

# Docker Installation

## Step 1 - Create a new user with username *1RV24MC038\_hrshreeraksha*.

- Use **adduser** command to set up a new user
- Use **usermod** command to add the user to the **sudo** group
- Use **su** command to use the terminal as the root user

```
(~) (raksha@asus:pts/3)
(09:21:02) -> sudo adduser 1RV24MC038_hrshreeraksha --force-badname 1 ← (Fri, Oct17)
Allowing use of questionable username.
Adding user `1RV24MC038_hrshreeraksha' ...
Adding new group `1RV24MC038_hrshreeraksha' (1002) ...
Adding new user `1RV24MC038_hrshreeraksha' (1002) with group `1RV24MC038_hrshreeraksha' ...
Creating home directory `/home/1RV24MC038_hrshreeraksha' ...
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 1RV24MC038_hrshreeraksha
Enter the new value, or press ENTER for the default
    Full Name []: 1RV24MC038_hrshreeraksha
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
(~) (raksha@asus:pts/3)
(09:21:37) -> usermod -aG sudo 1RV24MC038_hrshreeraksha (Fri, Oct17)
usermod: Permission denied.
usermod: cannot lock /etc/passwd; try again later.
(~) (raksha@asus:pts/3)
(09:22:14) -> sudo usermod -aG sudo 1RV24MC038_hrshreeraksha 1 ← (Fri, Oct17)
(~) (raksha@asus:pts/3)
(09:22:31) -> su - 1RV24MC038_hrshreeraksha (Fri, Oct17)
Password:
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
```

## Step 2 - Check current user

- Use the **whoami** command to check if the current user is *1RV24MC038\_hrshreeraksha*

```
1RV24MC038_hrshreeraksha@asus:~$ whoami
1RV24MC038_hrshreeraksha
1RV24MC038_hrshreeraksha@asus:~$
```

## Step 3 - Uninstall any pre-existing versions of Docker

- Run ***for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove \$pkg; done***

```
1RV24MC038_hrshreeraksha@asus:~$ for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove $pkg; done
[sudo] password for 1RV24MC038_hrshreeraksha:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'docker.io' is not installed, so not removed
The following packages were automatically installed and are no longer required:
cpu-checker docker-ce-rootless-extras ibverbs-providers ipxe-qemu ipxe-qemu-256k-compatible-efi-roms libcacard0
libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo libfdt1 libgfbapi0 libgfrpc0 libgfxdr0 libglusterfs0 libibverbs1
libiscsi7 libndctl6 libpmem1 libpmemobj1 libqrencode4 librados2 librbd1 librdmacm1 libsd12-2.0-0 libslirp0
libspice-server1 liburing2 libusbredirparser1 libvirglrenderer1 msr-tools ovmf pass pigz qemu-block-extra
qemu-system-common qemu-system-data qemu-system-gui qemu-system-x86 qemu-utils qrencode seabios slirp4netns uidmap
xclip
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 304 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 packages were automatically installed and are no longer required:
cpu-checker docker-ce-rootless-extras ibverbs-providers ipxe-qemu ipxe-qemu-256k-compatible-efi-roms libcacard0
libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo libfdt1 libgfbapi0 libgfrpc0 libgfxdr0 libglusterfs0 libibverbs1
libiscsi7 libndctl6 libpmem1 libpmemobj1 libqrencode4 librados2 librbd1 librdmacm1 libsd12-2.0-0 libslirp0
libspice-server1 liburing2 libusbredirparser1 libvirglrenderer1 msr-tools ovmf pass pigz qemu-block-extra
qemu-system-common qemu-system-data qemu-system-gui qemu-system-x86 qemu-utils qrencode seabios slirp4netns uidmap
xclip
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 304 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 packages were automatically installed and are no longer required:
cpu-checker docker-ce-rootless-extras ibverbs-providers ipxe-qemu ipxe-qemu-256k-compatible-efi-roms libcacard0
libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo libfdt1 libgfbapi0 libgfrpc0 libgfxdr0 libglusterfs0 libibverbs1
libiscsi7 libndctl6 libpmem1 libpmemobj1 libqrencode4 librados2 librbd1 librdmacm1 libsd12-2.0-0 libslirp0
libspice-server1 liburing2 libusbredirparser1 libvirglrenderer1 msr-tools ovmf pass pigz qemu-block-extra
qemu-system-common qemu-system-data qemu-system-gui qemu-system-x86 qemu-utils qrencode seabios slirp4netns uidmap
xclip
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 304 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 packages were automatically installed and are no longer required:
cpu-checker docker-ce-rootless-extras ibverbs-providers ipxe-qemu ipxe-qemu-256k-compatible-efi-roms libcacard0
libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo libfdt1 libgfbapi0 libgfrpc0 libgfxdr0 libglusterfs0 libibverbs1
libiscsi7 libndctl6 libpmem1 libpmemobj1 libqrencode4 librados2 librbd1 librdmacm1 libsd12-2.0-0 libslirp0
libspice-server1 liburing2 libusbredirparser1 libvirglrenderer1 msr-tools ovmf pass pigz qemu-block-extra
qemu-system-common qemu-system-data qemu-system-gui qemu-system-x86 qemu-utils qrencode seabios slirp4netns uidmap
xclip
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 304 not upgraded.
Reading package lists... Done
```

## Step 4 - Update and set up docker repository

Run the following commands

- `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`

```

1RV24MC038_hrshreeraksha@asus:~$ sudo apt-get update
Hit:1 https://download.docker.com/linux/ubuntu jammy InRelease
Get:2 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Hit:3 https://packages.microsoft.com/repos/code stable InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Hit:5 https://brave-browser-apt-release.s3.brave.com stable InRelease
Get:6 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,209 B]
Get:7 https://packages.mozilla.org/apt mozilla InRelease [1,524 B]
Hit:8 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:9 https://packages.mozilla.org/apt mozilla/main all Packages [5,310 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:11 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-11 Metadata [54.5 kB]
Hit:12 https://packages.zorinos.com/stable jammy InRelease
Get:13 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.9 kB]
Hit:14 https://packages.zorinos.com/patches jammy InRelease
Get:15 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 DEP-11 Metadata [208 B]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 DEP-11 Metadata [126 kB]
Hit:17 https://packages.zorinos.com/apps jammy InRelease
Get:18 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [22.2 kB]
Get:19 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 DEP-11 Metadata [208 B]
Hit:20 https://packages.zorinos.com/drivers jammy InRelease
Hit:21 https://ppa.launchpadcontent.net/zorinos/apps/ubuntu jammy InRelease
Get:22 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Hit:23 https://ppa.launchpadcontent.net/zorinos/drivers/ubuntu jammy InRelease
Hit:24 https://ppa.launchpadcontent.net/zorinos/patches/ubuntu jammy InRelease
Hit:25 https://ppa.launchpadcontent.net/zorinos/stable/ubuntu jammy InRelease
Get:26 https://packages.mozilla.org/apt mozilla/main amd64 Packages [103 kB]
Get:27 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [899 kB]
Get:28 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2,992 kB]
Get:29 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [112 kB]
Get:30 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [19.0 kB]
Get:31 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [4,671 kB]
Get:32 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted i386 Packages [49.2 kB]
Get:33 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [862 kB]
Get:34 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 DEP-11 Metadata [212 B]
Get:35 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [640 B]
Get:36 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,235 kB]
Get:37 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [786 kB]
Get:38 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 DEP-11 Metadata [359 kB]
Get:39 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [29.7 kB]
Get:40 http://in.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [57.6 kB]
Get:41 http://in.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:42 http://in.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [600 B]
Get:43 http://in.archive.ubuntu.com/ubuntu jammy-backports/main amd64 DEP-11 Metadata [7,168 B]
Get:44 http://in.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 DEP-11 Metadata [212 B]
Get:45 http://in.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 DEP-11 Metadata [9,712 B]
Get:46 http://in.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 DEP-11 Metadata [212 B]
Fetched 18.1 MB in 17s (1,044 kB/s)
Reading package lists... Done
1RV24MC038_hrshreeraksha@asus:~$ sudo apt-get install ca-certificates curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203~22.04.1).
The following packages were automatically installed and are no longer required:

```

---

```

1RV24MC038_hrshreeraksha@asus:~$ sudo install -m 0755 -d /etc/apt/keyrings
1RV24MC038_hrshreeraksha@asus:~$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
1RV24MC038_hrshreeraksha@asus:~$ sudo chmod a+r /etc/apt/keyrings/docker.asc
1RV24MC038_hrshreeraksha@asus:~$ 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
Hit:1 https://download.docker.com/linux/ubuntu jammy InRelease
Hit:2 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:3 https://packages.microsoft.com/repos/code stable InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Hit:6 https://packages.mozilla.org/apt mozilla InRelease
Hit:7 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:8 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:9 https://brave-browser-apt-release.s3.brave.com stable InRelease
Hit:10 https://ppa.launchpadcontent.net/zorinos/apps/ubuntu jammy InRelease
Hit:11 https://ppa.launchpadcontent.net/zorinos/drivers/ubuntu jammy InRelease
Hit:12 https://ppa.launchpadcontent.net/zorinos/patches/ubuntu jammy InRelease
Hit:13 https://ppa.launchpadcontent.net/zorinos/stable/ubuntu jammy InRelease
Hit:14 https://packages.zorinos.com/stable jammy InRelease
Hit:15 https://packages.zorinos.com/patches jammy InRelease
Hit:16 https://packages.zorinos.com/apps jammy InRelease
Hit:17 https://packages.zorinos.com/drivers jammy InRelease
Reading package lists... Done

```

## Step 5 - Install the latest version of docker

- Run the following command
- ***sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin***

```
1RV24MC038_hrshreeraksha@asus:~$ 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 packages were automatically installed and are no longer required:
  cpu-checker ibverbs-providers ipxe-qemu ipxe-qemu-256k-compat-efi-roms libcacard0 libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo libfdt1 libgfp10 libgfrpc0 libgfxdr0
  libpmemobj1 libqrencode4 librados2 librd1 librdmacm1 libsd12-2.0-0 libspice-server1 liburing2 libusbredirparser1 libvirtlrenderer1 msr-tools ovmf pass qemu-block-extra (
  qemu-system-x86 qemu-utils qrencode seabios uidmap xclip
Use 'sudo apt autoremove' to remove them.
Suggested packages:
  cgroupfs-mount | cgroup-lite docker-model-plugin
The following NEW packages will be installed:
  docker-ce docker-ce-cli docker-compose-plugin
The following packages will be upgraded:
  containerd.io docker-buildx-plugin
2 upgraded, 3 newly installed, 0 to remove and 300 not upgraded.
Need to get 98.2 MB of archives.
After this operation, 218 MB of additional disk space will be used.
Get:1 https://download.docker.com/linux/ubuntu jammy/stable amd64 containerd.io amd64 1.7.28-1~ubuntu.22.04~jammy [31.9 MB]
Get:2 https://download.docker.com/linux/ubuntu jammy/stable amd64 docker-ce-cli amd64 5:28.5.1-1~ubuntu.22.04~jammy [16.5 MB]
Get:3 https://download.docker.com/linux/ubuntu jammy/stable amd64 docker-ce amd64 5:28.5.1-1~ubuntu.22.04~jammy [19.7 MB]
Get:4 https://download.docker.com/linux/ubuntu jammy/stable amd64 docker-buildx-plugin amd64 0.29.1-1~ubuntu.22.04~jammy [15.9 MB]
Get:5 https://download.docker.com/linux/ubuntu jammy/stable amd64 docker-compose-plugin amd64 2.40.0-1~ubuntu.22.04~jammy [14.2 MB]
Fetched 98.2 MB in 3min 14s (505 kB/s)
(Reading database ... 300792 files and directories currently installed.)
Preparing to unpack .../containerd.io_1.7.28-1~ubuntu.22.04~jammy_amd64.deb ...
Unpacking containerd.io (1.7.28-1~ubuntu.22.04~jammy) over (1.7.27-1) ...
Selecting previously unselected package docker-ce-cli.
Preparing to unpack .../docker-ce-cli_5%3a28.5.1-1~ubuntu.22.04~jammy_amd64.deb ...
Unpacking docker-ce-cli (5:28.5.1-1~ubuntu.22.04~jammy) ...
Selecting previously unselected package docker-ce.
Preparing to unpack .../docker-ce_5%3a28.5.1-1~ubuntu.22.04~jammy_amd64.deb ...
Unpacking docker-ce (5:28.5.1-1~ubuntu.22.04~jammy) ...
Preparing to unpack .../docker-buildx-plugin_0.29.1-1~ubuntu.22.04~jammy_amd64.deb ...
Unpacking docker-buildx-plugin (0.29.1-1~ubuntu.22.04~jammy) over (0.26.1-1~ubuntu.22.04~jammy) ...
Selecting previously unselected package docker-compose-plugin.
Preparing to unpack .../docker-compose-plugin_2.40.0-1~ubuntu.22.04~jammy_amd64.deb ...
Unpacking docker-compose-plugin (2.40.0-1~ubuntu.22.04~jammy) ...
Setting up docker-buildx-plugin (0.29.1-1~ubuntu.22.04~jammy) ...
Setting up containerd.io (1.7.28-1~ubuntu.22.04~jammy) ...
Setting up docker-compose-plugin (2.40.0-1~ubuntu.22.04~jammy) ...
Setting up docker-ce-cli (5:28.5.1-1~ubuntu.22.04~jammy) ...
Setting up docker-ce (5:28.5.1-1~ubuntu.22.04~jammy) ...
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.
Processing triggers for man-db (2.10.2-1) ...
```

## Step 6 - Verify installation

```
1RV24MC038_hrshreeraksha@asus:~$ sudo docker run hello-world
[sudo] password for 1RV24MC038_hrshreeraksha:
```

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/>