

Docker Hub v/s Docker Registry

1. Docker Registry - A server that stores and serves Docker images.

- = Docker Hub (public)
- = AWS ECR
- = Github Registry.
- = Self Hosted.

2. Docker hub - A public docker registry hosted by docker, Inc.

feature: Stores public images. (Free for anyone to pull)
Supports private repositories (Paid) or (Limited).

Default source for docker pull when no registry is specified

3. Repository - A repository stores different versions (tags) of the same book.

Example:

- = Repository - nginx
- = Different version - nginx:1.21, nginx:1.22 ..

Private Registry: Not open to the public,
Only members or employees can enter.

↳ Stored on your company's network or
in a restricted cloud service.

↳ Example: AWS ECR with permissions only
for your org.

Note:- All public/private docker hub repos are
public/private registry.

But Not all public/private registry are on
docker hub.

Docker Installation

To Mac

↳ Download docker desktop:
(choose intel or silicon version)
<https://www.docker.com/products/docker-desktop>

2. Open .dmg → Drag docker to application

3. Run docker desktop → Allow permission.

4. Test if docker run hello-world.

2. Windows

1. Make sure WSL 2 is installed (WSL-version)
2. Download docker desktop for windows
3. Run installer → Enable WSL 2 backend
4. Start docker desktop → Sign in
5. Test → docker run hello-world

3. Linux (Ubuntu/Debian)

1. Remove old docker →
sudo apt remove docker-engine
docker.io containerd runc.
2. Install:
sudo apt update
sudo apt install ca-certificates curl gnupg
curl -fsSL https://download.docker.com/linux/
ubuntu/gpg/
sudo gpg --dearmor -o /etc/apt/keyrings/
docker.gpg.
→ Set up repository
sudo apt update
sudo apt install docker-ce docker-ce-cli
containerd.io

Note Running State (Before using docker)

- ⇒ Docker must be running before executing commands.
- ⇒ Windows & Mac
 - ⇒ keep docker desktop open (look for the whale icon in system tray).
- ⇒ Linux
 - ⇒ Start docker manually if not running
 - [`sudo systemctl start docker`]
 - ⇒ Enable auto start
 - [`sudo systemctl enable docker`]

Common docker Commands

1. docker --version → Check docker version
2. docker ps → List running containers
3. docker ps -q → List all containers (running & stopped).
4. docker images → List downloaded images.

5. `docker pull <image>` → download image from docker hub.

6. `docker run <image>` → run a container from an image

7. `docker stop <container_id>` → stop container

8. `docker rm <container_id>` → Remove container

9. `docker rmi <image_id>` → Remove image.