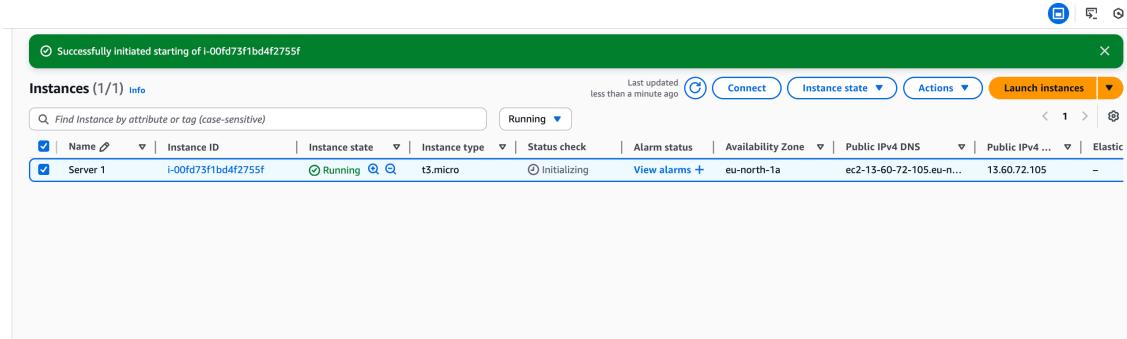


Challenge - 01

1. Launch one aws ec2 and install jenkins.
2. Setup Apache Tomcat on Ubuntu Virtual Machine
3. Setup Docker Desktop on your local windows.



```
[sainiharikagundu@192 ~ % ssh -i ~/downloads/Gayu_01.pem ec2-user@13.60.72.105

A newer release of "Amazon Linux" is available.
Version 2023.9.20251208:
Run "/usr/bin/dnf check-release-update" for full release and version update info
,
      #
~\_\_ #####_          Amazon Linux 2023
~~ \_\#\#\#\#\\
~~ \#\#\#
~~ \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
~~     \~' '->
~~
~~
~~ ._. _/
~~ / _/
~/m/'

Last login: Thu Dec 11 12:10:12 2025 from 13.48.4.202
[ec2-user@ip-172-31-29-44 ~]$ ]$
```

Installed jenks by “yum install jenks”

```
[root@ip-172-31-29-44 ~]# sudo dnf install jenkins -y
Last metadata expiration check: 0:06:02 ago on Thu Dec 11 12:30:24 2025.
Dependencies resolved.
=====
== Package           Architecture      Version ==
=====
Installing:
jenkins           noarch          2.528.3-1.1

Transaction Summary
=====
Install 1 Package

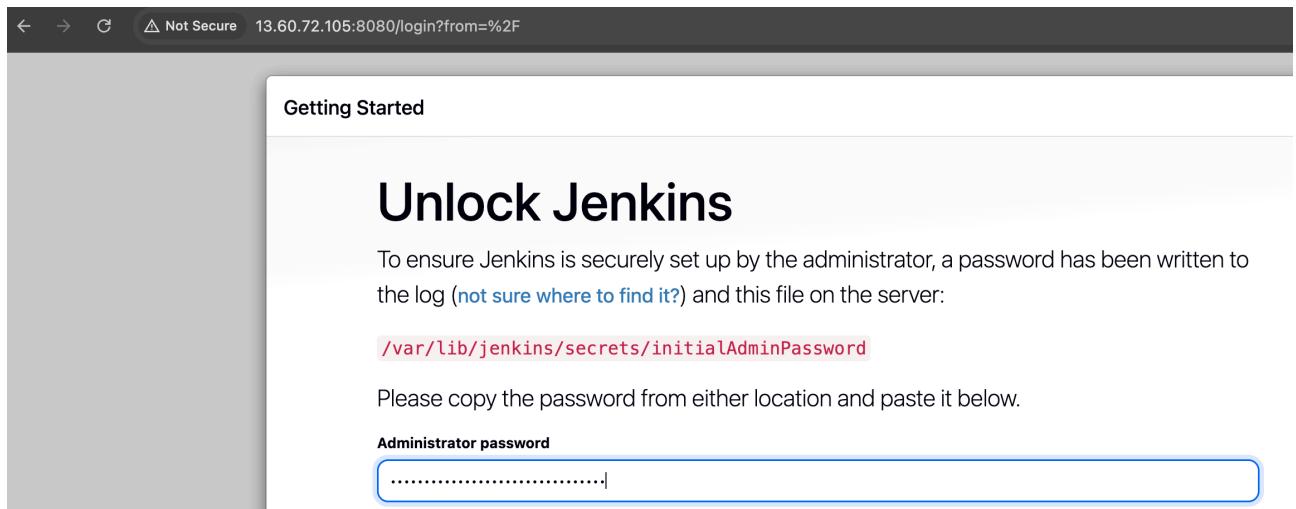
Total download size: 91 M
Installed size: 91 M
Downloading Packages:
jenkins-2.528.3-1.1.noarch.rpm
=====
Total
Jenkins-stable
Importing GPG key 0xEF5975CA:
  Userid : "Jenkins Project <jenkinsci-board@googlegroups.com>"
  Fingerprint: 6366 7EE7 4BBA 1F0A 08A6 9872 5BA3 1D57 EF59 75CA
  From   : https://pkg.jenkins.io/redhat-stable/repo/epel/repodata/repomd.xml.key
Key imported successfully
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing :
    Running scriptlet: jenkins-2.528.3-1.1.noarch
  Installing   : jenkins-2.528.3-1.1.noarch
  Running scriptlet: jenkins-2.528.3-1.1.noarch
  Verifying    : jenkins-2.528.3-1.1.noarch
=====
WARNING:
  A newer release of "Amazon Linux" is available.
```

Sudo systemctl start jenkins

```
Installed:
  jenkins-2.528.3-1.1.noarch

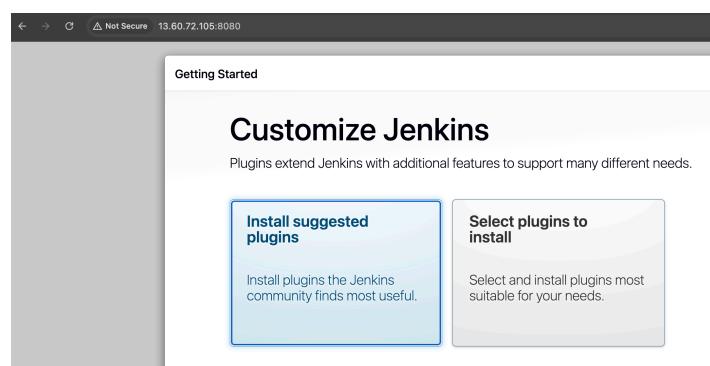
Complete!
[root@ip-172-31-29-44 ~]# sudo dnf install jenkins -y
Last metadata expiration check: 0:00:38 ago on Thu Dec 11 13:04:12 2025.
Package jenkins-2.528.3-1.1.noarch is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-29-44 ~]# sudo systemctl start jenkins
[root@ip-172-31-29-44 ~]# sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[root@ip-172-31-29-44 ~]# sudo systemctl restart jenkins
[root@ip-172-31-29-44 ~]# sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
     Active: active (running) since Thu 2025-12-11 13:06:05 UTC; 16s ago
       Main PID: 30041 (java)
          Tasks: 45 (limit: 1053)
        Memory: 265.8M
         CPU: 15.521s
      CGroup: /system.slice/jenkins.service
              └─30041 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Dec 11 13:06:01 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: [LF]>
Dec 11 13:06:01 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: [LF]> This may also be found at: /var/lib/jenkins/secrets/initial
Dec 11 13:06:01 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: [LF]>
Dec 11 13:06:01 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: [LF]> ****
Dec 11 13:06:05 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: 2025-12-11 13:06:05.810+0000 [id=31]      INFO  jenkins.I
Dec 11 13:06:05 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: 2025-12-11 13:06:05.830+0000 [id=23]      INFO  hudson.li
Dec 11 13:06:05 ip-172-31-29-44.eu-north-1.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Dec 11 13:06:10 ip-172-31-29-44.eu-north-1.compute.internal jenkins[30041]: 2025-12-11 13:06:10.867+0000 [id=59]      WARNING h.n.Di
Lines 1-20/20 (END)
```



For password > sudo cat /var/lib/jenkins/secrets/initialAdminPassword

```
[root@ip-172-31-29-44 ~]# sudo cat /var/lib/jenkins/secrets/initialAdminPassword
df28515ff90f4ba59908049c04e60c75
[root@ip-172-31-29-44 ~]#
```



>> yum install docker

```
[root@ip-172-31-29-44 ~]# sudo yum install docker -y
Last metadata expiration check: 1:02:50 ago on Thu Dec 11 13:04:12 2025.
Dependencies resolved.
=====
==> Package docker.x86_64 0:25.0.13-1.amzn2023.0.2 will be installed
=====
Installing:
  docker.x86_64 25.0.13-1.amzn2023.0.2
Installing dependencies:
  container-selinux.noarch 4:2.242.0-1.amzn2023
  containerd.x86_64 2.1.4-1.amzn2023.0.2
  iptables-libc.x86_64 1.8.8-3.amzn2023.0.2
  libdnf.x86_64 1.1.0-1.amzn2023.0.2
  libdnffilter.x86_64 3.0-2.amzn2023.0.1
  libdnffilter_conntrack.x86_64 1.0.8-2.amzn2023.0.2
  libdnfnetlink.x86_64 1.0.1-19.amzn2023.0.2
  libdnfctl.x86_64 1.2.1-2.amzn2023.0.2
  pigz.x86_64 2.6-1.amzn2023.0.3
  runc.x86_64 1.3.3-2.amzn2023.0.1
=====
Repository                                         Size
amazonlinux                                         46 M
amazonlinux                                         58 k
amazonlinux                                         23 M
amazonlinux                                         491 k
amazonlinux                                         185 k
amazonlinux                                         75 k
amazonlinux                                         58 k
amazonlinux                                         39 k
amazonlinux                                         84 k
amazonlinux                                         83 k
amazonlinux                                         3.9 M
```

```

Installed:
  container-selinux-4:2.242.0-1.amzn2023.noarch           containerd-2.1.4-1.amzn2023.0.2.x86_64
  iptables-nft-1.8.8-3.amzn2023.0.2.x86_64              libcgroup-3.0-1.amzn2023.0.1.x86_64
  libnftnl-1.2.2-2.amzn2023.0.2.x86_64                 pigz-2.5-1.amzn2023.0.3.x86_64

Complete!
[[root@ip-172-31-29-44 ~]# sudo systemctl enable docker
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/
[[root@ip-172-31-29-44 ~]# sudo systemctl start docker
[[root@ip-172-31-29-44 ~]# sudo systemctl status docker
● docker.service - Docker Application Container Engine
  Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: disabled)
  Active: active (running) since Thu 2025-12-11 14:10:36 UTC; 14s ago
    Docs: https://docs.docker.com
   Process: 35367 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
   Process: 35368 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, sta
 Main PID: 35369 (dockerd)
    Tasks: 9
   Memory: 31.2M
      CPU: 325ms
     CGroup: /system.slice/docker.service
             └─35369 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --

Dec 11 14:10:35 ip-172-31-29-44.eu-north-1.compute.internal systemd[1]: Starting docker.service
Dec 11 14:10:35 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:35.000000000Z" level=info msg="Starting Docker daemon"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon is running"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Listening on fd://"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon has initialized"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon is ready to service requests"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon is running"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon has initialized"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal dockerd[35369]: time="2025-12-11T14:10:36.000000000Z" level=info msg="Docker daemon is ready to service requests"
Dec 11 14:10:36 ip-172-31-29-44.eu-north-1.compute.internal systemd[1]: Started docker.service
[
```

>> sudo docker run hello-world

```

[[root@ip-172-31-29-44 ~]# sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
17eec7bbc9d7: Pull complete
Digest: sha256:d4aaab6242e0cace87e2ec17a2ed3d779d18fbfd03042ea58f2995626396a274
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

[root@ip-172-31-29-44 ~]# 
```