

// Run Jenkins on Docker Container. //

step 1: create an ubuntu instance,

EC2 service – set name EG: Jenkins on docker – in AMIs: ubuntu 20.04 version – instance type: t2.micro – key pair login: .ppk – in network settings (edit): security group: All Traffic – in configuration storage: 30 Gib – launch instance.

Instance launched successfully.

Instances (1) Info									
<input type="text" value="Find instance by attribute or tag (case-sensitive)"/>									
Instance state = running Clear filters									
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	
<input type="checkbox"/>	*jenkins on Docker*	i-0780d104f32ae553b	Running	t2.micro	2/2 checks passed.	No alarms	ap-northeast-1c	ec2-52-192-107-126.3	

Connect to putty,

```
ubuntu@ip-172-31-13-16: ~
login as: ubuntu
Authenticating with public key "tokyo_ppk_key_pair"
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1033-aws x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Sun Apr 23 07:17:24 UTC 2023

System load:  0.0          Processes:      98
Usage of /:   5.4% of 28.89GB Users logged in: 0
Memory usage: 23%         IPv4 address for eth0: 172.31.13.16
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-13-16:~$
```

#sudo -i

#apt-get update -y


#apt-get install docker.io -y

In docker hub > explore > search Jenkins and copy and paste in server,

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Explore > jenkins/jenkins



jenkins/jenkins

By Jenkins · Updated 3 hours ago

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Image

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↓ Pulls 18+

Overview Tags

Jenkins Continuous Integration and Delivery server.

This is a fully functional Jenkins server, based on the weekly and LTS releases .



Docker Pull Command

Pull command copied

`docker pull jenkins/jenkins`

#docker pull Jenkins/Jenkins

```
root@ip-172-31-13-16:~# docker pull jenkins/jenkins
Using default tag: latest
latest: Pulling from jenkins/jenkins
b0248cf3e63c: Pull complete
33b6b181dd75: Pull complete
a0ae619c7e04: Pull complete
628a3df031c5: Pull complete
0c9cd1e5e117: Pull complete
4a90cdec99a2: Pull complete
a8bb08b626f0: Pull complete
0564e42b8d2d: Pull complete
fd62b7502c2d: Pull complete
f1461e578f49: Pull complete
9cde15aa1b91: Pull complete
f055553ffae1: Pull complete
bcf1ce5799b0: Pull complete
Digest: sha256:7560cc798140cdcdef5b75ca069c28b2a44f179827e3e55076ea18bdfb17b5aa
Status: Downloaded newer image for jenkins/jenkins:latest
docker.io/jenkins/jenkins:latest
```

#docker images ----- Jenkins image is created

```
root@ip-172-31-13-16:~# docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
jenkins/jenkins     latest         6c30514bdde6   4 days ago     471MB
root@ip-172-31-13-16:~#
```

#mkdir /var/Jenkins_home

#cd /var/Jenkins_home

#chmod -R 777 /var/Jenkins_home

#docker run -p 8080:8080 -d -v /var/Jenkins_home:/var/Jenkins_home Jenkins/Jenkins

Now the new Jenkins container is created,

```
root@ip-172-31-13-16:~# mkdir /var/jenkins_home
root@ip-172-31-13-16:~# cd /var/jenkins_home/
root@ip-172-31-13-16:/var/jenkins_home# chmod -R 777 jenkins_home
chmod: cannot access 'jenkins_home': No such file or directory
root@ip-172-31-13-16:/var/jenkins_home# chmod -R 777 /var/jenkins_home
root@ip-172-31-13-16:/var/jenkins_home# docker run -p 8080:8080 -d -v /var/jenkins_home:/var/jenkins_home jenkins/jenkins
bdcda0aee78513e73087a3575534e412b62819f94c6c73a830bbac3c3c2beba
root@ip-172-31-13-16:/var/jenkins_home#
```

#docker ps

```
root@ip-172-31-13-16:/var/jenkins_home# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES
bdcda0aee785   jenkins/jenkins  "/usr/bin/tini -- /u..."  2 minutes ago  Up 2 minutes  0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp  sharp_neumann
```

#docker logs <container id>

EG: #docker logs bdcda0ae

Now it shows Jenkins container logs, and we can able to see the initial login password of Jenkins:

```
rs.get("JENKINS_HOME")
2023-04-23 07:28:14.714+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@242a209e{Jenkins v2.401,,file:///var/jenkins_home/war/,AV
AVAILABLE} [/var/jenkins_home/war]
2023-04-23 07:28:14.762+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@17cdfd2d0{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2023-04-23 07:28:14.808+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started Server@774698ab{STARTING}[10.0.13,sto=0] @5981ms
2023-04-23 07:28:14.824+0000 [id=23] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2023-04-23 07:28:15.406+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2023-04-23 07:28:15.446+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2023-04-23 07:28:17.556+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2023-04-23 07:28:17.569+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2023-04-23 07:28:17.591+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2023-04-23 07:28:18.079+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2023-04-23 07:28:18.080+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2023-04-23 07:28:18.081+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2023-04-23 07:28:18.082+0000 [id=29] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2023-04-23 07:28:18.202+0000 [id=42] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file:/var/jenkins_home/war/WEB-INF/lib/groovy-all-2.4.21.jar) to constructor j
ava.lang.invoke.MethodHandles$Lookup(java.lang.Class,int)
WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.vmplugin.v7.Java7$1
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
2023-04-23 07:28:19.476+0000 [id=29] INFO jenkins.install.SetupWizard#init:

*****
*****
*****

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

2aa65d872e5f40a894e095848c8c2d61

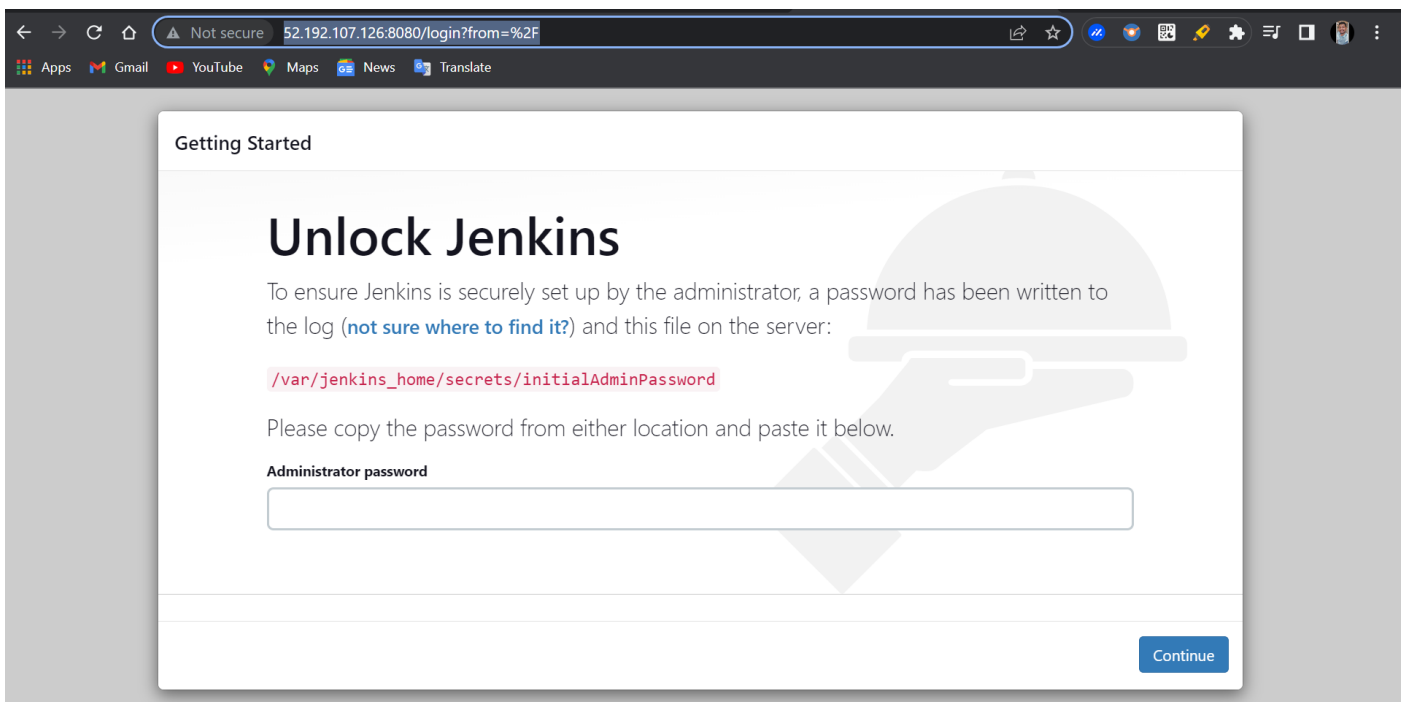
This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*****
*****
*****

2023-04-23 07:28:54.234+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
2023-04-23 07:28:54.274+0000 [id=22] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
2023-04-23 07:28:54.982+0000 [id=42] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller
2023-04-23 07:28:54.982+0000 [id=42] INFO hudson.util.Retrier#start: Performed the action check updates server successfully at the attempt #1
root@ip-172-31-13-16:/var/jenkins_home#
```

In browser, copy and paste IPv4 address of instance IP address follow by Jenkins port number

EG: 52.192.107.126:8080



Getting Started

Unlock Jenkins

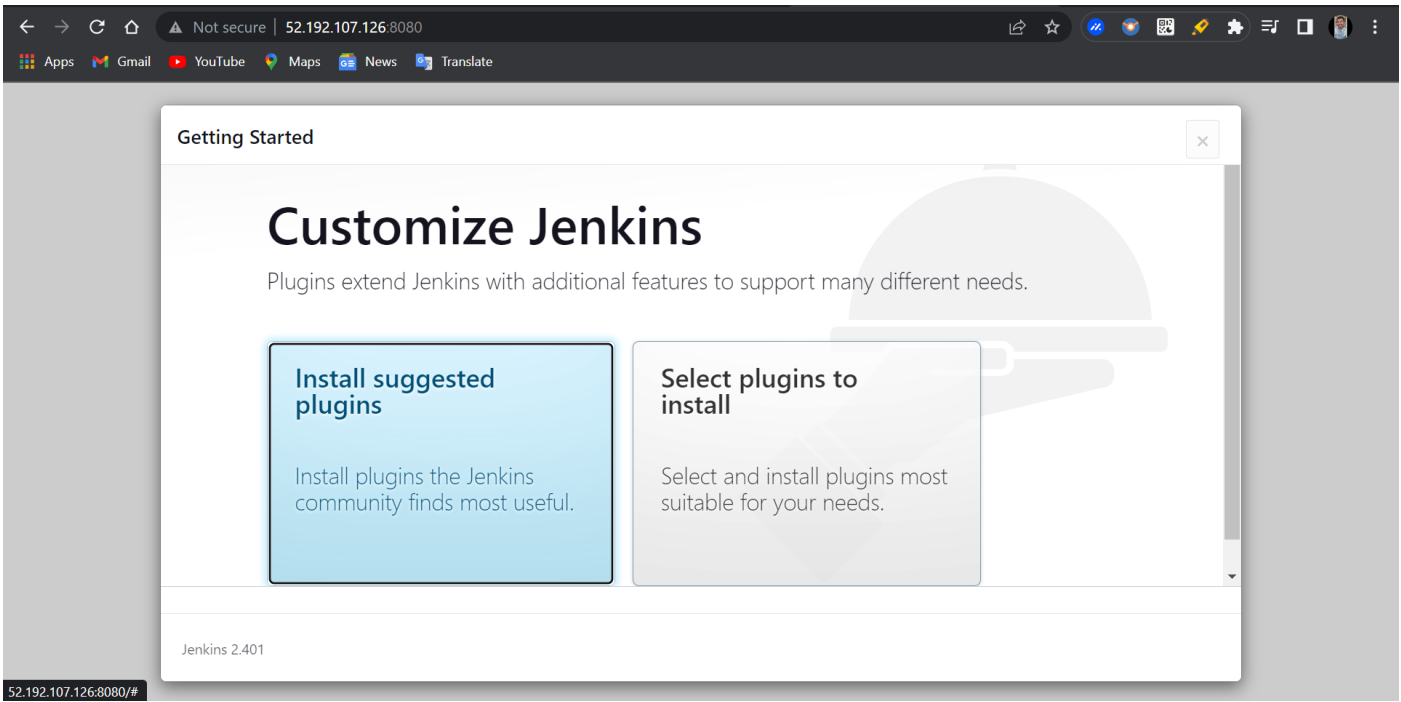
To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

`/var/jenkins_home/secrets/initialAdminPassword`

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

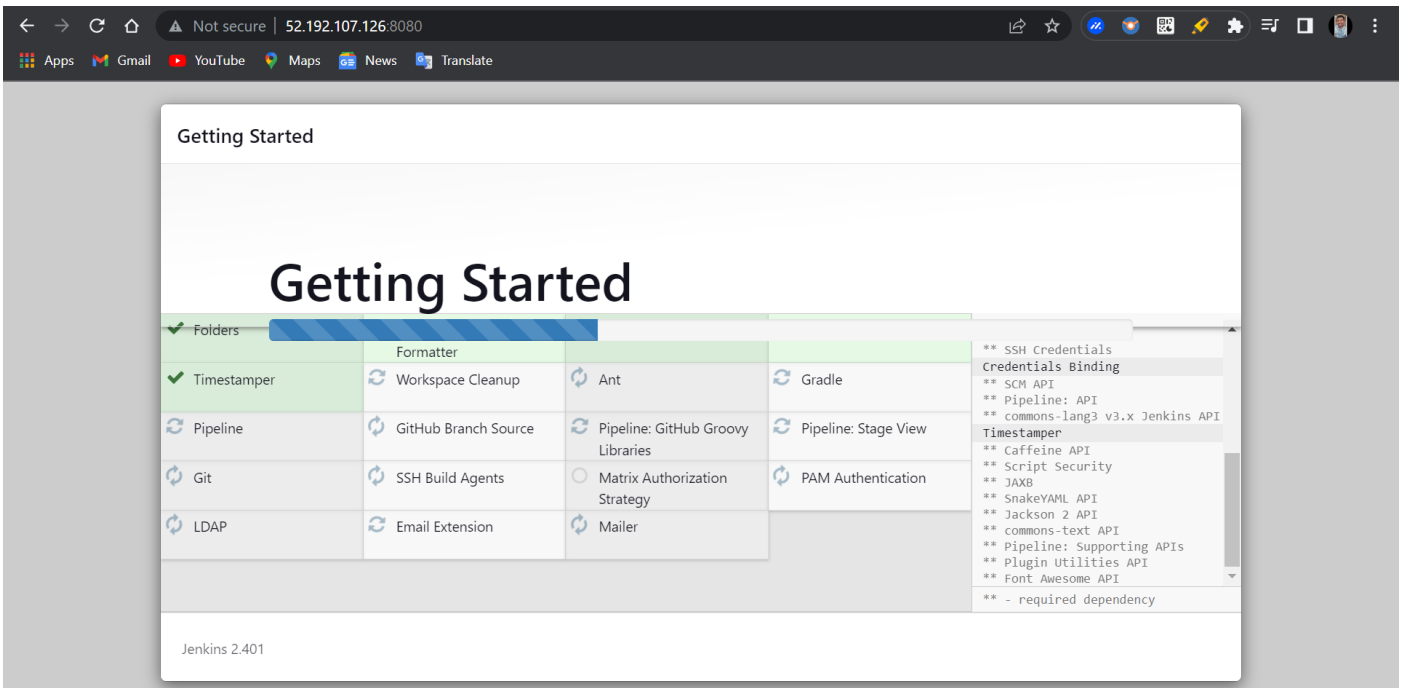
Administrator password

Continue



Here you able see the

```
root@ip-172-31-13-16:/var/jenkins_home# ls
config.xml          jenkins.install.InstallUtil.installingPlugins  nodeMonitors.xml  secret.key  updates  war
copy_reference_file.log  jenkins.telemetry.Correlator.xml              nodes            secret.key.not-so-secret  userContent
hudson.model.UpdateCenter.xml  jobs                                           plugins          secrets      users
root@ip-172-31-13-16:/var/jenkins_home#
```



Dashboard >

+ New Item

People

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

Search (CTRL+K)

Ambalavaneshwaran R

log out

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

Create a job

Set up a distributed build

Set up an agent

Here by we seen Running Jenkins through Docker container clearly.