Docker Desktop for Windows

Docker on Windows

- Docker Desktop for Windows is the Community version of Docker for Microsoft Windows. You can download Docker Desktop for Windows from Docker Hub.

❄ Download from Docker Hub

> The installation provides Docker Engine, Docker CLI client, Docker Compose, Docker Machine, and Kitematic. Containers and images created with Docker Desktop for Windows are shared between all user accounts on machines where it is installed. This is because all Windows accounts use the same VM to build and run containers.

Docker Desktop for Windows

* Windows 10 Enterprise/
Professional Edition
Windows Server 2016

⚠Avoid ! :What to know before you install

System Requirements:

- Windows 10 64-bit: Pro, Enterprise, or Education (Build 15063 or later).
- Hyper-V and Containers Windows features must be enabled.
- The following hardware prerequisites are required to successfully run Client Hyper-V on Windows 10:
  - 64 bit processor with Second Level Address Translation (SLAT)
  - 4GB system RAM
  - BIOS-level hardware virtualization support must be enabled in the BIOS settings.

💡Tips:
Docker Desktop for Windows Requires Microsoft Windows 10 Professional or Enterprise 64-bit. For previous versions get Docker Toolbox.
❄ Download Docker Toolbox

Docker Toolbox

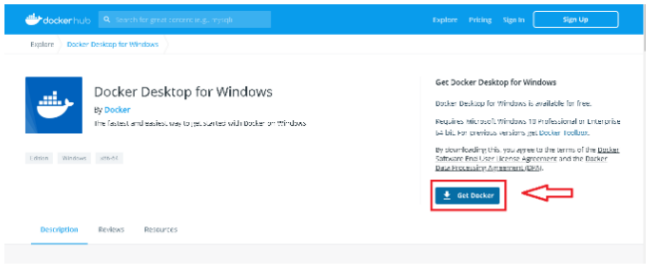
* 64-bit operating
* Windows 7 or Higher
* Virtualization is enabled

* Oracle Virtualbox
* Docker Engine
* Docker Compose
* Kitematic GUI

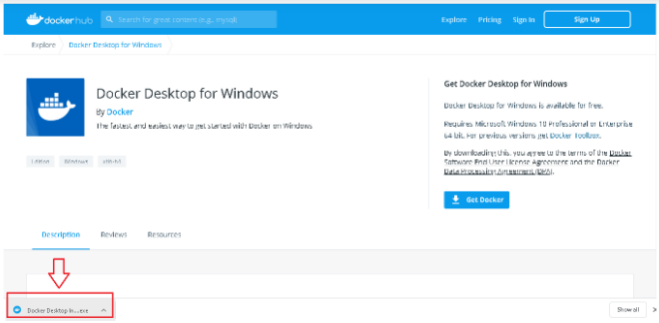
Install Docker Desktop on Windows

1. Download the Docker.

💡Tips:
If you haven't already downloaded the installer **(Docker Desktop Installer.exe)**, you can get it from;
❄ Download from Docker Hub



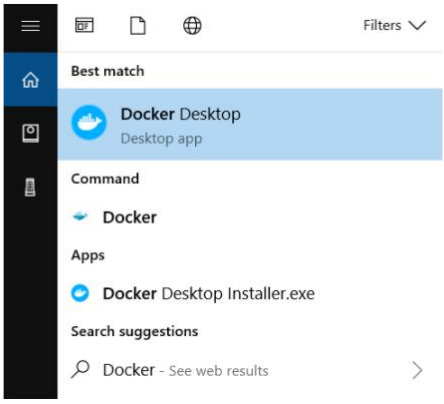
2. Double-click Docker **Desktop Installer.exe** to run the installer.



3. Follow the instructions on the installation wizard to accept the license, authorize the installer, and proceed with the install.

4. **Click Finish** on the setup complete dialog and launch the Docker Desktop application.

5. Docker Desktop does not start automatically after installation. To start Docker Desktop, search for Docker, and select Docker Desktop in the search results.



6. When the whale icon in the status bar stays steady, Docker Desktop is up-and-running and is accessible from any terminal window.

7. From now on, you can use Docker.

💡Tips:
Run **docker version** to check the version.

```
> docker --version
Docker version 19.03.8
```

Install Docker Toolbox on Windows

Tips:
Docker Desktop for Windows Requires Microsoft Windows 10 Professional or Enterprise 64-bit. For previous versions get Docker Toolbox.

Docker Toolbox includes the following Docker tools:

- Docker CLI client for running Docker Engine to create images and containers
- Docker Machine so you can run Docker Engine commands from Windows terminals
- Docker Compose for running the `docker-compose` command
- Kitematic, the Docker GUI
- The Docker QuickStart shell preconfigured for a Docker command-line environment
- Oracle VM VirtualBox

⚠**Avoid ! :** You can't run Docker Engine natively on Windows, Because the Docker Engine daemon uses Linux-specific kernel features. Instead, you must use the Docker Machine command, docker-machine, to create and attach to a small Linux VM on your machine. This VM hosts Docker Engine for you on your Windows system.

1. Check your version.

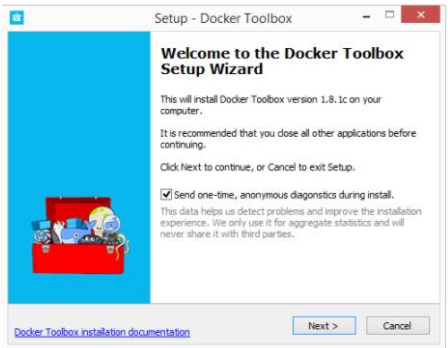
Tips:
- **For Windows 10:** Run Speccy, and look at the CPU information.
- **For Windows 8 or 8.1** Choose **Start > Task Manager** and navigate to the Performance tab. Under **CPU** you should see.
- **For Windows 7 :**Run a tool like the Microsoft® Hardware-Assisted Virtualization Detection Tool or Speccy, and follow the on-screen instructions.

⚠**Avoid ! :** Verify your Windows OS is 64-bit (x64).

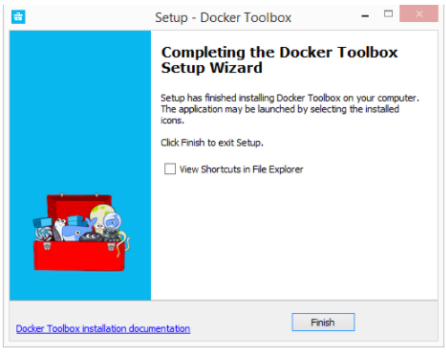
2. Install Docker Toolbox.

3. To download the latest version of Docker Toolbox
❄ Download Docker Toolbox

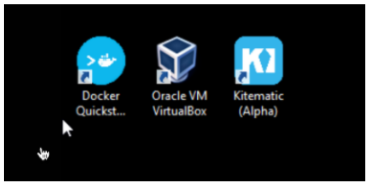
4.Install Docker Toolbox by double-clicking the installer.



6. When it completes, the installer reports it was successful:



7. On your Desktop, find the Docker QuickStart Terminal icon.



8. Click the Docker QuickStart icon to launch a pre-configured Docker Toolbox terminal.

9. Click the Docker QuickStart icon to launch a pre-configured Docker Toolbox terminal.

10. Type the docker run hello-world command and press RETURN.

```
$ docker run hello-world
Unable to find image 'hello-world:latest' locally
Pulling repository hello-world
91c95931e552: Download complete
a8219747be10: Download complete
Status: Downloaded newer image for hello-world:latest
Hello from Docker.
```

Docker for Linux

Install Docker to Linux

There are of course millions ways to install Docker on like a million different flavors of Linux, and we are just showing you installation of Amazon Linux 2 and Ubuntu Linux.

No matter your distribution of choice, you'll need a 64-bit installation and a kernel at 3.10 or newer. Kernels older than 3.10 do not have the necessary features Docker requires to run containers; data loss and kernel panics occur frequently under certain conditions.

Tips:
Check your current Linux version with **uname -r**. You should see something like 3.10.[alphanumeric string].x86_64.

Installing Docker on Amazon Linux 2 (ec2)

1. Launch an instance with the Amazon Linux 2 AMI

2. Connect to your instance.

3. Update the installed packages and package cache on your instance.

```
[ec2-user@clarusway ~]$ sudo yum update -y
```

4.Install the most recent Docker Community Edition package.

```
[ec2-user@clarusway ~]$ sudo amazon-linux-extras install docker
```

5. Start the Docker service.

```
[ec2-user@clarusway ~]$ sudo service docker start
```

> After Installation

```
[ec2-user@clarusway ~]$ docker version
Client: Docker Engine - Community
 Version:           19.03.8
 API version:       1.40
 Go version:        go1.12.17
 Git commit:        afacb8b7f0
 Built:             Wed Mar 11 01:25:46 2020
 OS/Arch:           linux/amd64
 Experimental:      false
Got permission denied while trying to connect to the Docker daemon socket at unix
    :///var/run/docker.sock: Get http://%2Fvar%2Frun%2Fdocker.sock/v1.40/version:
    dial unix /var/run/docker.sock: connect: permission denied
```

6. Add the ec2-user to the docker group so you can execute Docker commands without using sudo.

```
[ec2-user@clarusway ~]$ sudo usermod -a -G docker ec2-user
```

Tips:
After adding your user name to the docker group,

- Run `$ docker version`
- You will see on screen `Got this permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get http://%2Fvar%2Frun%2Fdocker.sock/v1.40/version: dial unix /var/run/docker.sock: connect: permission denied`
- Solution: as a non-root user run `$ newgrp docker` commands.

7. Verify that the ec2-user can run Docker commands without sudo.

```
[ec2-user@clarusway ~]$ docker info
```

Installing Docker on Ubuntu

Installing Docker 18.09 CE on Ubuntu 18.10

Verifying Ubuntu 18.10 release

```
$ cat /etc/os-release
NAME="Ubuntu"
VERSION="18.10 (Cosmic Cuttlefish)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.10"
VERSION_ID="18.10"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy
    -policy"
VERSION_CODENAME=cosmic
UBUNTU_CODENAME=cosmic
```

Installing Docker 18.09 Release

```
$ sudo apt install apt-transport-https ca-certificates curl software-properties
    -common
$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
$ sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu
    bionic test"
$ sudo apt install docker-ce
```

Tips:
If you want to run docker as non-root user then you need to add it to the docker group.

- `$ sudo groupadd docker #Create the docker group if it does not exist`
- `$ sudo usermod -aG docker $USER #Add your user to the docker group`
- `$ newgrp docker #Run the following command or Logout and login again and run`

```
$ sudo docker version
Client:
 Version:           18.09.0
 API version:       1.39
 Go version:        go1.10.4
 Git commit:        4d60db4
 Built:             Wed Mar 11 00:49:01 2020
 OS/Arch:           linux/amd64
 Experimental:      false
Server: Docker Engine - Community
 Engine:
  Version:          18.09.0
  API version:      1.39 (minimum version 1.12)
  Go version:       go1.10.4
  Git commit:       4d60db4
  Built:            Wed Mar 11 00:49:01 2020
  OS/Arch:          linux/amd64
  Experimental:     false
```

Installing Docker 18.06 CE on Ubuntu 18.11

Updating Ubuntu 18.11 Repository

```
$ sudo apt update
```

Using Snap to install Docker CE 18.06

```
$ sudo snap install docker
```

```
$ sudo docker version
Client:
 Version:           18.06.1-ce
 API version:       1.38
 Go version:        go1.10.4
 Git commit:        e68fc7a
 Built:             Wed Mar 11 00:49:01 2020
 OS/Arch:           linux/amd64
 Experimental:      false
Server:
 Engine:
  Version:          18.06.1-ce
  API version:      1.38 (minimum version 1.12)
  Go version:       go1.10.4
  Git commit:       e68fc7a
  Built:            Wed Mar 11 00:49:01 2020
  OS/Arch:          linux/amd64
  Experimental:     false
```