

Practice Lab 1

- **Change username**

- 1) Change user name to name_usn
- 2) Create a temporary user using the following command: **sudo adduser temporary**
- 3) Allow the temporary user to run sudo by adding the user to sudo group: **sudo adduser temporary sudo**
- 4) Login to the temporary user account and change the name of the initial user using the following command : **sudo usermod -l newUsername oldUsername**
- 5) Log back into the initial user and check if the username is changed using the command : **whoami**
- 6) Delete the temporary user : **sudo deluser temporary**

```
1rv24mc024_chandan_athreya_s@JARVIS:~$ whoami
1rv24mc024_chandan_athreya_s
1rv24mc024_chandan_athreya_s@JARVIS:~$ sudo deluser temporary
sudo rm -r /home/temporary
[sudo] password for 1rv24mc024_chandan_athreya_s:
info: Removing crontab ...
info: Removing user `temporary' ...
```

- **Install Docker**

- 1) Delete the older versions of Docker using : for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove \$pkg; done

```
1rv24mc024_chandan_athreya_s@JARVIS:~$ for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove $pkg; done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker.io' is not installed, so not removed
The following package was automatically installed and is no longer required:
  liblvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker-doc' is not installed, so not removed
The following package was automatically installed and is no longer required:
  liblvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker-compose' is not installed, so not removed
The following package was automatically installed and is no longer required:
  liblvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker-compose-v2' is not installed, so not removed
The following package was automatically installed and is no longer required:
  liblvm19
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'podman-docker' is not installed, so not removed
The following package was automatically installed and is no longer required:
```

- 2) Set up Docker's apt repository

```
1rv24mc024_chandan_athreya_s@JARVIS:~$ # 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
```

3) Install Docker Packages

```
1rv24mc024_chandan_athreya_s@JARVIS:~$ sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  docker-ce-rootless-extras libslirp0 pigz slirp4netns
Suggested packages:
  cgroupfs-mount | cgroup-lite docker-model-plugin
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras
  docker-compose-plugin libslirp0 pigz slirp4netns
0 upgraded, 9 newly installed, 0 to remove and 27 not upgraded.
Need to get 105 MB of archives.
After this operation, 436 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 https://download.docker.com/linux/ubuntu noble/stable amd64 containerd.io amd64 1.7.28-1~ubuntu.24.04~noble [31.9 MB]
Get:2 http://archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libslirp0 amd64 4.7.0-1ubuntu3 [63.8 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble/universe amd64 slirp4netns amd64 1.2.1-1build2 [34.9 kB]
Get:5 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-cli amd64 5:28.5.1-1~ubuntu.24.04~noble [16.5 MB]
Get:6 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce amd64 5:28.5.1-1~ubuntu.24.04~noble [19.7 MB]
Get:7 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-buildx-plugin amd64 0.29.1-1~ubuntu.24.04~noble [15.9 MB]
Get:8 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-rootless-extras amd64 5:28.5.1-1~ubuntu.24.04~noble [6,481 kB]
Get:9 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-compose-plugin amd64 2.40.0-1~ubuntu.24.04~noble [14.2 MB]
Fetched 105 MB in 3min 29s (501 kB/s)
Selecting previously unselected package containerd.io.
(Reading database ... 228756 files and directories currently installed.)
Preparing to unpack .../0-containerd.io_1.7.28-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking containerd.io (1.7.28-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce-cli.
Preparing to unpack .../1-docker-ce-cli_5%3a28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce-cli (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce.
Preparing to unpack .../2-docker-ce_5%3a28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-buildx-plugin.
Preparing to unpack .../3-docker-buildx-plugin_0.29.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-buildx-plugin (0.29.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce-rootless-extras.
Preparing to unpack .../4-docker-ce-rootless-extras_5:28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce-rootless-extras (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-compose-plugin.
Preparing to unpack .../5-docker-compose-plugin_2.40.0-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-compose-plugin (2.40.0-1~ubuntu.24.04~noble) ...
Selecting previously unselected package libslirp0.
Preparing to unpack .../6-libslirp0_4.7.0-1ubuntu3_amd64.deb ...
Unpacking libslirp0 (4.7.0-1ubuntu3) ...
Selecting previously unselected package pigz.
Preparing to unpack .../7-pigz_2.8-1_amd64.deb ...
Unpacking pigz (2.8-1) ...
Selecting previously unselected package slirp4netns.
Preparing to unpack .../8-slirp4netns_1.2.1-1build2_amd64.deb ...
Unpacking slirp4netns (1.2.1-1build2) ...
Setting up containerd.io (1.7.28-1~ubuntu.24.04~noble) ...
Setting up docker-buildx-plugin (0.29.1-1~ubuntu.24.04~noble) ...
Setting up docker-ce-rootless-extras (5:28.5.1-1~ubuntu.24.04~noble) ...
Setting up docker-ce-cli (5:28.5.1-1~ubuntu.24.04~noble) ...
Setting up docker-ce (5:28.5.1-1~ubuntu.24.04~noble) ...
Setting up docker-compose-plugin (2.40.0-1~ubuntu.24.04~noble) ...
Setting up libslirp0 (4.7.0-1ubuntu3) ...
Setting up pigz (2.8-1) ...
Setting up slirp4netns (1.2.1-1build2) ...
```

- **Verify Docker Installation**

`sudo docker run hello-world`

```
1rv24mc024_chandan_athreya_s@JARVIS:~$ 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.
(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/>