

Lab 5. Installing Jenkins

Objectives

- Install Java on OL 7.
- Install Jenkins on OL 7
- Install Maven Plugin for Jenkins

Pre-requisite

- Access to OL 7 VM as root user.
- Internet Access

Sequence 1 install Jenkins on your Oracle Linux 7.

1. Install the OpenJDK 8 and other packages if not already installed

```
# yum install -y java-1.8.0-openjdk-devel git wget curl
```

2. Setup the Jenkins Repository.

```
# curl --silent --location http://pkg.jenkins-ci.org/redhat-stable/jenkins.repo | sudo tee /etc/yum.repos.d/jenkins.repo
```

```
[root@server ~]# curl --silent --location http://pkg.jenkins-ci.org/redhat-stable/jenkins.repo | sudo tee /etc/yum.repos.d/jenkins.repo
[jenkins]
name=Jenkins-stable
baseurl=http://pkg.jenkins.io/redhat-stable
gpgcheck=1
[root@server ~]#
```

3. Import the GPG Key:

```
# rpm --import https://pkg.jenkins.io/redhat/jenkins.io.key
```

This Command will not give any output.

4. Install the latest stable version of Jenkins:

```
# yum install -y jenkins
```

```
=====
Package                Arch          Version           Repository        Size
=====
Installing:
jenkins                noarch        2.263.2-1.1       jenkins           64 M
Transaction Summary
-----
Install 1 Package

Total download size: 64 M
Installed size: 64 M
Downloading packages:
jenkins-2.263.2-1.1.noarch.rpm | 64 MB 00:01:26
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.263.2-1.1.noarch 1/1
  Verifying  : jenkins-2.263.2-1.1.noarch 1/1

Installed:
jenkins.noarch 0:2.263.2-1.1

Complete!
[root@server ~]#
```

5. Start and enable the Jenkins service to start on system boot

```
# systemctl start jenkins && systemctl enable jenkins
```

6. To check whether it started successfully run:

```
# systemctl status jenkins
```

```
[root@server ~]# systemctl start jenkins && systemctl enable jenkins
jenkins.service is not a native service, redirecting to /sbin/chkconfig.
Executing /sbin/chkconfig jenkins on
[root@server ~]# systemctl status jenkins
● jenkins.service - LSB: Jenkins Automation Server
   Loaded: loaded (/etc/rc.d/init.d/jenkins; bad; vendor preset: disabled)
   Active: active (running) since Sun 2021-01-17 05:15:47 EST; 10s ago
     Docs: man:systemd-sysv-generator(8)
    CGroup: /system.slice/jenkins.service
            └─11856 /etc/alternatives/java -Dcom.sun.akuma.Daemon=daemonized -Djava.awt.headless=true -DJENKIN...

Jan 17 05:15:45 server.example.com systemd[1]: Starting LSB: Jenkins Automation Server...
Jan 17 05:15:45 server.example.com runuser[11842]: pam_unix(runuser:session): session opened for user jen...d=0)
Jan 17 05:15:47 server.example.com jenkins[11837]: Starting Jenkins [ OK ]
Jan 17 05:15:47 server.example.com systemd[1]: Started LSB: Jenkins Automation Server.
Hint: Some lines were ellipsized, use -l to show in full.
[root@server ~]#
```

7. Open the necessary port with

```
# firewall-cmd --permanent --zone=public --add-port=8080/tcp
```

```
# firewall-cmd --reload
```

Sequence 2. Setup Jenkins.

1. To set up your new Jenkins installation, open your browser and type your domain or IP address followed by port 8080:

http://10.10.0.100:8080

2. Enter the Administrator password that is created during the installation:

Getting Started

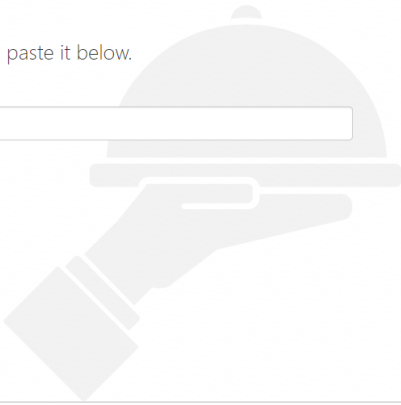
Unlock Jenkins

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/lib/jenkins/secrets/initialAdminPassword
```

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

Administrator password



Continue

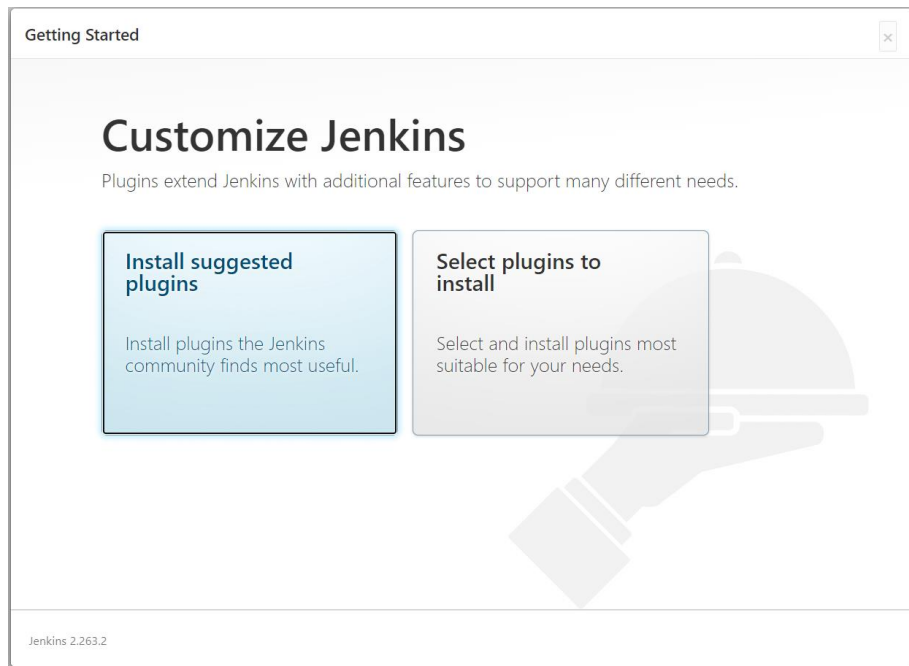
3. If you have installed Jenkins using **yum**, use the following command to print the password on your terminal:

```
# cat /var/lib/jenkins/secrets/initialAdminPassword
```

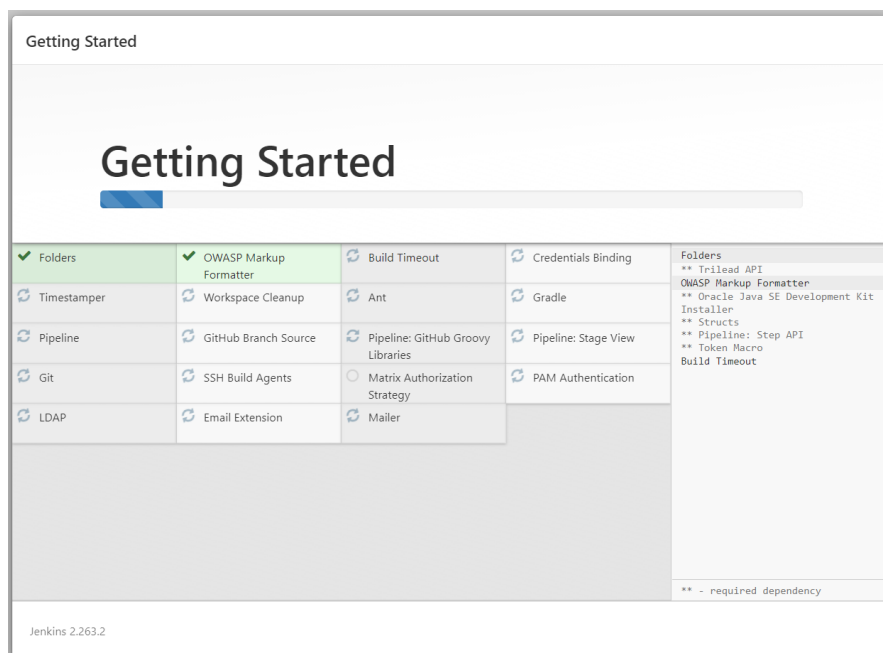
You should see a 32-character long alphanumeric password as shown below:

```
2115173b548f4e99a203ee99a8732a32
```

4. Copy the password from your terminal, paste it into the Administrator password field and click **Continue**. If **git** is not installed, you will be redirected to Jenkins Dashboard, you have to manually install plugins as given in the screenshot of step 5.



5. Click on the Install suggested plugins box, and the installation process will start.



6. On the next screen fill out all required information and click **Save and Continue**.

Getting Started

Create First Admin User

Username:

admin

Password:

.....

Confirm password:

.....

Full name:

Ram Niwas Sangwan

E-mail address:

rnsangwan@gmail.com

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Skip and continue as admin

Save and Continue

7. On the next, screen verify the URL.

Getting Started

Instance Configuration

Jenkins URL:

http://10.10.0.100:8080/

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps.

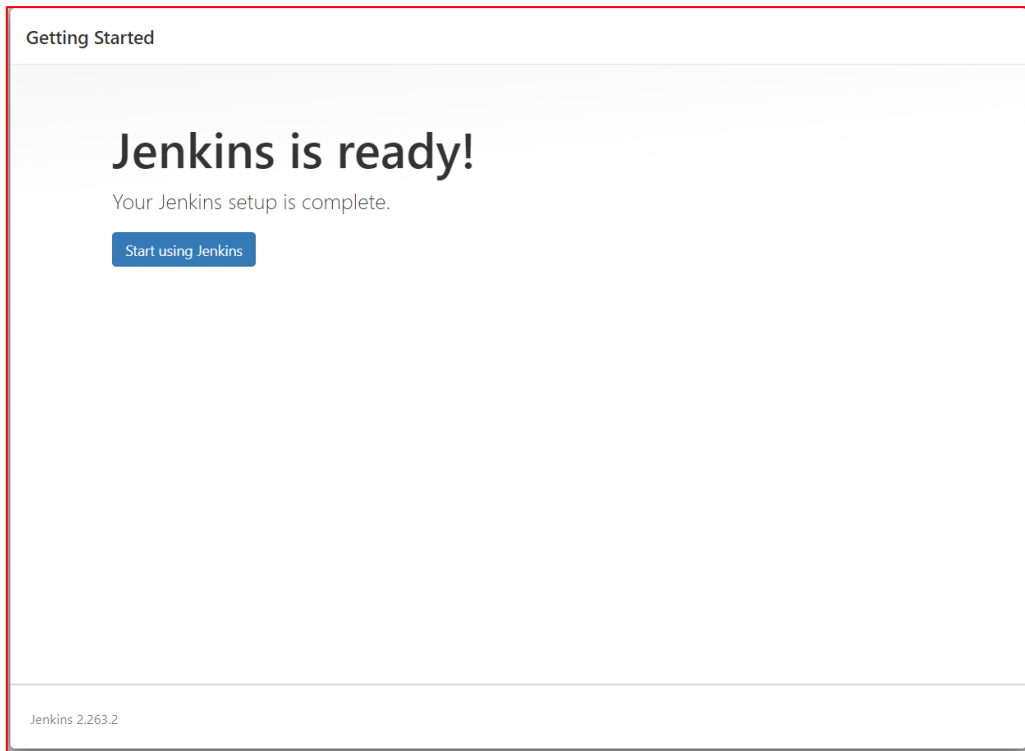
The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

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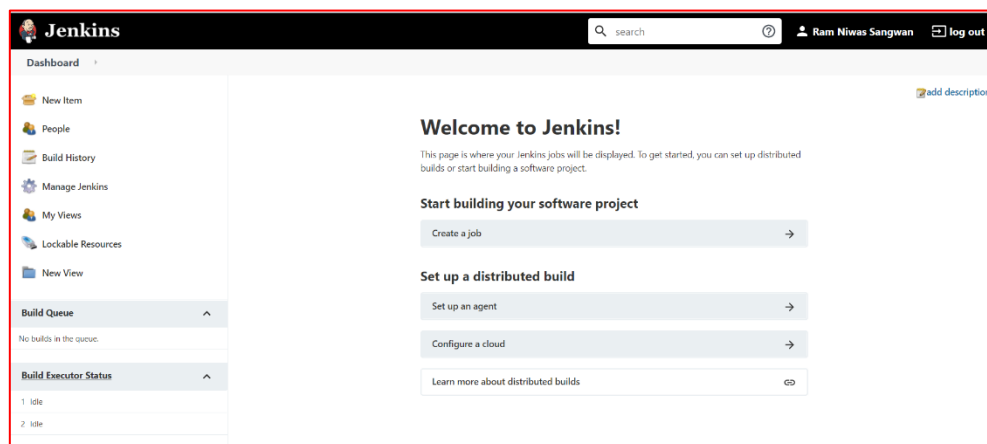
Not now

Save and Finish

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



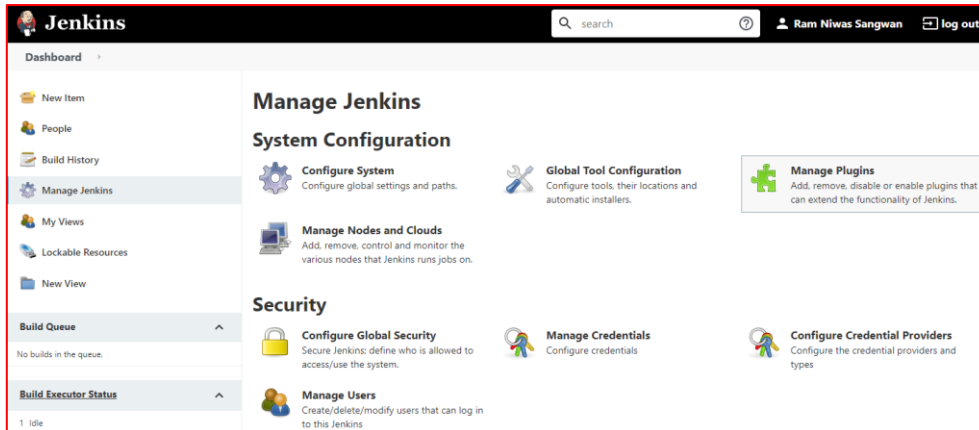
9. Finally, click on the Start using Jenkins button and you will be redirected to the Jenkins dashboard logged in as the admin user you have created in one of the previous steps.



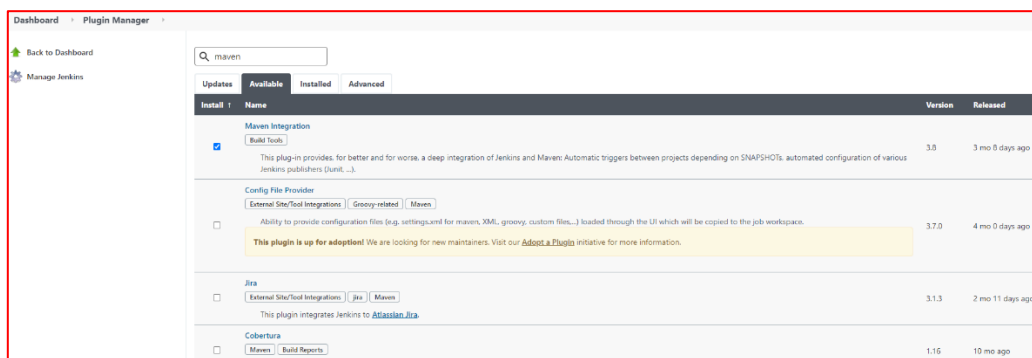
10. If you've reached this point, you've successfully installed Jenkins on your CentOS system.

Sequence 3. Setting up Jenkins and Maven

1. In the Jenkins dashboard (Home screen), click **Manage Jenkins** from the left-hand side menu.



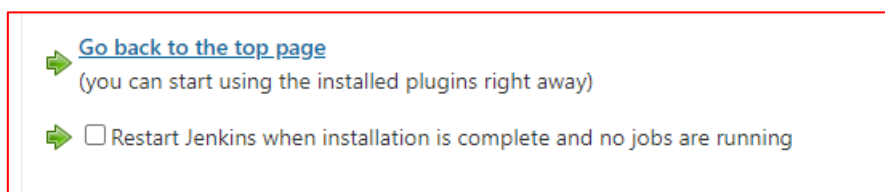
2. In the Configure system screen, click on **Manage Plugins**.



3. In the search box type **Maven**. Select the checkbox in front of all maven related plugins and Click on the button **Install without restart** given at the bottom.



4. Plugin Installation will start. After installation is done click on the checkbox **Restart Jenkins when Installation is complete and no jobs running**.



Installing Plugins/Upgrades

Preparation

- Checking internet connectivity
- Checking update center connectivity
- Success

WMI Windows Agents

Success

Javadoc

Success

Maven Integration

Installing

Maven Info

Pending

Maven Dependency Update Trigger

Pending

H2 API

Pending

Config File Provider

Pending

Pipeline Maven Integration

Pending

Maven Repository Scheduled Cleanup

Pending

Maven Invoker

Pending

Maven Repository Server

Pending

Maven Metadata Plugin for Jenkins CI server

Pending

Maven Integration

Pending

5.

6.

7. You can now create a job with the '**Maven Project**' option.