# Where Do Images Come From?

Throughout this chapter, we have been using images to create containers; but where do images come from? We explore just that in this lesson.

Each container is created from an image. You provide the image name to the *docker run* command. Docker first looks for the image locally and uses it when present. When the image is not present locally, it is downloaded from a *registry*.

Downloading an image from a registry to your local machine
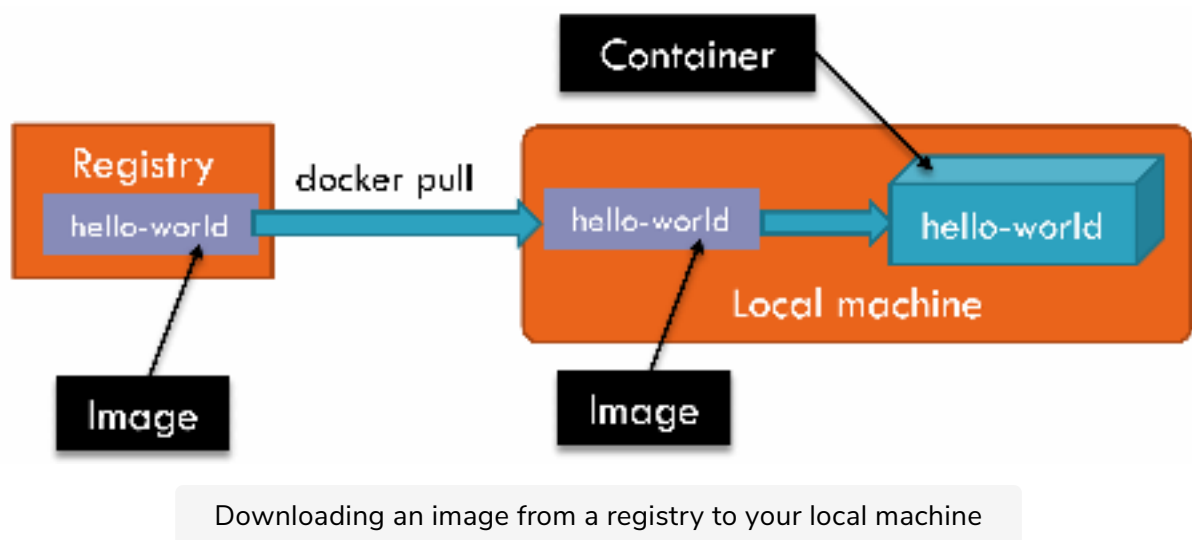
You can list the local images using the following command: *docker images ls*

When an image is published to a registry, its name must be:

```
<repository_name>/<name>:<tag>
```

- *tag* is optional; when missing, it is considered to be *latest* by default

- *repository_name* can be a registry DNS or the name of a registry in the Docker Hub

We'll soon see more about Docker Hub and private registries. All of the images

we've been using until now were downloaded from Docker Hub as they are

not DNS names. When you have time, you should browse the Docker Hub and get familiar with the images it provides.

For instance, the Jenkins image may be found on the Docker Hub.

Although the *docker run* command downloads images automatically when missing, you may want to trigger the download manually. To do this, you can use the *docker pull* command. A pull command forces an image to download, whether it is already present or not.

Here are some scenarios where using a *docker pull* command is relevant:

- You expect that the machine which runs the containers does not have access to the registries (e.g., no internet connection) at the time of running the containers.
- You want to ensure you have the latest version of an image tagged as "latest," which wouldn't be downloaded by the *docker run* command.

Let's wrap up this chapter with a quiz to test what you have learned so far.