

# How to install Docker in Linux

Docker is a containerized utility that has become very popular, simplifying such tasks. Moreover, when there is a problem with the operating system, instead of installing and reconfiguring the application, users only need to reinstall the operating system, copy the container again.

Virtualization and containers are constantly increasing in popularity. The reason is because they help enhance security and provide mobility to users.

For example, if you use some cloud services, they will help separate data and services more easily. But their use is not limited to that. If you are a Linux application developer, you will quickly realize just how difficult it is to make the application available to all Linux distributions.

When the program you create works in Ubuntu, making it work in Arch Linux, Debian and other distributions is not as simple as you think. Each distribution will be different and you must make adjustments so that the utilities are available in each distribution.



Containerization process makes development easier and can be deployed anywhere. Instead of relying on the operating system to provide what the application needs, all dependencies are bundled in the container itself. When the container is active, users can move it from one computer to another and between different operating systems easily.

Docker is a containerized utility that has become very popular, simplifying such tasks. Moreover, when there is a problem with the operating system, instead of installing and reconfiguring the application, users only need to reinstall the operating system, copy the container again.

# Instructions for installing Docker on some Linux distributions

1. Delete the old Docker settings
2. How to install Docker on Ubuntu
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4. How to install Docker on Fedora
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## Delete the old Docker settings

This is an optional step, required only if the old version of Docker is installed. They may conflict with new versions, especially if they come from different repositories than what is used here.

On Debian or Ubuntu, 'clean up' everything with:

```
sudo apt --purge autoremove docker docker-engine docker.io containerd runc
```

On Fedora:

```
sudo dnf remove docker docker-client docker-client-latest docker-common docker-l
```

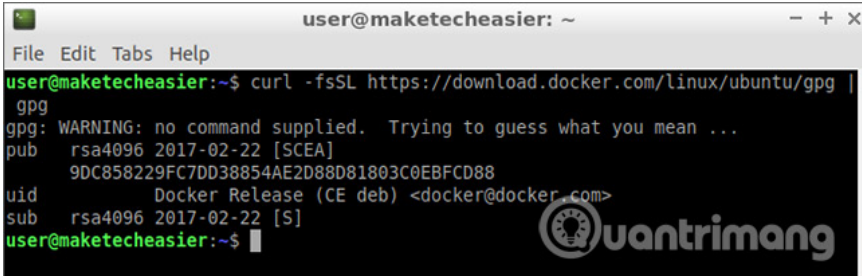
## How to install Docker on Ubuntu

Open the terminal and install the prerequisites.

```
sudo apt update && sudo apt install software-properties-common gnupg2 curl ca-ce
```

Check Docker's fingerprint GPG key.

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | gpg
```



```
user@maketecheasier: ~  
File Edit Tabs Help  
user@maketecheasier:~$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg |  
gpg  
gpg: WARNING: no command supplied. Trying to guess what you mean ...  
pub   rsa4096 2017-02-22 [SCEA]  
      9DC858229FC7DD38854AE2D88D81803C0EBFCD88  
uid   Docker Release (CE deb) <docker@docker.com>  
sub   rsa4096 2017-02-22 [S]  
user@maketecheasier:~$
```

At the time of writing, the fingerprint is: **9DC858229FC7DD38854AE2D88D81803C0EBFCD88**. This may change in the future. Check Docker's official website to see if they match. The key is used to verify the

electronic signature, so users can ensure the software being installed is legitimate and not malicious software uploaded by the attacker to the server.

Once you've made sure you have the correct key, add it to APT's trusted keys.

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
```

Add the Docker repository for Ubuntu to the software source.

```
sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu
```

Install Docker.

```
sudo apt update && sudo apt install docker-ce
```

If you need Docker Compose, users can install it with:

```
sudo apt install docker-compose
```

Most Docker commands need to be started with `sudo`. If you want to avoid having to enter your password each time, add users to the Docker group.

```
sudo adduser $USER docker
```

Log out of the graphical user interface and log in again. Now, users can use commands like **ps docker** instead of **sudo docker ps**.

## How to install Docker on Debian

Because Ubuntu is made from Debian, the steps are very similar.

```
sudo apt update && sudo apt install software-properties-common apt-transport-https
```

Check the fingerprint to see if it is the same as in the previous section.

```
curl -fsSL https://download.docker.com/linux/debian/gpg | gpg
```

Add reliable keys.

```
curl -fsSL https://download.docker.com/linux/debian/gpg | sudo apt-key add -
```

Add software source.

```
sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/debian
```

Install Docker.

```
sudo apt update && sudo apt install docker-ce
```

If you need Docker Compose, install it with:

```
sudo apt install docker-compose
```

To use Docker commands without setting **sudo** in front:

```
sudo adduser $USER docker
```

Then log out and log in again.

## How to install Docker on Fedora

Install prerequisites.

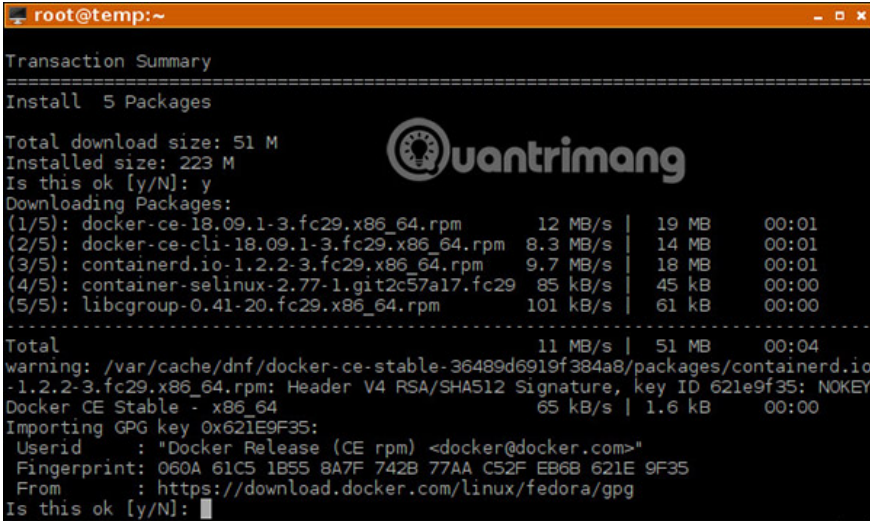
```
sudo dnf install dnf-plugins-core
```

Add the Docker software store.

```
sudo dnf config-manager --add-repo https://download.docker.com/linux/fedora/docker
```

Install Docker.

```
sudo dnf install docker-ce
```



```
root@temp:~
Transaction Summary
=====
Install 5 Packages

Total download size: 51 M
Installed size: 223 M
Is this ok [y/N]: y
Downloading Packages:
(1/5): docker-ce-18.09.1-3.fc29.x86_64.rpm    12 MB/s | 19 MB    00:01
(2/5): docker-ce-cli-18.09.1-3.fc29.x86_64.rpm 8.3 MB/s | 14 MB    00:01
(3/5): containerd.io-1.2.2-3.fc29.x86_64.rpm   9.7 MB/s | 18 MB    00:01
(4/5): container-selinux-2.77-1.git2c57a17.fc29 85 kB/s | 45 kB    00:00
(5/5): libcgrou-0.41-20.fc29.x86_64.rpm       101 kB/s | 61 kB    00:00
-----
Total                                       11 MB/s | 51 MB    00:04
warning: /var/cache/dnf/docker-ce-stable-36489d6919f384a8/packages/containerd.io-1.2.2-3.fc29.x86_64.rpm: Header V4 RSA/SHA512 Signature, key ID 621e9f35: NOKEY
Docker CE Stable - x86_64                  65 kB/s | 1.6 kB    00:00
Importing GPG key 0x621E9F35:
  Userid      : "Docker Release (CE rpm) <docker@docker.com>"
  Fingerprint: 060A 61C5 1B55 8A7F 742B 77AA C52F EB68 621E 9F35
  From        : https://download.docker.com/linux/fedora/gpg
Is this ok [y/N]:
```

On some systems, this will take some time to complete and there seems to be no progress at all. But do not cancel the operation. Of course, the installation process may actually be problematic, but take at least ten minutes to do the work on slow computers.

Allow automatic launch of Docker when booting.

```
sudo systemctl start docker.service
```

Start Docker.

```
sudo systemctl start docker.service
```

Add yourself to the Docker group.

```
sudo usermod -aG docker $USER
```

Log out and log back on to the graphical user interface.

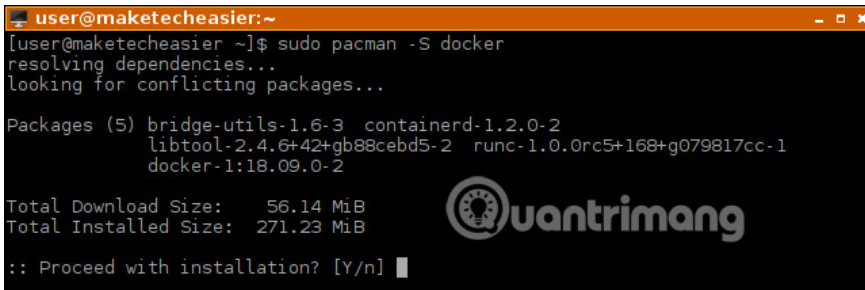
Anyone who needs Docker Compose can install it with:

```
sudo dnf install docker-compose
```

## How to install Docker on Arch Linux

Arch has included Docker in his community repository, so the installation process will be easier.

```
sudo pacman -S docker
```



```
user@maketecheasier:~  
[user@maketecheasier ~]$ sudo pacman -S docker  
resolving dependencies...  
looking for conflicting packages...  
  
Packages (5) bridge-utils-1.6-3 containerd-1.2.0-2  
libtool-2.4.6+42+gb88cebd5-2 runc-1.0.0rc5+168+g079817cc-1  
docker-1:18.09.0-2  
  
Total Download Size: 56.14 MiB  
Total Installed Size: 271.23 MiB  
  
:: Proceed with installation? [Y/n]
```

If you need Docker Compose:

```
sudo pacman -S docker-compose
```

Add yourself to the Docker group:

```
sudo usermod -aG docker $USER
```

Log out of the graphical user interface and log back in for the installation to take effect.

Allow Docker to automatically start when booting.

```
sudo systemctl enable docker
```

Start Docker.

```
sudo systemctl start docker
```

Obviously, this article does not cover all existing distributions. But if you're using something like openSUSE, you may be lucky to find a tutorial page on how to install Docker on that distribution at [en.opensuse.org/SDB:Docke](http://en.opensuse.org/SDB:Docke)r

Good luck!

See more:

1. 5 tips to learn Docker effectively for beginners
2. How to safely check desktop applications with Docker
3. 5 useful tips to learn Docker

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