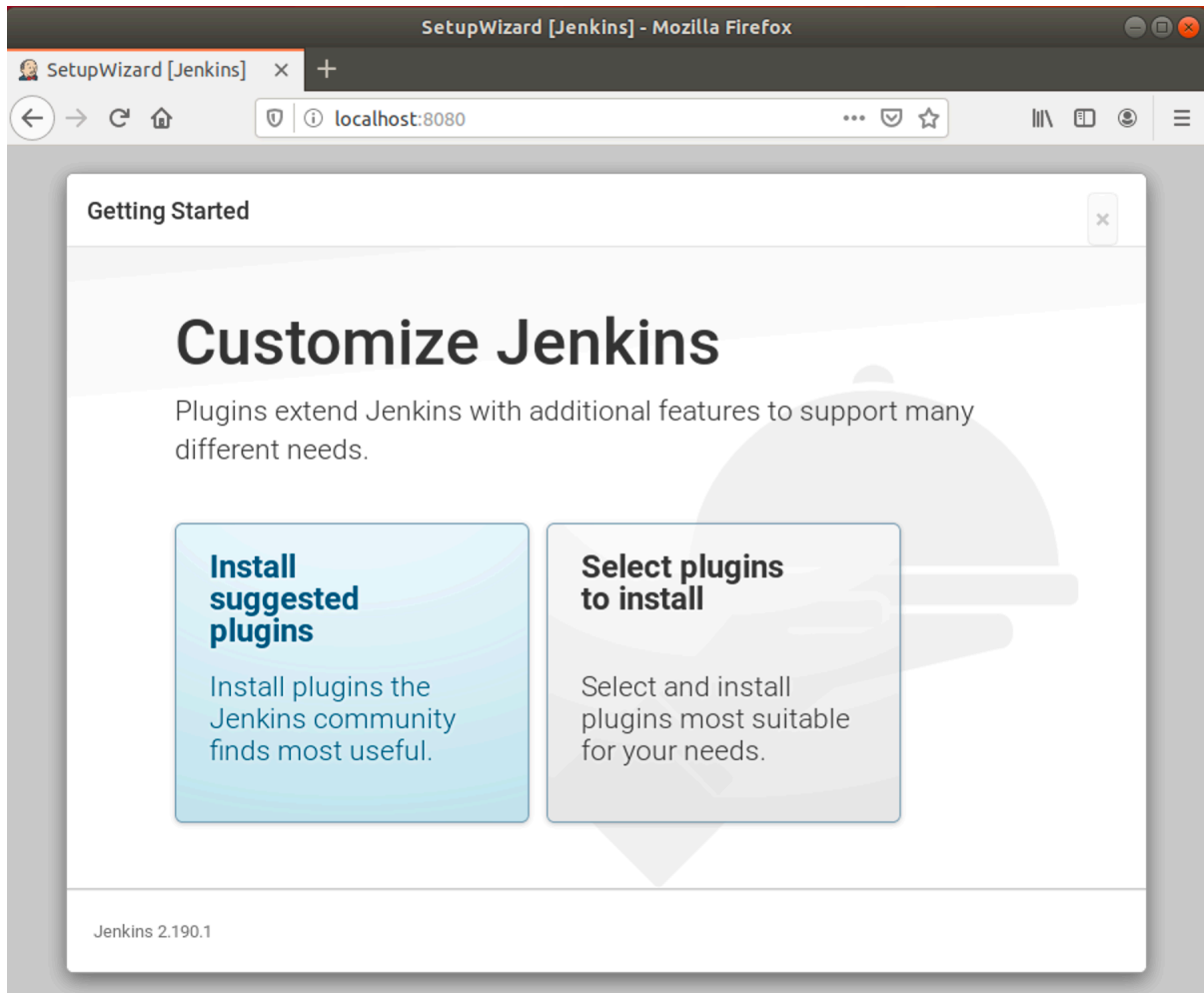
Oct 27 07:12:11 ubuntu systemd[1]: Starting LSB: Start Jenkins at boot time...
Oct 27 07:12:11 ubuntu jenkins[9550]: Correct java version found
Oct 27 07:12:11 ubuntu jenkins[9550]: * Starting Jenkins Automation Server jenk
Oct 27 07:12:11 ubuntu su[9587]: Successful su for jenkins by root
Oct 27 07:12:11 ubuntu su[9587]: + ??? root:jenkins
Oct 27 07:12:11 ubuntu su[9587]: pam_unix(su:session): session opened for user j
Oct 27 07:12:11 ubuntu su[9587]: pam_unix(su:session): session closed for user j
Oct 27 07:12:12 ubuntu jenkins[9550]: ...done.
Oct 27 07:12:12 ubuntu systemd[1]: Started LSB: Start Jenkins at boot time.
lines 1-16/16 (END)
```

CI/CD pipeline using Jenkins

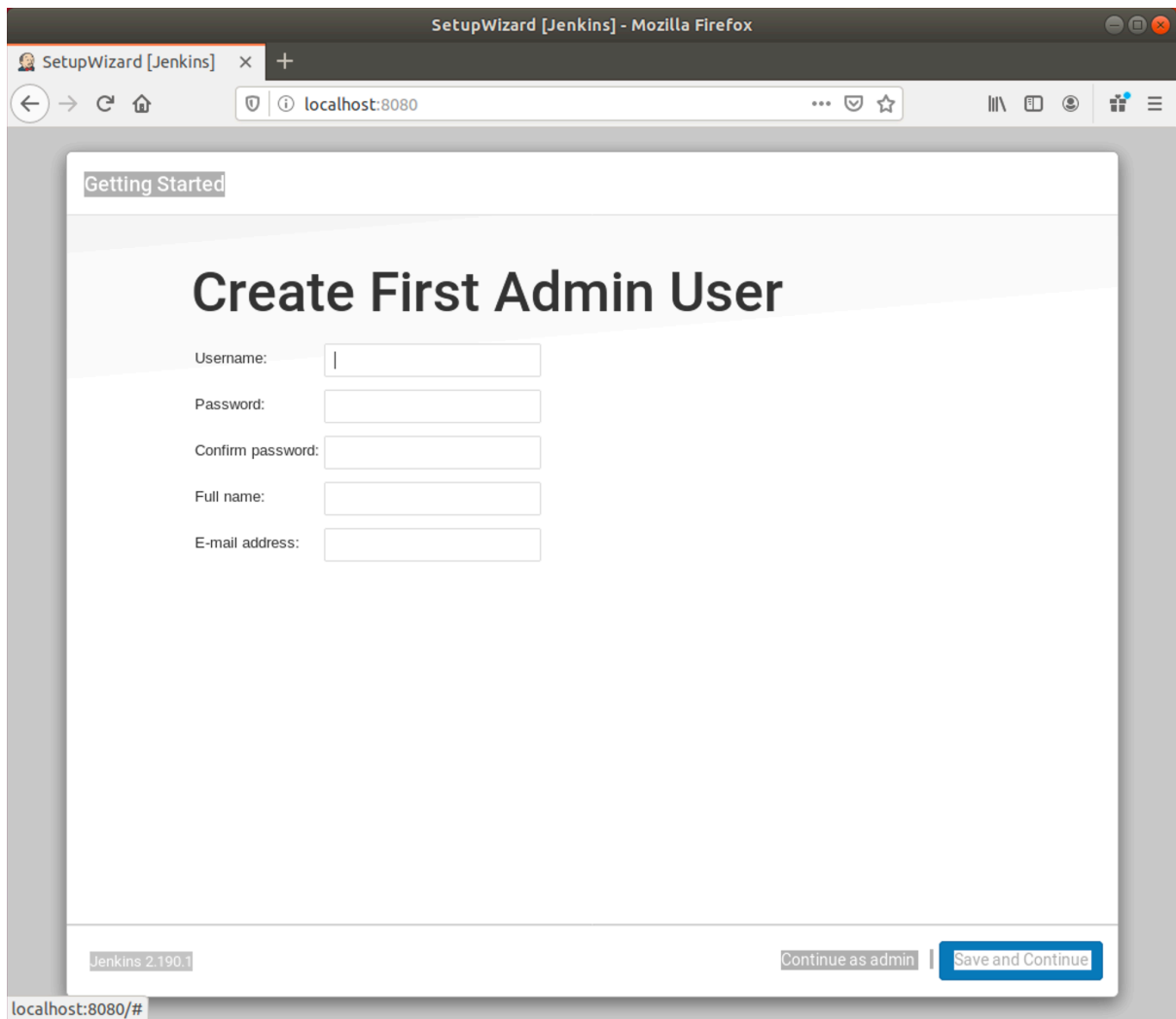
Step 7: Visit <http://localhost:8080>. Enter password from the file `/var/lib/jenkins/secrets/initialAdminPassword`



Step 7: Customize Jenkins. Use the install suggested plugins option to install the required plugins



Step 7: Create the first admin user



The screenshot shows the Jenkins Setup Wizard interface in a Mozilla Firefox browser window. The browser's address bar displays 'localhost:8080'. The page title is 'SetupWizard [Jenkins] - Mozilla Firefox'. The main heading is 'Create First Admin User'. Below the heading, there are five input fields: 'Username:', 'Password:', 'Confirm password:', 'Full name:', and 'E-mail address:'. At the bottom of the form, there are two buttons: 'Continue as admin' and 'Save and Continue'. The status bar at the bottom of the browser window shows 'localhost:8080/#'.

Getting Started

Create First Admin User

Username:

Password:

Confirm password:

Full name:

E-mail address:

Jenkins 2.190.1

Continue as admin | [Save and Continue](#)

localhost:8080/#

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Step 8: The Jenkins is not installed and working on port 8080.

