

Docker CLI Cheat Sheet

Your one-stop guide to mastering Docker commands \mathscr{Q}



SECTION 1: Image Commands

Command	Description	Example
docker pull <image/>	■ Pull an image from Docker Hub	docker pull ubuntu
docker images	List all local images	docker images
docker rmi <image/>	👿 Remove an image	docker rmi ubuntu
<pre>docker tag <repo>: <tag></tag></repo></pre>	Tag image for push or rename	docker tag myimg myrepo:v1
docker build -t <tag> .</tag>	E Build image from Dockerfile	docker build -t myapp .

SECTION 2: Container Lifecycle

Command	Description	Example
docker run <image/>		docker run ubuntu
<pre>docker run -it <image/></pre>	Interactive container with terminal	docker run -it ubuntu bash
docker run -d <image/>	Run in background (detached mode)	docker run -d nginx
docker ps	list running containers	docker ps
docker ps -a	Example 1 List all containers (including stopped)	docker ps -a
docker stop <id></id>	Stop a running container	docker stop 123abc
docker start <id></id>	► Start a stopped container	docker start 123abc
docker restart <id></id>	Restart a container	docker restart 123abc
docker rm <id></id>	X Remove a container	docker rm 123abc
docker logs <id></id>	☐ View container logs	docker logs 123abc

SECTION 3: Volume and Data Management

Command Description	Example
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Command	Description	Example
<pre>docker volume create <name></name></pre>	🖺 Create a volume	docker volume create myvol
docker volume ls	List volumes	docker volume ls
docker volume rm <name></name>		docker volume rm myvol
-v host:container	Ø Mount volume inside container	docker run -v \$(pwd):/app ubuntu

SECTION 4: Networking

Command	Description	Example
docker network 1s	List networks	docker network 1s
docker network create <name></name>		docker network create mynet
<pre>docker network connect <net> <container></container></net></pre>	♥ Connect a container to a network	docker network connect mynet webapp
-p host:container	Publish port to host	docker run -p 8080:80 nginx

Command	Description	Example
docker exec -it <id>bash</id>	Run command inside running container	docker exec -it web bash
docker inspect <id></id>	Detailed info on container/image	docker inspect 123abc
docker stats	Real-time usage (CPU, MEM)	docker stats
docker top <id></id>	Show running processes inside container	docker top web

SECTION 6: Save, Load, and Export

Command	Description	Example
<pre>docker save -o <file>.tar </file></pre>	Save image to .tar file	docker save -o ubuntu.tar ubuntu
docker load -i <file>.tar</file>	Load image from tar file	docker load -i ubuntu.tar
<pre>docker export <id> > file.tar</id></pre>	© Export container filesystem	docker export 123abc > ubuntu.tar

Command	Description	Example
docker import <file></file>	☐ Import tar as image	docker import ubuntu.tar

SECTION 7: DockerHub Login & Push

Command	Description	Example
docker login	ි Login to DockerHub	docker login
docker logout	ப் Logout from DockerHub	docker logout
docker push <user>/<image/></user>	Dush image to DockerHub	docker push myuser/myapp

SECTION 8: Dockerfile Related

Command	Description	Example
FROM	🕏 Base image	FROM node:18
COPY	Copy files	COPY . /app
RUN	🖔 Execute command in build	RUN npm install
CMD	${m arrho}$ Default container command	CMD ["node", "app.js"]
EXPOSE	Document exposed port	EXPOSE 3000

Command	Description	Example
docker system prune	A Remove all unused containers/images/volumes	docker system prune
docker image prune	Remove dangling images	docker image prune
docker container prune	Remove stopped containers	docker container prune
docker volume prune	🖺 Remove unused volumes	docker volume prune

Q Quick Tips

• Use --rm to auto-remove container on exit:

docker run --rm ubuntu

• Run detached with name and port:

```
docker run -d --name web -p 80:80 nginx
```

Access logs live:

```
docker logs -f <container_id>
```

Docker CLI Mastery with --help

"Learn how to teach yourself every command with confidence."



1. Understanding docker --help

Start with:

```
docker --help
```

Shows all major command groups like:

```
Commands:
 build
             Build an image from a Dockerfile
 commit
             Create a new image from a container's changes
 container Manage containers
 image
             Manage images
 volume
             Manage volumes
 network
             Manage networks
  . . .
```

2. Drill Down into Subcommands with --help

You can add --help to any subcommand to discover available options.

Examples:

What to Explore	Command
See all image-related commands	docker imagehelp
See all container commands	docker containerhelp
See all run options	docker runhelp

What to Explore	Command
See help for specific action	docker container starthelp

3. Section-Wise Docker Command Reference

Let's now organize all commands by category — and how to learn more using --help.

A. Docker Image Commands

Command	Description	Help Command
docker image ls	List images	docker image lshelp
docker image pull	Pull image from registry	docker image pullhelp
docker image rm	Remove image	docker image rmhelp
docker image build	Build image from Dockerfile	docker image buildhelp
docker image tag	Tag image	docker image taghelp
docker image inspect	Inspect image metadata	docker image inspecthelp
docker image prune	Remove unused images	docker image prunehelp

Explore: docker image --help

8. Docker Container Commands

Command	Description	Help Command
docker container ls	List containers	docker container lshelp
docker container run	Create & start new container	docker runhelp
docker container start/stop	Start/Stop container	docker container starthelp
docker container exec	Execute inside running container	docker exechelp
docker container logs	Show logs	docker logshelp
docker container rm	Remove container	docker container rmhelp
docker container inspect	Inspect container info	docker container inspect help
docker container prune	Remove all stopped containers	docker container prunehelp

Explore: docker container --help

C. Docker Volume Commands

Command	Description	Help Command
docker volume create	Create volume	docker volume createhelp
docker volume ls	List volumes	docker volume lshelp
docker volume inspect	Inspect volume	docker volume inspecthelp
docker volume rm	Remove volume	docker volume rmhelp
docker volume prune	Delete unused volumes	docker volume prunehelp

Explore: docker volume --help

D. Docker Network Commands

Command	Description	Help Command
docker network create	Create a custom network	docker network createhelp
docker network ls	List all networks	docker network lshelp
docker network connect	Connect container to network	docker network connecthelp
docker network inspect	Network details	docker network inspecthelp
docker network rm	Remove network	docker network rmhelp

Explore: docker network --help

🖺 E. Docker System Cleanup

Command	Description	Help Command
docker system df	Show disk usage	docker system dfhelp
docker system prune	Remove unused data	docker system prune help
docker image/container/volume prune	Cleanup individual resources	Addhelp accordingly

Explore: docker system --help

F. Docker Registry (DockerHub)

Command	Description	Help Command
docker login	Login to DockerHub	docker loginhelp

Command	Description	Help Command
docker logout	Logout	docker logouthelp
docker push	Push image to registry	docker pushhelp
docker pull	Pull image from registry	docker pullhelp

Command	Description	Help Command
docker exec	Run inside container	docker exechelp
docker logs	Show logs	docker logshelp
docker inspect	Deep object metadata	docker inspecthelp
docker stats	Real-time resource usage	docker statshelp
docker top	Processes inside container	docker tophelp

H. Docker Build Context

Command	Description	Help Command
docker build	Build image from Dockerfile	docker buildhelp
docker commit	Create image from container state	docker commithelp
docker history	Layer history of image	docker historyhelp

BONUS: Global Docker Options (docker --help)

At the very top level, Docker offers global flags too:

Option	Description
config	Use custom Docker config path
context	Use a specific context
debug	Enable debug mode
version	Show Docker version
help	Show help for any command

Final Tip: Combine Flags for Mastery

Example of full command:

docker run -it --rm -v \$(pwd):/app -p 3000:3000 --name myapp node bash