

GarraTT's Docker & Docker Compose Cheatsheet

A practical Docker reference for local development and deployment. Focused on containers, images, volumes, networks, and Docker Compose workflows.

Docker Basics

Concept	Use	Example
Image	Immutable template	<code>docker pull nginx</code>
Container	Running instance	<code>docker run nginx</code>
List containers	See running	<code>docker ps -a</code>
Stop/remove	Cleanup	<code>docker stop id</code> <code>docker rm id</code>
Logs	Debug	<code>docker logs container</code>

Images & Builds

Task	Command	Example
Build image	From Dockerfile	<code>docker build -t app .</code>
List images	Inventory	<code>docker images</code>
Remove image	Cleanup	<code>docker rmi app</code>
Tag image	Versioning	<code>docker tag app app:v1</code>
Push	Registry	<code>docker push app:v1</code>

Dockerfile Essentials

Instruction	Purpose	Example
FROM	Base image	<code>FROM node:20-alpine</code>
WORKDIR	Working dir	<code>WORKDIR /app</code>
COPY	Add files	<code>COPY . .</code>
RUN	Build step	<code>RUN npm install</code>
CMD	Default cmd	<code>CMD ["npm", "start"]</code>

Volumes & Networking

Concept	Use	Example
Volumes	Persistent data	<code>-v db:/var/lib/mysql</code>
Bind mounts	Local dev	<code>-v \$(pwd):/app</code>
Networks	Container comms	<code>docker network ls</code>
Expose	Internal port	<code>EXPOSE 3000</code>
Ports	Host mapping	<code>-p 3000:3000</code>

Docker Compose Basics

File	Purpose	Example
<code>compose.yml</code>	Service config	<code>services: app: build: .</code>
<code>up</code>	Start stack	<code>docker compose up -d</code>
<code>down</code>	Stop stack	<code>docker compose down</code>
<code>logs</code>	View output	<code>docker compose logs</code>
<code>exec</code>	Shell into svc	<code>docker compose exec app sh</code>

Compose Services

Key	Use	Example
<code>build</code>	Build image	<code>build: .</code>
<code>image</code>	Use image	<code>image: nginx:latest</code>
<code>ports</code>	Expose	<code>ports: - "80:80"</code>
<code>volumes</code>	Persist data	<code>volumes: - ./app</code>
<code>depends_on</code>	Order	<code>depends_on: - db</code>

Common Dev Stacks

Stack	Services	Notes
WordPress	nginx, php-fpm, mysql	Use volumes
Node	node	Bind mount code
Static	nginx	Multi-stage build
API	app + db	Env vars

Cleanup Commands

Task	Command	Warning
Stop all	docker stop	Stops running
Remove all	docker rm	Deletes containers
Prune	docker system prune	Deletes unused
Volumes	docker volume prune	Data loss

Best Practices

Practice	Why	Tip
Small images	Faster builds	Use alpine
Multi-stage	Lean prod	Separate build/runtime
Env vars	Config	Never hardcode
Healthchecks	Reliability	Restart policies
.dockerignore	Speed	Exclude node_modules