

Lab 1 : Docker Installation

Step 1: Changing the username

```
> whoami # for currently logged in username
# Changing the username to the given format
> boot into recovery mode
> access root terminal
> usermod -l new_name old_name
> usermod -d /home/new_name -m new_name
> groupmod -n new_name old_name
> id new_name
> reboot
```

Step 2: Uninstall the current installation of docker

```
## Removing docker
> docker ps
> sudo systemctl stop docker
> sudo systemctl stop docker.socket
> sudo systemctl stop docker
> sudo apt-get purge -y docker-engine docker docker.io docker-ce docker-ce-cli containerd.io
docker-buildx-plugin docker-compose-plugin
```

Step 3 : Reinstalling docker by following the instructions on the official website

```
## installing docker

# Add Docker's official GPG key:
sudo apt-get update
sudo apt-get install ca-certificates curl
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
# Add the repository to Apt sources:
echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc]
  https://download.docker.com/linux/ubuntu \
  ${. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}"} stable"
| \
  sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-
plugin

> sudo systemctl status docker
```

```
> sudo systemctl start docker  
> docker ps
```

Screenshots

```
> whoami
1RV24MC042_harshavardhan_b_r
```

Figure 1: whoami output

```
1RV24MC042 harshavardhan_b_r@blaze:~$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-10-17 09:53:30 IST; 4min 22s ago
     TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
      Main PID: 16136 (dockerd)
        Tasks: 18
       Memory: 25.6M (peak: 29.5M)
          CPU: 317ms
      CGroup: /system.slice/docker.service
              └─16136 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 17 09:53:29 blaze dockerd[16136]: time="2025-10-17T09:53:29.367496157+05:30" level=info msg="Creating a containerd
Oct 17 09:53:29 blaze dockerd[16136]: time="2025-10-17T09:53:29.380625483+05:30" level=info msg="[graphdriver] using pr
Oct 17 09:53:29 blaze dockerd[16136]: time="2025-10-17T09:53:29.409009312+05:30" level=info msg="Loading containers: st
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.156185722+05:30" level=info msg="Loading containers: do
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.179243187+05:30" level=info msg="Docker daemon" commit=
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.179274686+05:30" level=info msg="Initializing buildkit"
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.259025059+05:30" level=info msg="Completed buildkit ini
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.261619056+05:30" level=info msg="Daemon has completed i
Oct 17 09:53:30 blaze dockerd[16136]: time="2025-10-17T09:53:30.261649163+05:30" level=info msg="API listen on /run/doc
Oct 17 09:53:30 blaze systemd[1]: Started docker.service - Docker Application Container Engine.
```

Figure 2: docker installation output

```
> docker run hello-world

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/
```

Figure 3: running helloworld container