

# Peer Jenkins Setup Guide

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## Introduction

This document describes the steps to create Peer Jenkins server and establish the connection with the LF master Jenkins

## Infrastructure Requirements for VM

### Minimum hardware requirements:

- 256 MB of RAM
- 1 GB of drive space (although 10 GB is a recommended minimum if running Jenkins as a docker container)
- Ubuntu 16.04 or higher OS

### Recommended hardware configuration:

- 1 GB+ of RAM
- 50 GB+ of drive space

### Software requirements:

- Java
- Web browser compatibility
- Docker to be installed if Jenkins server running as a container

## Installation Guide

### Install Java

Since Jenkins is a Java application, the first step is to install Java. Update the package index and install the Java 8 OpenJDK package with the following commands

```
sudo apt-get update  
sudo apt install openjdk-8-jdk
```

### Install Docker

**Step 1:** First, in order to ensure the downloads are valid, add the GPG key for the official Docker repository to your system

```
curl -s https://apt.dockerproject.org/gpg | sudo apt-key add  
apt-key fingerprint 58118E89F3A912897C070ADBF76221572C52609D
```

**Step 2:** Add the Docker repository to APT sources

```
sudo  
add-apt-repository "deb https://apt.dockerproject.org/repo ubuntu-$(lsb_release -cs) main"
```

**Step 3:** Next, update the package database with the Docker packages from the newly added repo

```
sudo apt-get update
```

**Step 4 :** Make sure you are about to install from the Docker repo instead of the default Ubuntu 16.04 (xenial):

```
sudo apt-cache policy docker-engine
```

You should see output like the follow:

Output of apt-cache policy docker-engine

docker-engine

```
Installed: 1.13.0-0~ubuntu-xenial
Candidate: 17.05.0~ce-0~ubuntu-xenial
Version table:
 17.05.0~ce-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 17.04.0~ce-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 17.03.0~ce-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 17.03.0~ce-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.13.0-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
--- 1.13.0-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.5-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.5-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.3-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.2-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.1-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.12.0-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.11.2-0~ubuntu-xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.11.1-0~xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
 1.11.0-0~xenial 500
   500 https://apt.dockerproject.org/repo ubuntu-xenial/main amd64 Packages
```

**Step 5:** Finally, Install Docker

```
sudo apt-get install docker-engine=1.13.0-0~ubuntu-xenial
```

**Step 6:** Docker should now be installed, the daemon started, and the process enabled to start on boot. Check that it's running

```
sudo systemctl status docker
```

## Setting up the Peer Jenkins server

**Step 1 :** Pulling the latest jenkins image from docker hub

```
sudo docker pull jenkins
sudo docker images
```

**Step 2 :** create a jenkins.sh file under /data directory

```
sudo vi jenkins.sh
```

add below startup script in Jenkins.sh file for running the Jenkins in a container

```
#!/bin/bash
export DROOT=/data
export DOMAIN=your.domain.name
docker run --detach --name jenkins --restart=always --hostname jenkins.$DOMAIN --volume $DROOT/jenkins:/var/jenkins_home --volume /var/run/docker.sock:/var/run/docker.sock --publish 80:8080 jenkins/jenkins
```

save the changes and run the script using below command

```
./jenkins.sh (or)  
sudo sh jenkins.sh
```

### Step 3 : Pulling the latest jenkins image from docker hub

```
sudo docker ps
```

- if the Jenkins container is restarting again and again then check the logs using below command

```
sudo docker logs --tail 50 --follow --timestamps Jenkins
```

- If the logs are showing like below **Wrong volume permissions**?

```
touch: cannot touch '/var/jenkins_home/copy_reference_file.log': Permission denied  
Can not write to /var/jenkins_home/copy_reference_file.log.
```

The volume directory /data/jenkins need to be separated with the admin ownership to keep the Jenkins home

```
sudo chown 1000 /data/Jenkins
```

Then run the command: (Now the container is up and running)

```
sudo docker ps -a
```

Executing into Jenkins container

```
sudo docker exec -it jenkins /bin/bash
```

Inside the Jenkins container, go to /var/Jenkins\_home/secrets/ directory. Copy the initial admin password like this

```
cat /var/Jenkins_home/secrets/initialAdminPassword
```

## Accessing Jenkins Peer and continue setup

Default port for Jenkins is 8080 and this should be open. To set up your new Jenkins installation, open your browser and type your domain or IP address followed by port 8080

```
http://your_ip_or_domain:8080
```

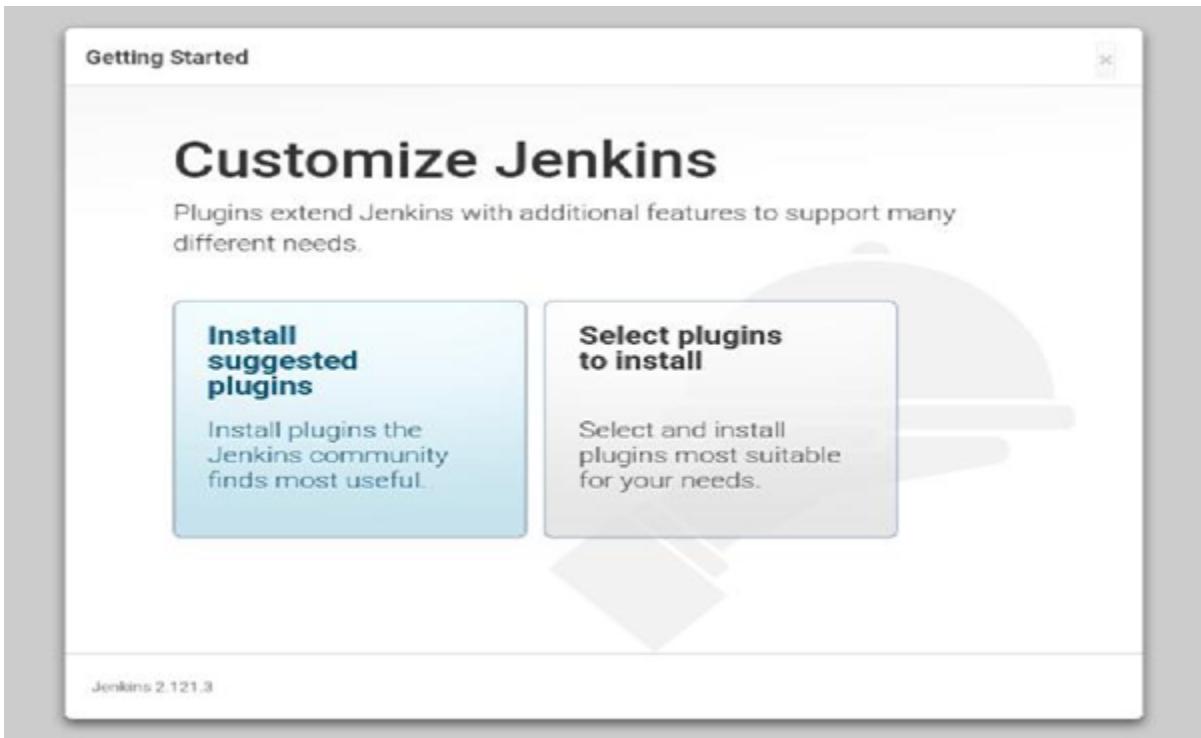
A screen like the following will appear, prompting you to enter the Administrator password that is created during the installation



Use the following command to print the password on your Jenkins container

```
cat /var/jenkins_home/secrets/initialAdminPassword
```

You should see a 32-character long alphanumeric password. Copy the password from your terminal, paste it into the Administrator password field and click Continue



On the next screen, you will be asked whether you want to install the suggested plugins or to select specific plugins. Click on the Install suggested plugins box, and the installation process will start immediately.

## Getting Started

The Getting Started page lists various Jenkins features and their status:

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding
✓ Timestamper	⌚ Workspace Cleanup	⌚ Ant	⌚ Gradle
⌚ Pipeline	⌚ GitHub Branch Source	⌚ Pipeline: GitHub Groovy Libraries	⌚ Pipeline: Stage View
⌚ Git	⌚ Subversion	⌚ SSH Slaves	⌚ Matrix Authorization Strategy
⌚ PAM Authentication	⌚ LDAP	⌚ Email Extension	⌚ Mailer

Below the table, there is a detailed tree view of Jenkins components:

- \*\* JUNIT
- OWASP Markup Formatter
  - \*\* Token Macro
  - Build Timeout
  - \*\* Credentials
    - \*\* SSH Credentials
    - \*\* Plain Credentials
  - Credentials Binding
- Timestamper
  - \*\* Pipeline: Supporting APIs
  - \*\* Durable Task
  - \*\* Pipeline: Nodes and Processes
  - \*\* Matrix Project
- \*\* - required dependency

Jenkins 2.121.3

Once the installation is complete, you will be prompted to set up the first administrative user. Fill out all required information and click Save and Continue.

## Create First Admin User

Fill in the following fields to create your first admin user:

Username:	<input type="text" value="linuxize"/>
Password:	<input type="password" value="*****"/>
Confirm password:	<input type="password" value="*****"/>
Full name:	<input type="text" value="Linuxize Tuts"/>
E-mail address:	<input type="text" value="hello@linuxize.com"/>

Jenkins 2.121.3

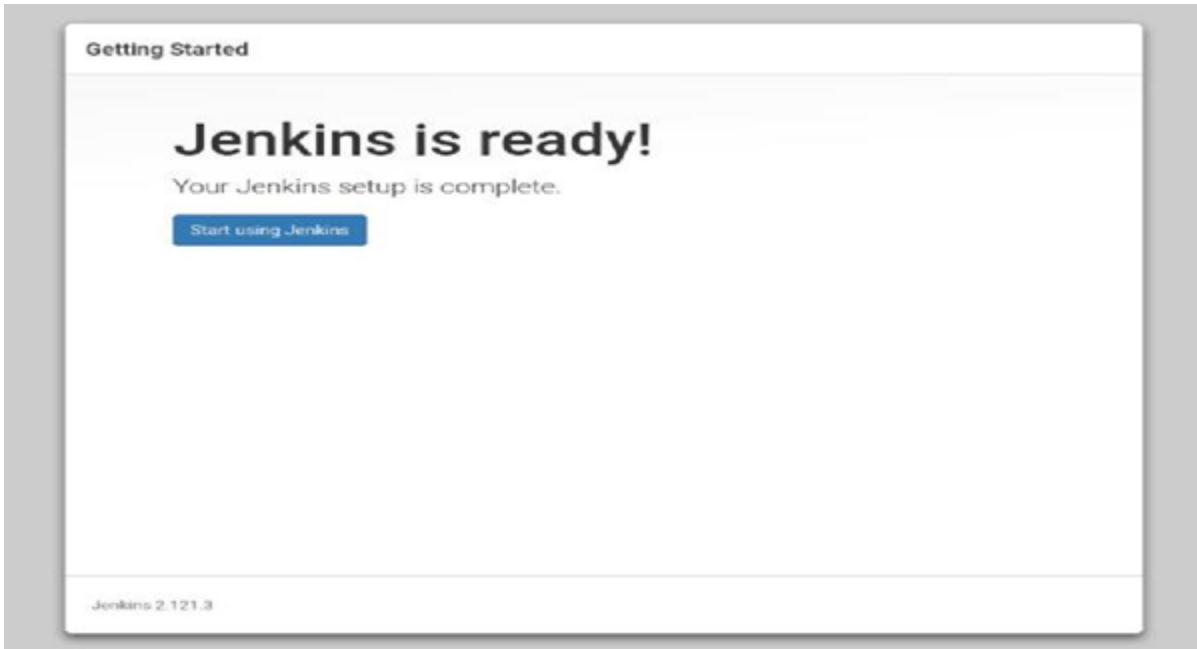
Continue as admin

Save and Continue

On the next page, you will be asked to set the URL for the Jenkins instance. The URL field will be populated with an automatically generated URL.



To complete the setup, confirm the URL by clicking on the Save and Finish button.



Finally, click on the Start using Jenkins button and you will be redirected to the Jenkins dashboard logged in as the admin user you have created in one of the previous steps.

Jenkins &gt;

 New Item People Build History Manage Jenkins My Views Credentials New View

## Welcome to Jenkins!

Please [create new jobs](#) to get started.

 add description

### Build Queue

No builds in the queue.

### Build Executor Status

1	Idle
2	Idle

Page generated: Aug 22, 2018 1:40:37 PM PDT [BEST API](#) Jenkins ver. 2.121.3

If you've reached this point, you've successfully installed Jenkins.