

Practice Lab-1

Ubuntu User Configuration commands

Step-1: Create a new user using the command:

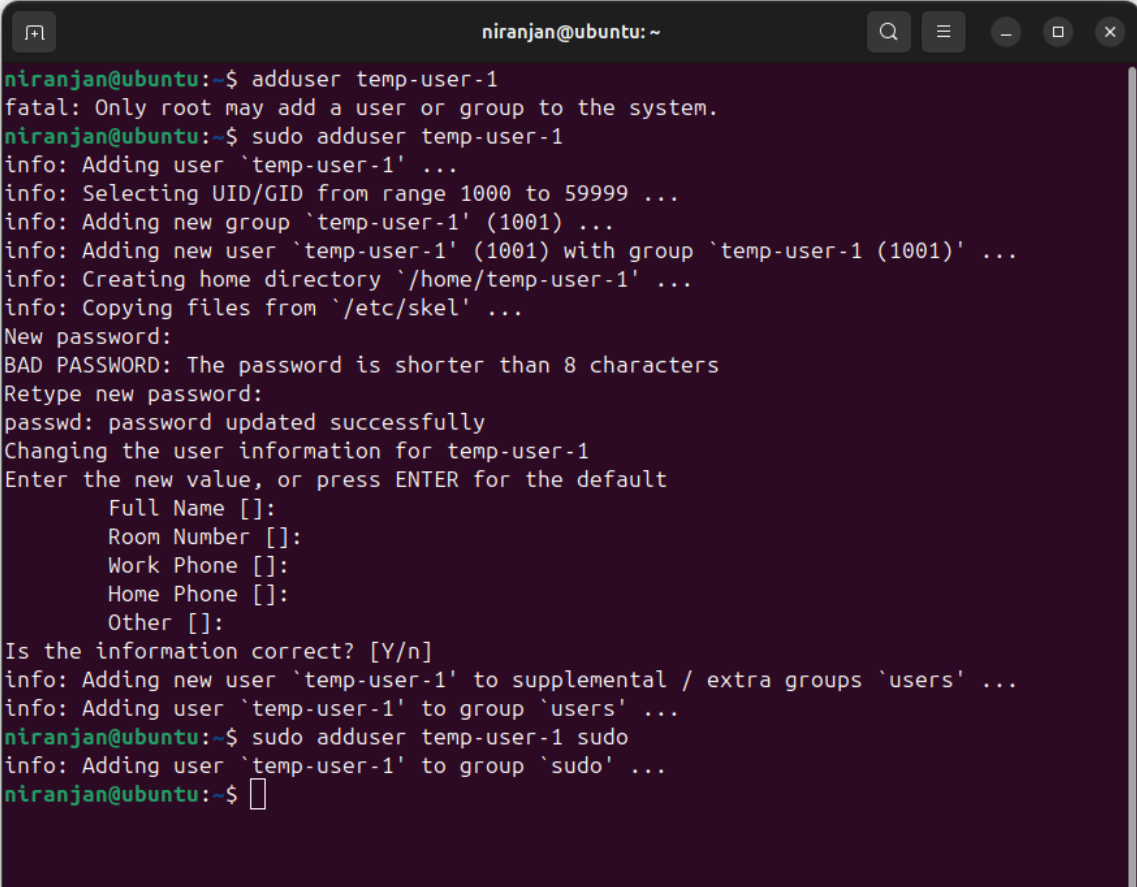
- `sudo adduser temp-user-1`

Step-2: Add the user to the Sudo group by using either of the commands:

- `sudo adduser temp-user-1 sudo`
- `sudo usermod -aG sudo temp-user-1`

Step-3: Create another user with sudo privileges using any of the below commands.

- `sudo adduser temp-user-2`
- `sudo adduser temp-user-2 sudo`

A terminal window titled 'niranjan@ubuntu: ~' with standard Ubuntu window controls. The terminal shows the execution of 'adduser temp-user-1', which fails with a 'fatal' error. Then 'sudo adduser temp-user-1' is run, proceeding through password prompts and user information questions. Finally, 'sudo adduser temp-user-1 sudo' is executed to add the user to the sudo group.

```
niranjan@ubuntu:~$ adduser temp-user-1
fatal: Only root may add a user or group to the system.
niranjan@ubuntu:~$ sudo adduser temp-user-1
info: Adding user `temp-user-1' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `temp-user-1' (1001) ...
info: Adding new user `temp-user-1' (1001) with group `temp-user-1 (1001)' ...
info: Creating home directory `/home/temp-user-1' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for temp-user-1
Enter the new value, or press ENTER for the default
  Full Name []:
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []:
Is the information correct? [Y/n]
info: Adding new user `temp-user-1' to supplemental / extra groups `users' ...
info: Adding user `temp-user-1' to group `users' ...
niranjan@ubuntu:~$ sudo adduser temp-user-1 sudo
info: Adding user `temp-user-1' to group `sudo' ...
niranjan@ubuntu:~$
```

- `sudo usermod -aG sudo temp-user-2`

Step-4: Verify whether the users got the sudo privileges.

- `sudo -l -U temp-user-1`

Step-5: Switch between users and modify the privileges of temp-user-2 with temp-user-1

- `su - temp-user-1`
Enter password..
- `sudo deluser temp-user-2 sudo`

Now, again check the privileges of temp-user-2

- `sudo -l -U temp-user-2`
Output: User temp-user-2 is not allowed to run sudo on ubuntu.

Now, delete the temp-user-2

- `sudo userdel -r temp-user-2`

Check whether the user still exists:

- `id temp-user-2`

```
niranjan@ubuntu:~$ sudo usermod -aG sudo temp-user-2
niranjan@ubuntu:~$ sudo -l
Matching Defaults entries for niranjan on ubuntu:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin,
    use_pty

User niranjan may run the following commands on ubuntu:
    (ALL : ALL) ALL
niranjan@ubuntu:~$ sudo -l -U temp-user-1
Matching Defaults entries for temp-user-1 on ubuntu:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin,
    use_pty

User temp-user-1 may run the following commands on ubuntu:
    (ALL : ALL) ALL
niranjan@ubuntu:~$ sudo -l -U temp-user-2
Matching Defaults entries for temp-user-2 on ubuntu:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin,
    use_pty

User temp-user-2 may run the following commands on ubuntu:
    (ALL : ALL) ALL
niranjan@ubuntu:~$
```

```
temp-user-1@ubuntu: ~  
niranjan@ubuntu:~$ users  
niranjan niranjan niranjan  
niranjan@ubuntu:~$ whoami  
niranjan  
niranjan@ubuntu:~$ su - temp-user-1  
Password:  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
temp-user-1@ubuntu:~$ sudo deluser temp-user-2 sudo  
[sudo] password for temp-user-1:  
info: Removing user `temp-user-2' from group `sudo' ...  
temp-user-1@ubuntu:~$ sudo -l -U temp-user-2  
User temp-user-2 is not allowed to run sudo on ubuntu.  
temp-user-1@ubuntu:~$ sudo userdel -r temp-user-2  
userdel: temp-user-2 mail spool (/var/mail/temp-user-2) not found  
temp-user-1@ubuntu:~$ id temp-user-2  
id: `temp-user-2': no such user  
temp-user-1@ubuntu:~$
```

Docker Installation

Step-1: Update and upgrade all the packages on the machine

- `sudo apt update && upgrade`

Step-2: Setup docker's apt repository:

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
```

Step-3: Install the latest version of Docker using the below command:

- `sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin`

The Docker service starts automatically after installation. To verify that Docker is running, use:

- `sudo systemctl status docker`

Some systems may have this behavior disabled and will require a manual start:

- `sudo systemctl start docker`

Verify that the installation is successful by running the hello-world image:

- `sudo docker run hello-world`

```
niranjan@ubuntu:~$ sudo systemctl start docker
niranjan@ubuntu:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
17eec7bbc9d7: Pull complete
Digest: sha256:6dc565aa630927052111f823c303948cf83670a3903ffa3849f1488ab517f891
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/>

```
niranjan@ubuntu:~$
```