


# DOCKER-01

## 1) SETUP A VIRTUAL MACHINE USING UBUNTU IMAGE.

### Ubuntu 24.04.1 LTS

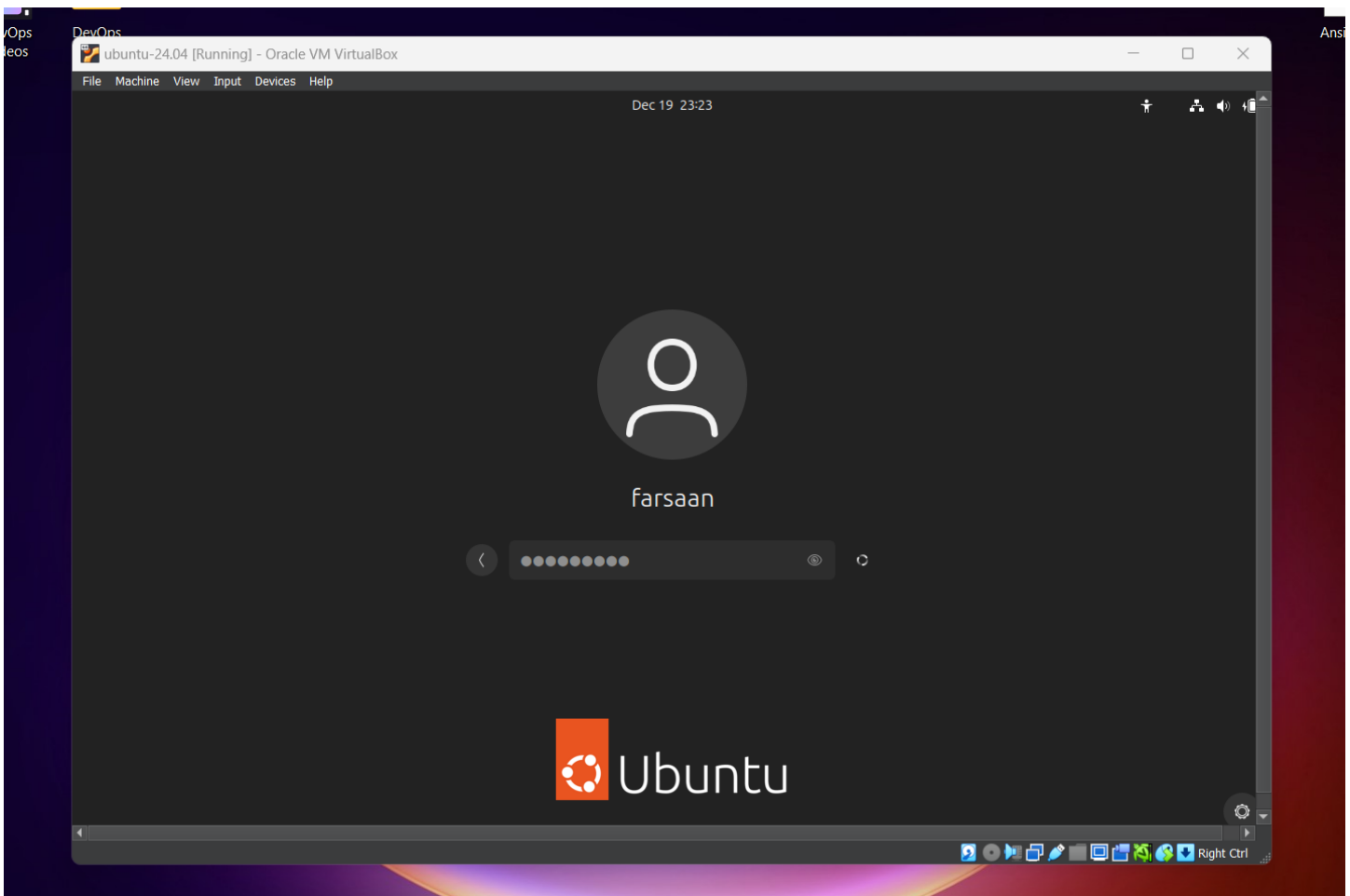


The latest LTS version of Ubuntu, for desktop PCs and laptops. LTS stands for long-term support — which means five years of free security and maintenance updates, extended up to 12 years with [Ubuntu Pro](#).

[Download 24.04.1 LTS](#) 5.8GB

For other versions of Ubuntu Desktop including torrents, the network installer, a list of local mirrors and past releases [check out our alternative downloads](#).

[What's new](#) [System requirements](#) [How to install](#)



## 2) INSTALL DOCKER ON EC2.

```
# sudo yum install -y docker
```

```
# docker --version
```

```
# systemctl start docker
```

```
root@ip-10-0-0-169:~  
[root@ip-10-0-0-169 ~]# docker --version  
Docker version 25.0.5, build 5dc9bcc
```

### 3) PULL 5 DOCKER IMAGES.(NGINX,APACHE TOMCAT,UBUNTU,JENKINS,SONARQUBE)

```
[root@ip-10-0-0-169 ~]# docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
tomcat	latest	f62f518e5c5c	10 days ago	467MB
sonarqube	latest	6bada21f1230	2 weeks ago	1.12GB
nginx	latest	66f8bdd3810c	3 weeks ago	192MB
ubuntu	latest	b1d9df8ab815	4 weeks ago	78.1MB
jenkins	2.60.3	cd14cecfdb3a	6 years ago	696MB

### 4) RUN NGINX CONTAINER AND EXPOSE ON PORT 81.

```
[root@ip-10-0-0-169 ~]# docker run -d -p 81:80 --name mynginx nginx
47ce5c351872a75743cc216446d46b133febd52f867c0bc66d907cfd19068c88
[root@ip-10-0-0-169 ~]# docker container ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
47ce5c351872	nginx	"/docker-entrypoint..."	17 seconds ago	Up 16 seconds	0.0.0.0:81->80/tcp, :::81->80/tcp	mynginx

### 5) DELETE THE APACHE TOMCAT IMAGE FROM LOCAL.

```
[root@ip-10-0-0-169 ~]# docker image rmi tomcat
Untagged: tomcat:latest
Untagged: tomcat@sha256:935ff51abecc8dc793cb19c229ac7a988c8899e5fcb5e69ae96530fa76c4d56
Deleted: sha256:f62f518e5c5c117ed2b23e2868bcbb510edbc7e403246e74694c3e7e05213673
Deleted: sha256:21a52b0ff969560eb7d92bcc040367a001ba0f7da4106663e0ab101b2569f9fb
Deleted: sha256:7a43f5a5837a214963cad3eb2ed5d392e9e297e8fe683b4dd3f88d170a4af962
Deleted: sha256:09bac625fd98c313fbb8e456912fea86f9cf819497001c5a4a046978973f77db
Deleted: sha256:4dd4e3829be4d2564be9abc10745e9784e7ad62e56af90c3c244c596ce638b59
Deleted: sha256:c4a0b3b7746a883fd71e07ade13ec4e2ba3812fbcf9527ea49fbb643939940
Deleted: sha256:3ddd3978477832533d9fe07032a9a3bb347740076de810e640dcfc2dbf85e037
Deleted: sha256:c38291e406fe42590effeeabf6a8522b7441718345d9c2bdb56bd217e20b148c
Deleted: sha256:f1ea1df560b257879739de224d12f09c1402ccc4b18405b998927ef1de1af7f1
```

### 6) INSPECT THE JENKINS IMAGE,SONARQUBE IMAGE.

# docker image inspect jenkins:2.60.3

```
[root@ip-10-0-0-169 ~]# docker image inspect jenkins:2.60.3
[
  {
    "Id": "sha256:cd14cecfdb3a657ba7d05bea026e7ac8b9abafc6e5c66253ab327c7211fa6281",
    "RepoTags": [
      "jenkins:2.60.3"
    ]
  }
]
```

# docker image inspect sonarqube

```
[root@ip-10-0-0-169 ~]# docker image inspect sonarqube
[
  {
    "Id": "sha256:6bada21f1230c8901a0ee86671c2cf1ef968e76e2f946585d462660292b98983",
    "RepoTags": [
      "sonarqube:latest"
    ]
  }
]
```

## 7) RUN JENKINS CONTIANER AND RUN ONE SAMPLE JOB.

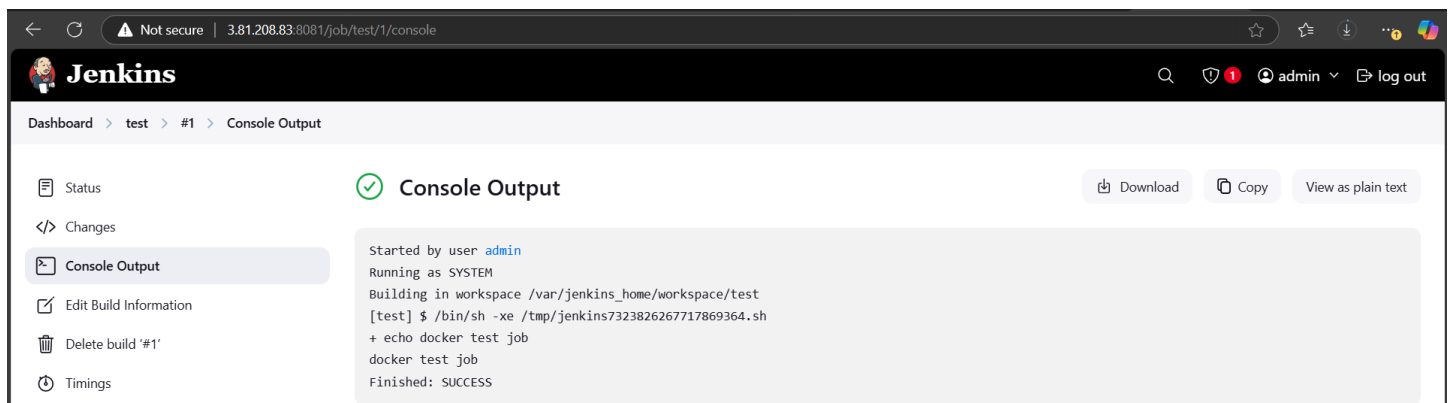
```
# docker run -itd -p 8081:8080 jenkins/jenkins
```

```
[root@ip-10-0-0-169 ~]# docker run -itd -p 8081:8080 jenkins/jenkins
Unable to find image 'jenkins/jenkins:latest' locally
latest: Pulling from jenkins/jenkins
fdf894e782a2: Pull complete
903845c5c222: Pull complete
fa7f6ed646eb: Pull complete
41f06876f339: Pull complete
718d59945474: Pull complete
be3fdbdd74a2: Pull complete
5dc12264d2cd: Pull complete
1c2547651e57: Pull complete
5d7c36b59f5e: Pull complete
b5a00ec9b928: Pull complete
6318eb677308: Pull complete
9978495fa09c: Pull complete
Digest: sha256:bbd73494c04e3687a7ec2f0890a7dd8257bd463c939a7b1bb7d5258ae00db3c6
Status: Downloaded newer image for jenkins/jenkins:latest
0f2ba667c37fe99c453b6cb5bbf7cf55378cbda1632fb96c935536ba434e7136
```

```
# docker exec -it <id> bash
```

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

```
[root@ip-10-0-0-169 ~]# docker exec -it 0f2 bash
jenkins@0f2ba667c37f:/$ cat /var/jenkins_home/secrets/initialAdminPassword
826dd6be1c2e43859183206f4a21694f
jenkins@0f2ba667c37f:/$
```



The screenshot shows the Jenkins web interface in a browser. The address bar indicates the URL is `3.81.208.83:8081/job/test/1/console`. The page title is "Jenkins". The navigation bar shows the user is logged in as "admin" and there is a "log out" link. The main content area displays the "Console Output" for a build named "test" (build #1). The console output shows the build was started by user "admin", running as "SYSTEM", and building in the workspace `/var/jenkins_home/workspace/test`. The build script executed `[test] $ /bin/sh -xe /tmp/jenkins732382626717869364.sh` and included the command `+ echo docker test job`. The build finished successfully.

Dashboard > test > #1 > Console Output

Console Output

Started by user [admin](#)  
Running as SYSTEM  
Building in workspace `/var/jenkins_home/workspace/test`  
`[test] $ /bin/sh -xe /tmp/jenkins732382626717869364.sh`  
`+ echo docker test job`  
docker test job  
Finished: SUCCESS