Shifter Hands-on: Installing the required applications

Docker

Docker is available in two editions: Community Edition (CE) and Enterprise Edition (EE).

Here we will explain how to install Docker CE, as it's the solution targeted at individual developers and small teams.

Ubuntu

- Uninstall old versions, if present:

```
$ sudo apt-get remove docker docker-engine
```

  It's OK if `apt-get` reports that none of these packages are installed.

- Set up the repository:

```
$ sudo apt-get 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 \
   $(lsb_release -cs) \
   stable"
```

  The `lsb_release -cs` sub-command returns the name of your Ubuntu distribution, such as `xenial`.

- Install Docker CE:

```
$ sudo apt-get update

$ sudo apt-get -y install docker-ce
```

- Verify Docker CE is installed correctly by running the `hello-world` image.

```
$ sudo docker run hello-world
```

NOTE: After Docker is installed, you need to use `sudo` to run Docker commands. Refer to the official documentation on

Post-installation steps for Linux to allow non-privileged users to run Docker commands and for other optional configuration steps.

Debian (Jessie)

- Uninstall old versions, if present:

```
$ sudo apt-get remove docker docker-engine
```

  It's OK if `apt-get` reports that none of these packages are installed.

- Set up the repository:

```
$ sudo apt-get install \
    apt-transport-https \
    ca-certificates \
    curl \
    gnupg2 \
    software-properties-common
```

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

```
$ sudo add-apt-repository \
   "deb [arch=amd64] https://download.docker.com/linux/debian \
   $(lsb_release -cs) \
   stable"
```

The `lsb_release -cs` sub-command returns the name of your Debian distribution, such as `jessie`.

- Install Docker CE:

```
$ sudo apt-get update

$ sudo apt-get install docker-ce
```

- Verify Docker CE is installed correctly by running the `hello-world` image.

```
$ sudo docker run hello-world
```

NOTE: After Docker is installed, you need to use `sudo` to run Docker commands. Refer to the official documentation on Post-installation steps for Linux to allow non-privileged users to run Docker commands and for other optional configuration steps.

Fedora

- Uninstall old versions, if present:

```
$ sudo dnf remove docker \
                  docker-common \
                  container-selinux \
                  docker-selinux \
                  docker-engine
```

It's OK if `dnf` reports that none of these packages are installed.

- Set up the repository:

```
$ sudo dnf -y install dnf-plugins-core
```

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

- Install Docker CE:

```
$ sudo dnf makecache fast

$ sudo dnf install docker-ce

$ sudo systemctl start docker
```

- Verify Docker CE is installed correctly by running the `hello-world` image.

```
$ sudo docker run hello-world
```

NOTE: After Docker is installed, you need to use `sudo` to run Docker commands. Refer to the official documentation on Post-installation steps for Linux to allow non-privileged users to run Docker commands and for other optional configuration steps.

CentOS

- Uninstall old versions, if present:

```
$ sudo yum remove docker \
                  docker-common \
                  container-selinux \
                  docker-selinux \
                  docker-engine
```

It's OK if `yum` reports that none of these packages are installed.

- Set up the repository:

```
$ sudo yum install -y yum-utils
```

```
$ sudo yum-config-manager \
    --add-repo \
    https://download.docker.com/linux/centos/docker-ce.repo
```

- Install Docker CE:

```
$ sudo yum makecache fast

$ sudo yum install docker-ce

$ sudo systemctl start docker
```

- Verify Docker CE is installed correctly by running the `hello-world` image.

```
$ sudo docker run hello-world
```

NOTE: After Docker is installed, you need to use `sudo` to run Docker commands. Refer to the official documentation on Post-installation steps for Linux to allow non-privileged users to run Docker commands and for other optional configuration steps.

Other Linux

If you're using a distribution other than Ubuntu, Debian, Fedora or CentOS, please head over to the official documentation for other distributions or consider installing from binaries.

macOS

Download Docker Community Edition for Mac from the Docker Store page. We recommend the Stable version installer.

Double-click the `Docker.dmg` file. A small window will open instructing you to drag and drop the docker icon onto the Applications folder.

Once you have done that, double-click the Docker app in the Applications folder. Follow the setup instructions (you will be asked for your password).

When the installation starts, a pop-up will appear informing you about the status of the installation (the colored dot on top).

When the installation is complete, a whale icon in the top status bar indicates that Docker is running, and accessible from a terminal. Click on this icon to access a menu with Preferences and other options.

Select *About Docker* to verify that you have the latest version.

Windows

Download Docker Community Edition for Windows from the Docker Store page. We recommend the Stable channel installer.

Double-click the `InstallDocker.msi` file to start the installation process. You will be asked to authorize the installer.

When the installation finishes, Docker starts automatically.

A whale icon in the notification area indicates that Docker is running, and accessible from a terminal. Click on this icon to access a menu with Preferences and other options.

Select *About Docker* to verify that you have the latest version.

nvidia-docker (Linux and NVIDIA GPU only)

nvidia-docker is a wrapper around Docker meant to enable native GPU acceleration for applications inside Docker containers.

`nvidia docker` is only available for Linux x86_64 systems with kernel version >3.10.

Please also ensure you have installed NVIDIA drivers >= 340.29.

Debian-based distributions (Ubuntu, Mint and derivatives)

```
$ wget -P /tmp https://github.com/NVIDIA/nvidia-
docker/releases/download/v1.0.1/nvidia-docker_1.0.1-1_amd64.deb

$ sudo dpkg -i /tmp/nvidia-docker*.deb && rm /tmp/nvidia-docker*.deb
```

Red Hat-based distributions (Fedora, CentOS, Scientific Linux)

```
$ wget -P /tmp https://github.com/NVIDIA/nvidia-
docker/releases/download/v1.0.1/nvidia-docker-1.0.1-1.x86_64.rpm

$ sudo rpm -i /tmp/nvidia-docker*.rpm && rm /tmp/nvidia-docker*.rpm

$ sudo systemctl start nvidia-docker
```

SSH Client

Linux

Most Linux distributions come with the `openssh` client installed by default. If this is not the case for you, use the commands below to perform the installation:

Debian-based distributions (Ubuntu, Mint and derivatives)

```
$ sudo apt-get install openssh-client
```

Red Hat-based distributions (Fedora, CentOS, Scientific Linux)

```
$ sudo yum install openssh-clients
```

Note: on Fedora use `dnf` instead of `yum`

macOS

macOS has SSH built-in and installed by default.

Windows

PuTTY is a popular and widely used SSH and telnet client for Windows.