

Docker Commands Quick Reference Cheat Sheet

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Docker is becoming increasingly popular among software developers, operators and enterprises as a software container platform. Containers package software in a format that can run isolated on a host operating system. Bundled with only essential libraries and settings, Docker renders lightweight, efficient, self-contained systems that run identically wherever deployed.

Optimizing the platform's functionality begins with mastery of the core Docker commands. This cheat sheet is a reference for the most basic Docker commands that address installation, Hub interaction, and working with containers and images.

As of this writing, the recommended Docker installation is Docker Community Edition (Docker CE (<https://docs.docker.com/engine/installation/>)). See the official docs or our [How to Install Docker \(/docs/applications/containers/how-to-install-docker-and-pull-images-for-container-deployment/\)](/docs/applications/containers/how-to-install-docker-and-pull-images-for-container-deployment/) guide for more details.

Note

If you have not added your limited user account to the `docker` group (with `sudo usermod -aG docker username`), all of the commands in this cheatsheet will need to be run with `sudo`.

Docker Hub

Docker Syntax	Description
docker search searchterm	Search Docker Hub for images.
docker pull user/image	Downloads an image from Docker Hub.
docker login	Authenticate to Docker Hub (or other Docker registry).
docker push user/image	Uploads an image to Docker Hub. You must be authenticated to run this command.

Image and Container Information

Docker Syntax	Description
docker ps	List all running containers.
docker ps -a	List all container instances, with their ID and status.
docker images	Lists all images on the local machine.
docker history user/image	Lists the history of an image.
docker logs [container name or ID]	Displays the logs from a running container.
docker port [container name or ID]	Displays the exposed port of a running container.
docker diff [container name or ID]	Lists the changes made to a container.

Work With Images and Containers

Docker Syntax	Description
docker run -it user/image	Runs an image, creating a container and changing the terminal to the terminal within the container.
docker run -p \$HOSTPORT:\$CONTAINERPORT -d user/image	Run an image in detached mode with port forwarding.
ctrl+p then ctrl+q	From within the container's command prompt, detach and return to the host's prompt.
docker attach [container name or ID]	Changes the command prompt from the host to a running container.
docker start [container name or ID]	Start a container.

Docker Syntax	Description
docker stop [container name or ID]	Stop a container.
docker rm -f [container name or ID]	Delete a container.
docker rmi	Delete an image.
docker tag user/image:tag user/image:newtag	Add a new tag to an image.
docker exec [container name or ID] shell command	Executes a command within a running container.

Image Creation

Docker Syntax	Description
docker commit user/image	Save a container as an image.
docker save user/image	Save an image to a tar archive.
docker build -t sampleuser/ubuntu .	Builds a Docker image from a Dockerfile in the current directory.
docker load	Loads an image from file.