Jenkins Best Docker Configuration

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Course Name	J04. Jenkins Docker Configure
Created	@Mar 9, 2021 4:44 PM
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Configure and Run Jenkins From Docker-Compose File (Best Practice)

After this tutorial, we will be able to initialize a docker container that runs Jenkins, but from a personalized docker-compose file.

> ✅ This custom way of working with Jenkins allows us to have a better control of the Jenkins container, avoid manual console tasks and be able to save the container in a docker-hub (or similar) cloud hosting.

Requirements

- Medium understanding of Docker.
- Have Docker installed in the machine.
- Knowing how a "docker-compose.yml" file works.

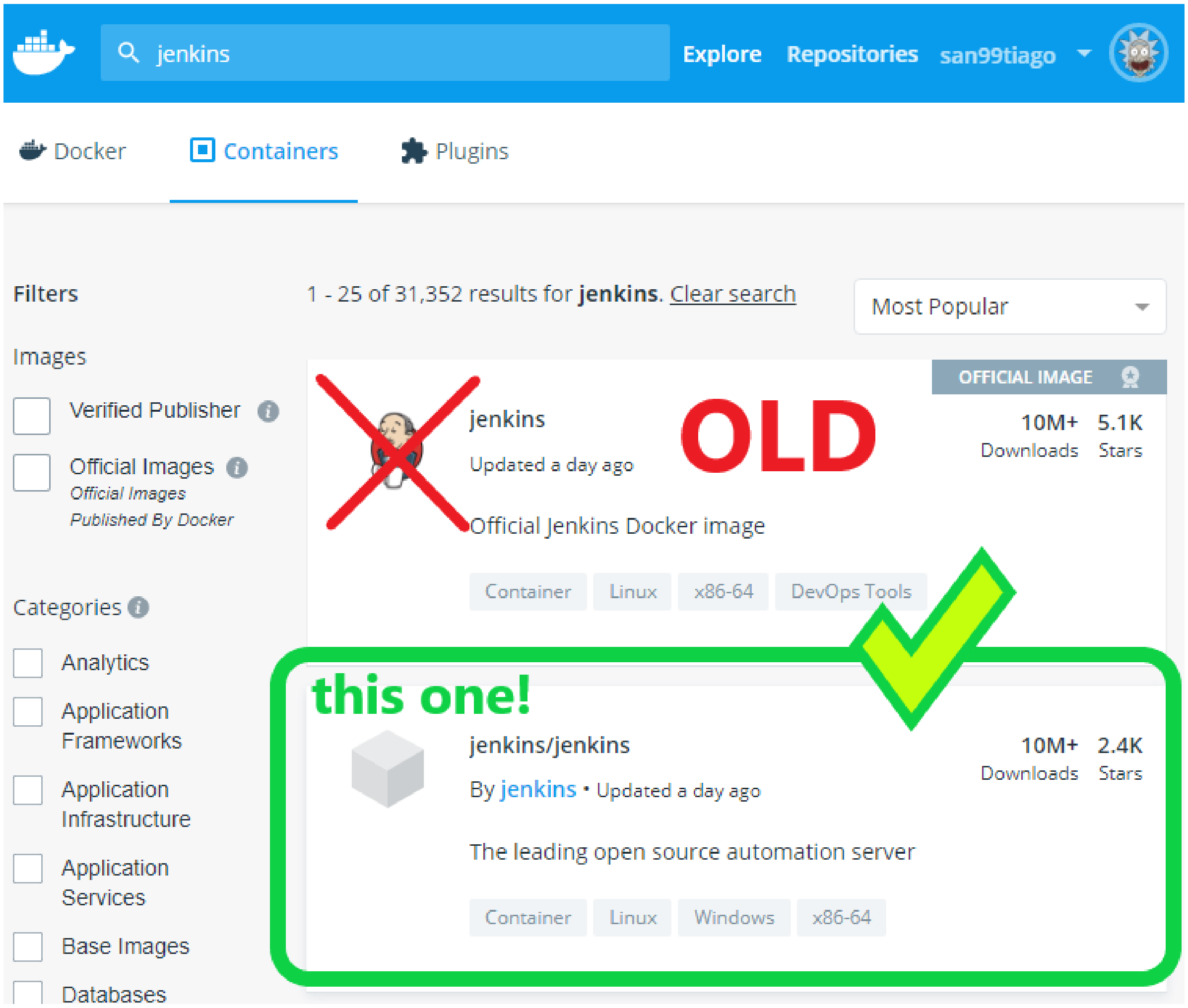
Setup Jenkins Step-by-Step

Docker Hub

https://hub.docker.com/r/jenkins/jenkins

We will dive into the step-by-step tutorial for the correct Jenkins install:

1. Run local docker platform/engine.
2. Go to https://hub.dockdocer.com/ and search for the shown Jenkins image:



1 - 25 of 31,352 results for **jenkins**. Clear search

jenkins
Updated a day ago
10M+ Downloads 5.1K Stars
Official Jenkins Docker image

jenkins/jenkins
By jenkins • Updated a day ago
10M+ Downloads 2.4K Stars
The leading open source automation server

Jenkins image is not the official (because it has been deprecated and not maintained), so to have the best features, we will choose the second one.

3. As shown before, we will now run our docker-compose.yml file (see repository for details).

   Before running the command for creating the container for Jenkins, make sure that we are in the root of the file "docker-compose.yml".

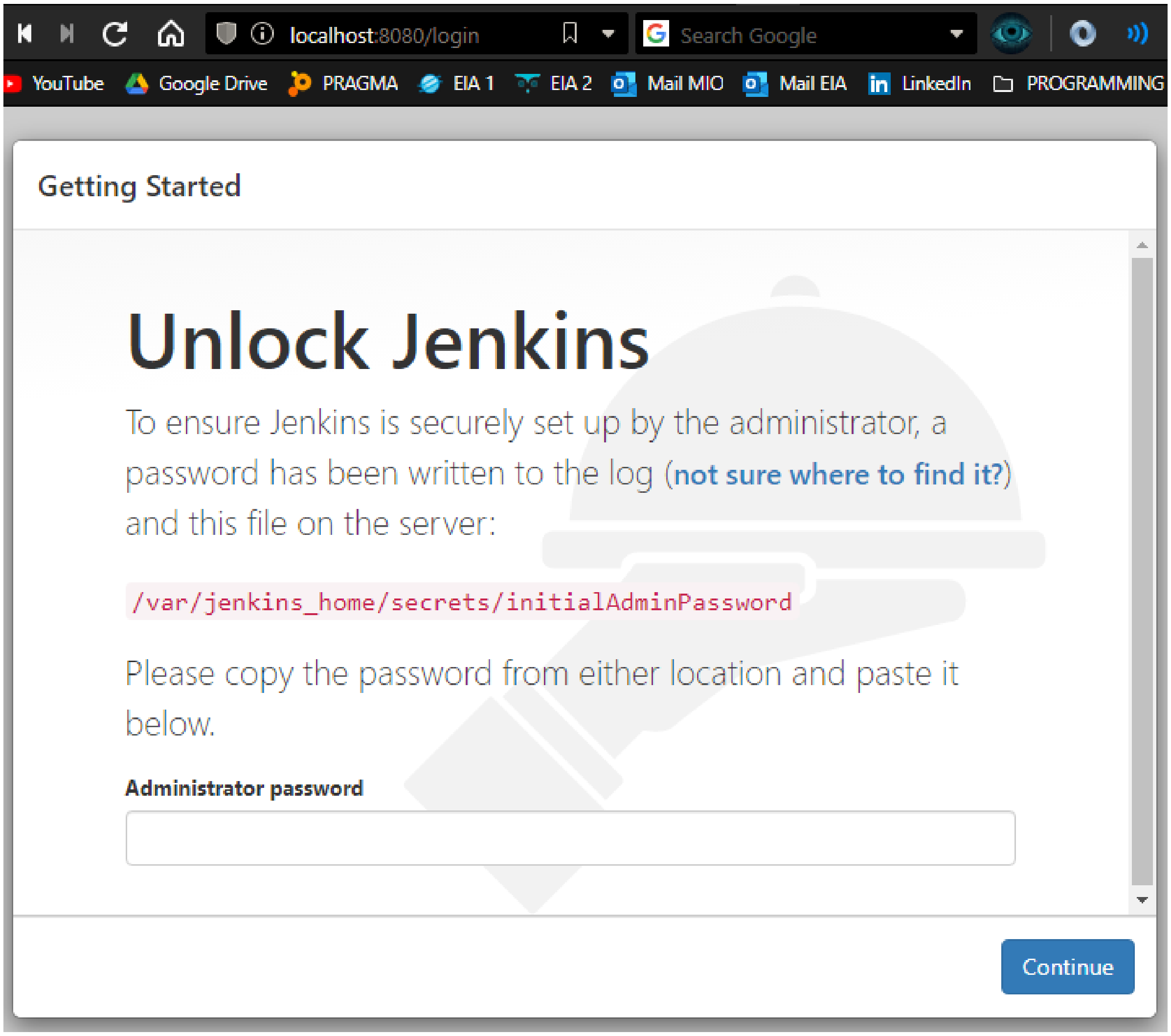
   ```
   docker-compose up
   ```

   docker-compose remarks:

> ⚠ There are two main ways to connect the Jenkins' Docker container. With "Host-Volumes" and with "Named-Volumes". The only one that is shown in the "docker-compose.yml" is a "Named-Volume" approach.

> ⚠ To use a "Host-Volume", we would only have to change the "volumes: ..." in the "docker-compose.yml" to the specific path in the host.

4. After running the container, we can now enter localhost:8080 and login with the password generated at the moment of the creating docker's container.



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:

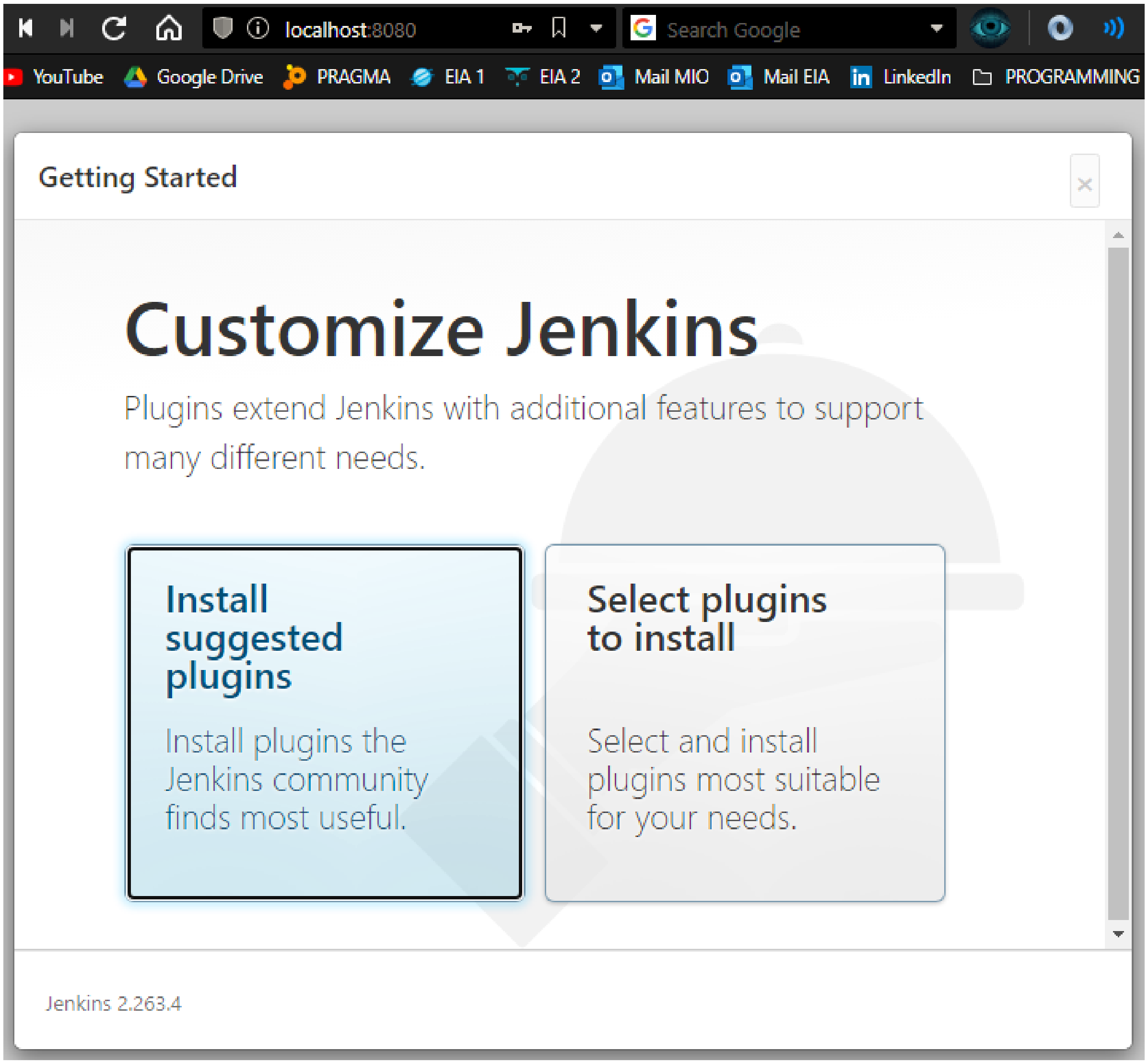
```
/var/jenkins_home/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

> ⚠ If we don't see the password, we can access "bash" in the running container and search for it in the shown path.

5. Initialize Jenkins with the suggested plugins (recommended option).



Getting Started

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

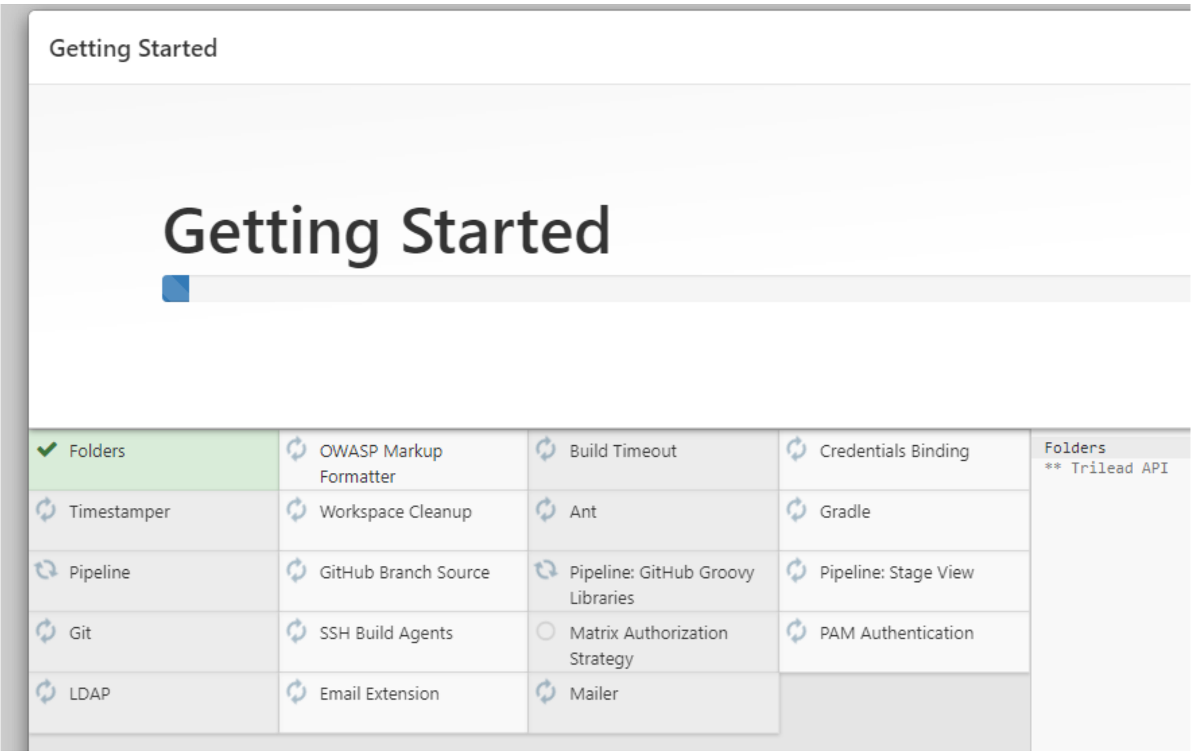
Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.263.4

6. It will take a while, but is the best choice for a good Jenkins setup.



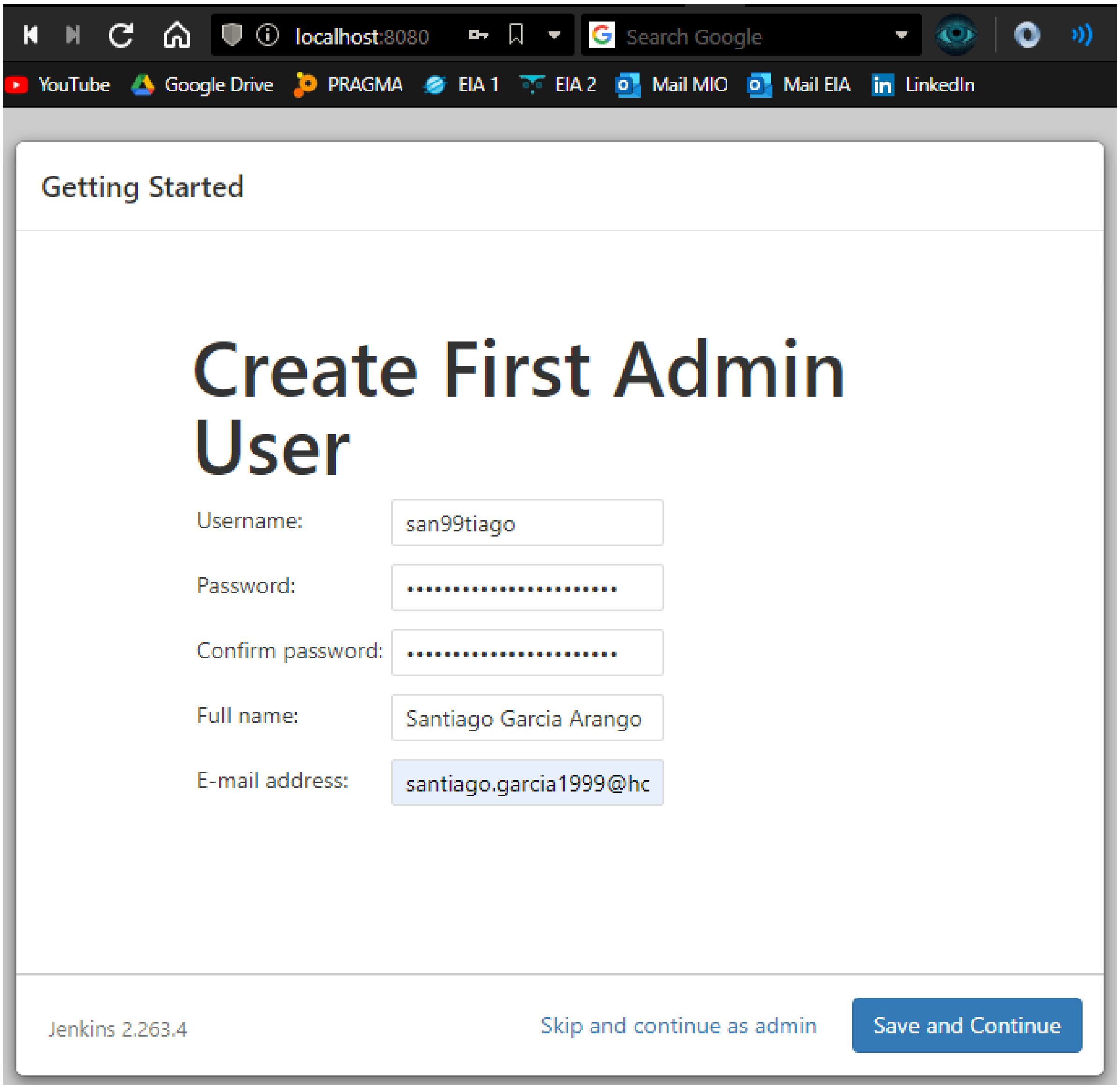
Getting Started

Getting Started

✓ 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	SSH Build Agents	○ Matrix Authorization Strategy	PAM Authentication
LDAP	Email Extension	Mailer	

```
Folders
** Trilead API
```

7. Create a Jenkins account with the specific required information.



Getting Started

Create First Admin User

Username: san99tiago

Password: ••••••••••••••••••••••••

Confirm password: ••••••••••••••••••••••••

Full name: Santiago Garcia Arango

E-mail address: santiago.garcia1999@hc

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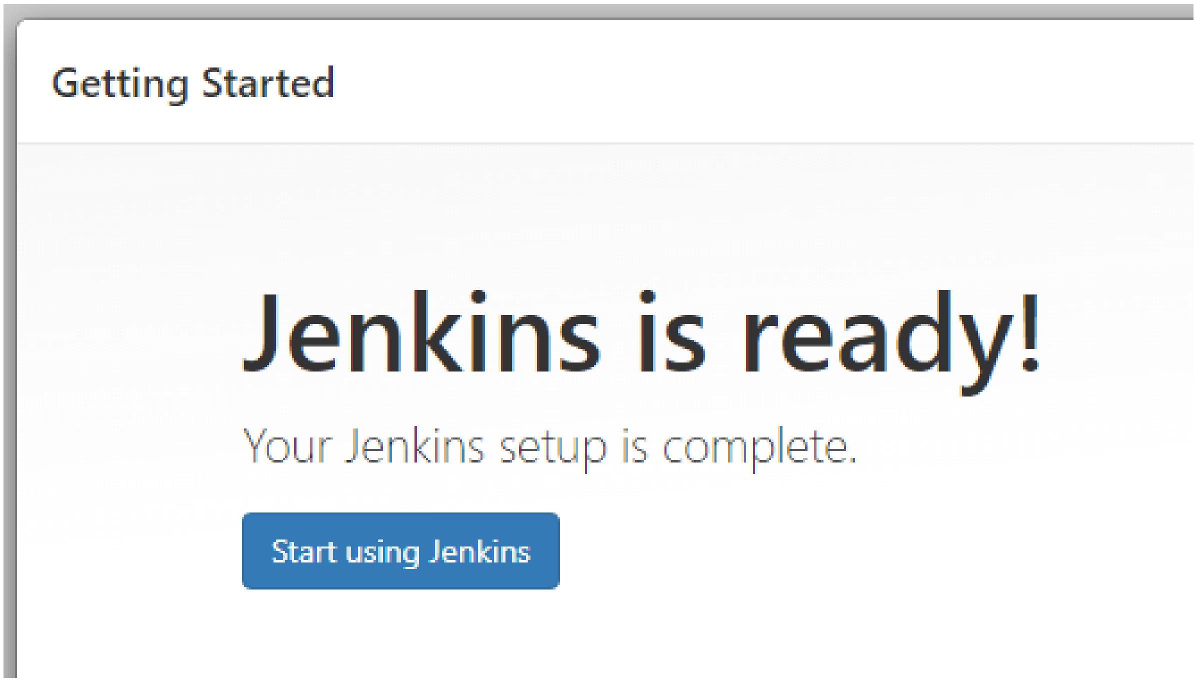
8. Jenkins is ready!

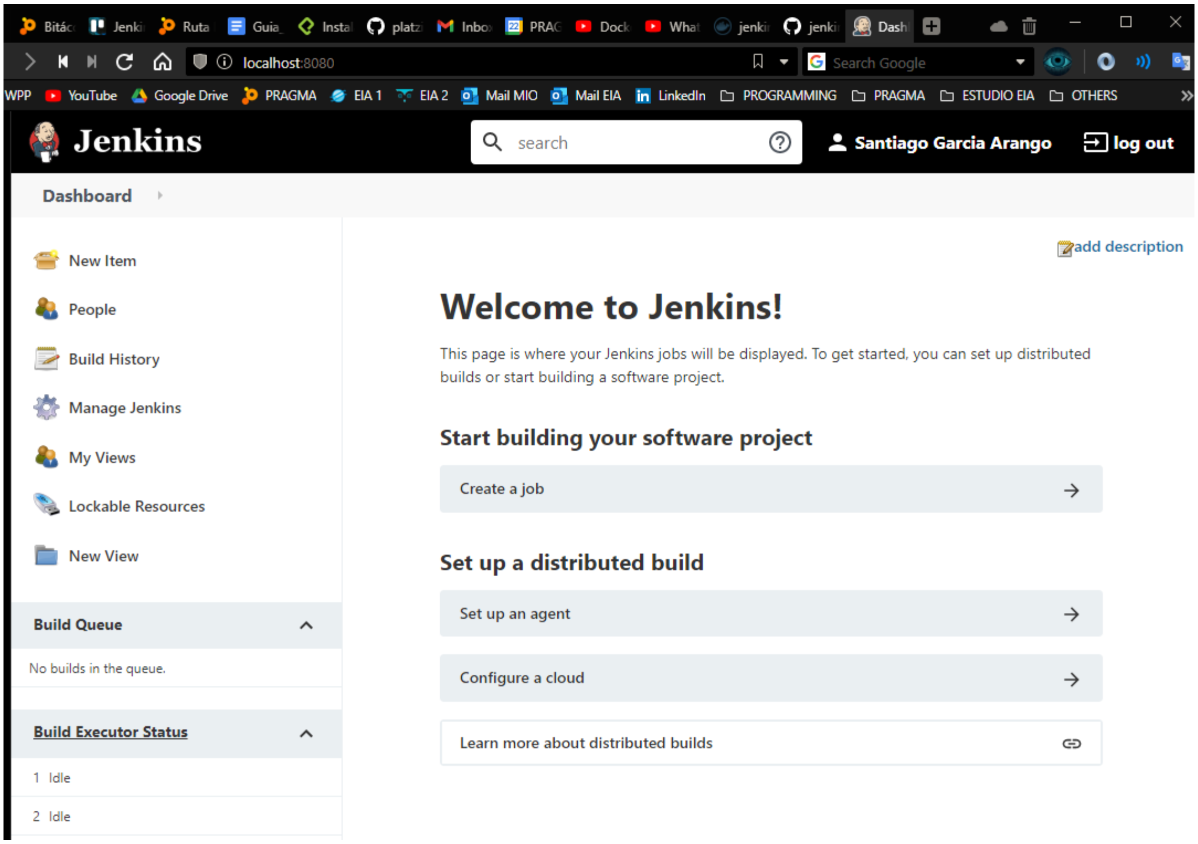


Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

9. Now we have Jenkins configured from an amazing custom docker-container that runs it.



No builds in the queue.

1 Idle

2 Idle

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

Set up a distributed build

Extra Jenkins Configuration for running Docker in Jenkins

This script lets us install Docker (Community Edition) into our Jenkins container and adds the necessary conditions for the Jenkins' user, so that it can run Docker correctly.

```
apt-get update

apt-get -y install apt-transport-https ca-certificates curl gnupg2 software-properties-common

curl -fsSL https://download.docker.com/linux/$(. /etc/os-release; echo "$ID")/gpg > /tmp/dkey;apt-key add /tmp/dkey

add-apt-repository  "deb [arch=amd64] https://download.docker.com/linux/$(. /etc/os-release; echo "$ID") $(lsb_release -cs)  stable"

apt-get update

apt-get -y install docker-ce

usermod -a -G docker jenkins

service jenkins restart
```

Sometimes this could be helpful:

```
sudo chmod 666 /var/run/docker.sock
```

What about docker-compose?

To install it correctly, we can run:

```
sudo curl -L "https://github.com/docker/compose/releases/download/1.28.5/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose
```