

LAB-1

DOCKER DOCUMENT

1. Changing username into usn_name format:

Create a temporary admin user if you don't have one:

```
sudo adduser tempadmin
```

```
sudo usermod -aG sudo tempadmin
```

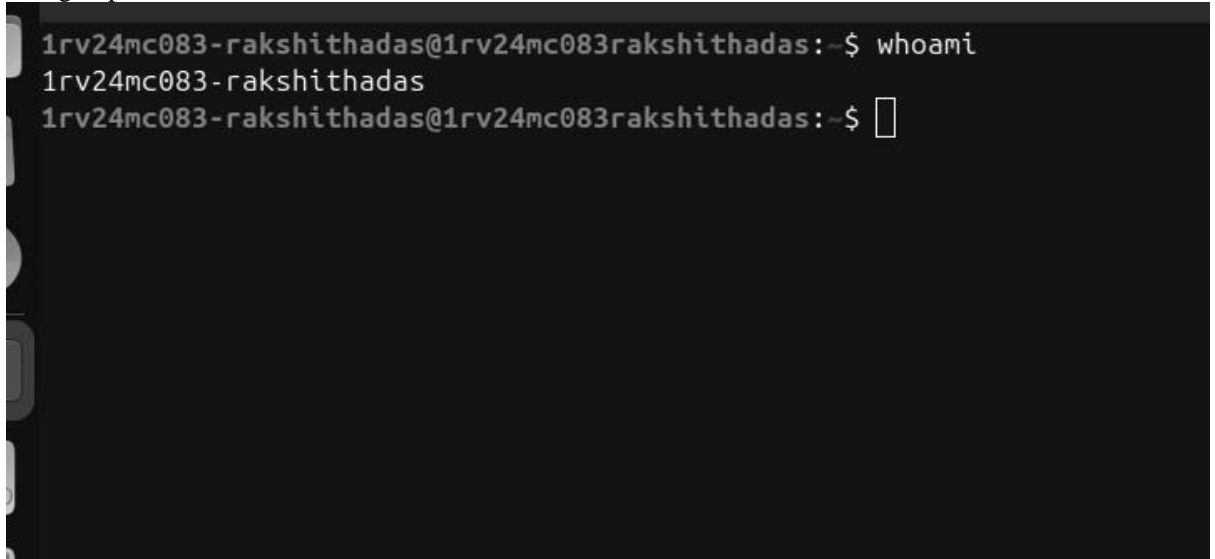
Log out of your current account and log in as tempadmin.

Now run the username change commands:

```
sudo usermod -l newname oldname
```

```
sudo usermod -d /home/newname -m newname
```

```
sudo groupmod -n newname oldname
```

A terminal window with a dark background. The prompt is '1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~\$'. The user has entered 'whoami' and the output is '1rv24mc083-rakshithadas'. The prompt is now '1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~\$' with a cursor at the end.

```
1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~$ whoami
1rv24mc083-rakshithadas
1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~$
```

2. Docker Installation:

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
```

```

Oct 15 15:52
1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~$

Removing pigz (2.8-1) ...
Removing slurp4nets (1.2.1-1build2) ...
Removing ubuntu-fan (0.12.16+24.04.1) ...
ubuntu-fan: removing default /etc/network/fan configuration
Processing triggers for man-db (2.12.1-3) ...
Processing triggers for libc-bin (2.40-1ubuntu3.1) ...
1rv24mc083-rakshithadas@1rv24mc083rakshithadas:~$ sudo apt-get install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  containerd pigz runc ubuntu-fan
Suggested packages:
  aufs-tools brfs-progs cgroupfs-mount | cgroup-lite deboststrap docker-buildx
  docker-compose-v2 docker-doc rinse zfs-fuse | zfsutils
The following packages will be REMOVED:
  docker-ce-cli
The following NEW packages will be installed:
  containerd docker.io pigz runc ubuntu-fan
0 upgraded, 5 newly installed, 1 to remove and 2 not upgraded.
Need to get 75.5 MB of archives.
After this operation, 242 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu noble-updates/main amd64 runc amd64 1.3.0-0ubuntu2-24.04.1 [8,743 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu noble-updates/main amd64 containerd amd64 1.7.28-0ubuntu1-24.04.1 [38.4 MB]
Get:4 http://in.archive.ubuntu.com/ubuntu noble-updates/universe amd64 docker.io amd64 28.2.2-0ubuntu1-24.04.1 [28.3 MB]
Get:5 http://in.archive.ubuntu.com/ubuntu noble-updates/universe amd64 ubuntu-fan all 0.12.16+24.04.1 [34.2 kB]
Fetched 75.5 MB in 38s (2,532 kB/s)
Preconfiguring packages ...
(Reading database ... 283751 files and directories currently installed.)
Removing docker-ce-cli (5:28.4.0-1-ubuntu.24.10-oracular) ...
Selecting previously unselected package pigz.
(Reading database ... 283554 files and directories currently installed.)
Preparing to unpack .../archives/pigz_2.8-1_amd64.deb ...
Unpacking pigz (2.8-1) ...
Selecting previously unselected package runc.
Preparing to unpack .../runc_1.3.0-0ubuntu2-24.04.1_amd64.deb ...
Unpacking runc (1.3.0-0ubuntu2-24.04.1) ...
Selecting previously unselected package containerd.
Preparing to unpack .../containerd_1.7.28-0ubuntu1-24.04.1_amd64.deb ...
Unpacking containerd (1.7.28-0ubuntu1-24.04.1) ...
Selecting previously unselected package docker.io.
Preparing to unpack .../docker.io_28.2.2-0ubuntu1-24.04.1_amd64.deb ...
Unpacking docker.io (28.2.2-0ubuntu1-24.04.1) ...

```

3. Checking the status of the Docker:

```
Processing triggers for man-db (2.12.1-3) ...
1rv24mc083-rakshithadas@1rv24mc083-rakshithadas:~$ docker --version
Docker version 28.2.2, build 28.2.2-0ubuntu1-24.04.1
1rv24mc083-rakshithadas@1rv24mc083-rakshithadas:~$ 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 Wed 2025-10-15 17:49:49 IST; 1min 21s ago
   Invocation: f29ba896fee846efafed6f8233e77828
   TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
    Main PID: 29929 (dockerd)
      Tasks: 14
     Memory: 22.3M (peak: 23.9M)
        CPU: 439ms
    CGroup: /system.slice/docker.service
            └─29929 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 15 17:49:48 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:48.985047564"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.697981145"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.718164637"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.718366646"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.730794565"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.730794493"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.780331091"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.790204082"
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.790265734"
Oct 15 17:49:49 1rv24mc083-rakshithadas systemd[1]: Started docker.service - Docker Appli
lines 1-23/23 (END)... skipping...
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
   Active: active (running) since Wed 2025-10-15 17:49:49 IST; 1min 21s ago
   Invocation: f29ba896fee846efafed6f8233e77828
   TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
    Main PID: 29929 (dockerd)
      Tasks: 14
     Memory: 22.3M (peak: 23.9M)
        CPU: 439ms
    CGroup: /system.slice/docker.service
            └─29929 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 15 17:49:48 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:48.985047564+05:30" level=info msg="Loading containers: start."
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.697981145+05:30" level=info msg="Loading containers: done."
Oct 15 17:49:49 1rv24mc083-rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.739564433+05:30" level=info msg="Loading containers: done."
1rv24mc083-rakshithadas@1rv24mc083-rakshithadas:~$
```

4. Run Hello from Docker:

```
CPU: 479ms
Cgroup: /system.slice/docker.service
└─29929 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 15 17:49:48 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:48.985047564+05:30" level=info msg="Loading containers: start."
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.697901145+05:30" level=info msg="Loading containers: done."
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.718164637+05:30" level=info msg="Docker daemon" commit="28.2.2-0ubuntu1-24.04.1" containerd-snapshott
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.718306646+05:30" level=info msg="Initializing buildkit"
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.730749565+05:30" level=warning msg="CDI setup error /etc/cdi: failed to monitor for changes: no such f
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.730794491+05:30" level=warning msg="CDI setup error /var/run/cdi: failed to monitor for changes: no su
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.780331091+05:30" level=info msg="Completed buildkit initialization"
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.790204082+05:30" level=info msg="Daemon has completed initialization"
Oct 15 17:49:49 irv24mc083rakshithadas dockerd[29929]: time="2025-10-15T17:49:49.790265734+05:30" level=info msg="API listen on /run/docker.sock"
Oct 15 17:49:49 irv24mc083rakshithadas systemd[1]: Started docker.service - Docker Application Container Engine.

irv24mc083-rakshithadas@irv24mc083rakshithadas:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
17eec7bbc9d7: Pull complete
Digest: sha256:6dc565aa63092705211f823c303948cf83670a3903ffa3849f1488ab517f891
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.
   (and64)
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/

irv24mc083-rakshithadas@irv24mc083rakshithadas:~$
```