Docker Cheatsheet

docker image

Build an image from a Dockerfile

```
docker image build -t IMAGE_NAME:VERSION PATH_TO_DIRECTORY
```

Use . for the current directory. The optional argument `-t` tags the image with a name and a version.

... or from a GitHub repository

```
docker build -t IMAGE_NAME:VERSION REPOSITORY_URL
```

The optional argument `-t` tags the image with a name and a version.

Tag an image

```
docker image tag OLD_TAG:VERSION NEW_TAG:VERSION
```

List images

```
docker image ls
```

Include intermediate images

```
docker image ls -a
```

Remove an image

```
docker image rm IMAGE_NAME:VERSION
```

Remove danging intermediate images

```
docker image prune
```

Remove images not referenced by a container

```
docker image prune -a
```

Synchronise with a container registry (usually DockerHub)

Pull from the registry

```
docker image pull IMAGE_NAME:VERSION
```

Push to the registry

```
docker image push IMAGE_NAME:VERSION
```

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docker container

Create - but do not start - a container from an image

```
docker container create IMAGE_NAME:VERSION
```

Publish ports

```
docker container create -p CONTAINER_PORT:EXTERNAL_PORT IMAGE_
NAME
```

Mount a volume

```
docker container create --mount source=PATH_ON_DISK, target=PA
TH_IN_CONTAINER, type=bind IMAGE_NAME:VERSION
```

Start a container

```
docker container start CONTAINER_NAME
```

Print container output

```
docker container start -a CONTAINER_NAME
```

Connect to the container's terminal

```
docker container start -it CONTAINER_NAME
```

`CTRL+P` then `CTRL+Q` to disconnect.

Create and start a container from an image

```
docker container run IMAGE_NAME:VERSION
```

`docker container run` combines `docker container create` and `docker container start`.

Stop running a container

Shutdown gracefully

```
docker container stop CONTAINER_NAME
```

Stop immediately

```
docker container kill CONTAINER_NAME
```

Pause or unpause all running processes in a container

Pause

```
docker container pause CONTAINER_NAME
```

Unpause

```
docker container unpause CONTAINER_NAME
```

Delete a container

```
docker container rm CONTAINER_NAME
```

Stop and delete a running container

```
docker container rm -f CONTAINER_NAME
```

Stops immediately, no graceful shutdown.

Delete all stopped containers

```
docker container prune
```

Delete all running and stopped containers

```
docker container rm -f $(docker ps -aq)
```

List containers

Running containers

```
docker container ls
```

All containers

```
docker container ls --all
```

Copy files

To container

```
docker container cp PATH_ON_DISK CONTAINER_NAME:PATH_IN_CONTAI
NER
```

From container

```
docker container cp CONTAINER_NAME:PATH_IN_CONTAINER PATH_ON_D
ISK
```

Execute command

```
docker container exec CONTAINER_NAME COMMAND OPTIONAL_ARGUMENT
S
```

Run in background

```
docker container exec -d CONTAINER_NAME COMMAND OPTIONAL_ARGUM
ENTS
```

Execute with temporary environment variables

```
docker container exec -e VARIABLE_NAME=VALUE CONTAINER_NAME CO
MMAND OPTIONAL_ARGUMENTS
```

Create an image from a container

```
docker container commit CONTAINER_NAME
```

Attach current terminal to container

```
docker container attach CONTAINER_NAME
```

`CTRL+C` to detach.

Diagnostics

Display container information

```
docker container inspect CONTAINER_NAME
```

Print container logs

```
docker container logs CONTAINER_NAME
```

Print the last N lines of the container logs

```
docker container logs --tail N CONTAINER_NAME
```

Print all subsequent logs

```
docker container logs -f CONTAINER_NAME
```

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docker network

Create a network

```
docker network create NETWORK_NAME
```

List networks

```
docker network ls
```

Delete a network

`docker network rm NETWORK_NAME`

Remove all unused networks

```
docker network prune
```

Connect / disconnect a container from a network

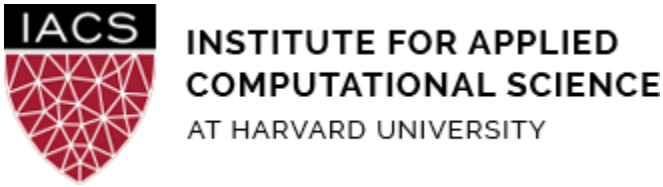
Connect

```
docker network connect NETWORK_NAME CONTAINER_NAME
```

Disconnect

```
docker network disconnect NETWORK_NAME CONTAINER_NAME
```

Made with ❤ by Javid Lakha for the Harvard AC295 / CSCI E-115 students. Please send suggestions and corrections to javid@hey.com.



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