

# DevOps Practice Lab - 1

## To change user name in Linux

1. Check your user name

>whoami

2. Create a temporary user and add the user to sudoers

```
sha@akanshasPC:~$ sudo adduser tempadmin
:) password for akansha:
: Adding user `tempadmin' ...
: Selecting UID/GID from range 1000 to 59999 ...
: Adding new group `tempadmin' (1001) ...
: Adding new user `tempadmin' (1001) with group `tempadmin (1001)' ...
: Creating home directory `/home/tempadmin' ...
: Copying files from `/etc/skel' ...
password:
PASSWORD: The password is shorter than 8 characters
Give me new password:
old: password updated successfully
Giving the user information for tempadmin
Enter the new value, or press ENTER for the default
  Full Name []: tempadmin
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []:
Is the information correct? [Y/n] Y
: Adding new user `tempadmin' to supplemental / extra groups `users' ...
: Adding user `tempadmin' to group `users' ...
sha@akanshasPC:~$ sudo usermod -aG sudo tempadmin
sha@akanshasPC:~$ █
```

3. Logout from the current user and login to tempadmin

4. Creating new user in usn\_name format and make it sudoer

```
hasPC:~$ sudo adduser --allow-bad-names 1rv24mc012_akanksha
g use of questionable username.
user `1rv24mc012_akanksha' ...
ng UID/GID from range 1000 to 59999 ...
new group `1rv24mc012_akanksha' (1004) ...
new user `1rv24mc012_akanksha' (1004) with group `1rv24mc012_akanksha' (
g home directory `/home/1rv24mc012_akanksha' ...
files from `/etc/skel' ...
```

```
The password is shorter than 8 characters
ssword:
ord updated successfully
user information for 1rv24mc012_akanksha
value, or press ENTER for the default
Name []:
Number []:
Phone []:
Phone []:
[]:
ation correct? [Y/n] Y
new user `1rv24mc012_akanksha' to supplemental / extra groups `users' .
user `1rv24mc012_akanksha' to group `users' ...
hasPC:~$ sudo usermod -aG sudo 1rv24mc012_akanksha
hasPC:~$
```

5. Remove the temp user

—delete temp user

## To install Docker using APT REPO

### 1. Set up Docker's apt repository

```
1rv24mc012_akanksha@akanshasPC:~$ sudo apt-get update
[sudo] password for 1rv24mc012_akanksha:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1,222 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,498 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [204 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [288 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [8,968 B]
Get:11 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1,978 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.3 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2,090 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [470 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:17 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 c-n-f Metadata [516 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,489 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [301 kB]
Get:20 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [378 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.2 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [30.3 kB]
Get:23 http://archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [5,564 B]
Get:24 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:25 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadata [484 B]
Get:26 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7,144 B]
Get:27 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:28 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [450 kB]
Get:29 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:30 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [885 kB]
Get:31 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [11.0 kB]
Get:32 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [197 kB]
Get:33 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:34 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [18.2 kB]
Get:35 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:36 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 12.2 MB in 9s (1,329 kB/s)
Reading package lists... Done
1rv24mc012_akanksha@akanshasPC:~$ sudo apt-get install ca-certificates curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

## 2.Install the Docker packages

```
1rv24mc012_akanksha@akanshasPC:~$ 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 additional packages will be installed:
  docker-ce-rootless-extras git git-man liberror-perl libslirp0 pigz
  slirp4netns
Suggested packages:
  cgroupfs-mount | cgroup-lite docker-model-plugin git-daemon-run
  | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs
  git-mediawiki git-svn
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli
  docker-ce-rootless-extras docker-compose-plugin git git-man liberror-perl
  libslirp0 pigz slirp4netns
0 upgraded, 12 newly installed, 0 to remove and 157 not upgraded.
Need to get 110 MB of archives.
After this operation, 461 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 liberror-perl all 0.17029-2 [25.6 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 git-man all 1:2.43.0-1ubuntu7.3 [1,100 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 git amd64 1:2.43.0-1ubuntu7.3 [3,680 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/main amd64 libslirp0 amd64 4.7.0-1ubuntu3 [63.8 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble/universe amd64 slirp4netns amd64 1.2.1-1build2 [34.9 kB]
Get:8 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:9 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:10 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:11 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:12 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 110 MB in 36s (3,021 kB/s)
Selecting previously unselected package containerd.io.
(Reading database ... 153558 files and directories currently installed.)
Preparing to unpack .../00-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 .../01-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 .../02-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 pigz.
Preparing to unpack .../03-pigz_2.8-1_amd64.deb ...
Unpacking pigz (2.8-1) ...
```

## 3.Verify that docker is running

```
1rv24mc012_akanksha@akanshasPC:~$ 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 10:43:00 IST; 54s ago
 TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
   Main PID: 6099 (dockerd)
     Tasks: 18
    Memory: 23.8M (peak: 25.8M)
       CPU: 551ms
    CGroup: /system.slice/docker.service
            └─6099 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 17 10:42:59 akanshasPC dockerd[6099]: time="2025-10-17T10:42:59.518430542+05:30" level=info msg="detected 1
Oct 17 10:42:59 akanshasPC dockerd[6099]: time="2025-10-17T10:42:59.566710016+05:30" level=info msg="Creating a
Oct 17 10:42:59 akanshasPC dockerd[6099]: time="2025-10-17T10:42:59.595603768+05:30" level=info msg="Loading co
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.095846907+05:30" level=info msg="Loading co
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.113468018+05:30" level=info msg="Docker dae
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.113626690+05:30" level=info msg="Initializi
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.137102264+05:30" level=info msg="Completed
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.145436489+05:30" level=info msg="Daemon has
Oct 17 10:43:00 akanshasPC dockerd[6099]: time="2025-10-17T10:43:00.145548890+05:30" level=info msg="API listen
Oct 17 10:43:00 akanshasPC systemd[1]: Started docker.service - Docker Application Container Engine.
lines 1-22/22 (END)
1rv24mc012_akanksha@akanshasPC:~$
```



#### 4. Verify that the installation is successful by running the hello-world image

```
1rv24mc012_akanksha@akanshasPC:~$ sudo systemctl start docker
1rv24mc012_akanksha@akanshasPC:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
17eec7bbc9d7: Pull complete
Digest: sha256:6dc565aa630927052111f823c303940cf83670a3903ffa3849f1488ab517f891
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/
```