Cheatsheet for Docker CLI

Run a new Container

Start a new Container from an Image

```
docker run IMAGE
docker run nginx
```

...and assign it a name

```
docker run --name CONTAINER IMAGE
docker run --name web nginx
```

...and map a port

```
docker run -p HOSTPORT:CONTAINERPORT IMAGE
docker run -p 8080:80 nginx
```

...and map all ports

```
docker run -P IMAGE
docker run -P nginx
```

...and start container in background

```
docker run -d IMAGE
docker run -d nginx
```

...and assign it a hostname

```
docker run --hostname HOSTNAME IMAGE
docker run --hostname srv nginx
```

...and add a dns entry

```
docker run --add-host HOSTNAME:IP IMAGE
```

...and map a local directory into the container

```
docker run -v HOSTDIR:TARGETDIR IMAGE
docker run -v ~/:/usr/share/nginx/html nginx
```

...but change the entrypoint

```
docker run -it --entrypoint EXECUTABLE IMAGE
docker run -it --entrypoint bash nginx
```

Manage Containers

Show a list of running containers

```
docker ps
```

Show a list of all containers

```
docker ps -a
```

Delete a container

```
docker rm CONTAINER
docker rm web
```

Delete a running container

```
docker rm -f CONTAINER
docker rm -f web
```

Delete stopped containers

```
docker container prune
```

Stop a running container

```
docker stop CONTAINER
docker stop web
```

Start a stopped container

```
docker start CONTAINER
docker start web
```

Copy a file from a container to the host

```
docker cp CONTAINER:SOURCE TARGET
docker cp web:/index.html index.html
```

Copy a file from the host to a container

```
docker cp TARGET CONTAINER:SOURCE
docker cp index.html web:/index.html
```

Start a shell inside a running container

```
docker exec -it CONTAINER EXECUTABLE
docker exec -it web bash
```

Rename a container

```
docker rename OLD_NAME NEW_NAME
docker rename 096 web
```

Create an image out of container

```
docker commit CONTAINER
docker commit web
```

Manage Images

Download an image

```
docker pull IMAGE[:TAG]
docker pull nginx
```

Upload an image to a repository

```
docker push IMAGE
docker push myimage:1.0
```

Delete an image

```
docker rmi IMAGE
```

Show a list of all Images

```
docker images
```

Delete dangling images

```
docker image prune
```

Delete all unused images

```
docker image prune -a
```

Build an image from a Dockerfile

```
docker build DIRECTORY
docker build .
```

Tag an image

```
docker tag IMAGE NEWIMAGE
docker tag ubuntu ubuntu:18.04
```

Build and tag an image from a Dockerfile

```
docker build -t IMAGE DIRECTORY
docker build -t myimage .
```

Save an image to .tar file

```
docker save IMAGE > FILE
docker save nginx > nginx.tar
```

Load an image from a .tar file

```
docker load -i TARFILE
docker load -i nginx.tar
```

Info & Stats

Show the logs of a container

```
docker logs CONTAINER
docker logs web
```

Show stats of running containers

```
docker stats
```

Show processes of container

```
docker top CONTAINER
docker top web
```

Show installed docker version

```
docker version
```

Get detailed info about an object

```
docker inspect NAME
docker inspect nginx
```

Show all modified files in container

```
docker diff CONTAINER
docker diff web
```

Show mapped ports of a container

```
docker port CONTAINER
docker port web
```

docker

Commands Cheat Sheet

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Container Lifecycle

docker create [IMAGE]	create a container without starting it
docker rename [CONTAINER_NAME] [NEW_CONTAINER_NAME]	rename a container
docker run [IMAGE]	create and start a container
docker run --rm [IMAGE]	remove a container after it stops
docker run -td [IMAGE]	start a container and keep it running
docker run -it [IMAGE]	create, start the container, and run a command in it
docker run -it-rm [IMAGE]	create, start the container, and run a command in it; after executing, the container is removed
docker rm [CONTAINER]	delete a container if it isn't running
docker update [CONTAINER]	update the configuration of a container

Networking

docker network ls	list networks
docker network rm [NETWORK]	remove one or more networks
docker network inspect [NETWORK]	show information on one or more networks
docker network connect [NETWORK] [CONTAINER]	connect a container to a network
docker network disconnect [NETWORK] [CONTINAER]	disconnect a container from a network

Image Lifecycle

docker build [URL]	create an image from a Dockerfile
docker build -t [URL]	build an image from a Dockerfile and tags it
docker pull [IMAGE]	pull an image from a registry
docker push [IMAGE]	push an image to a registry
docker import [URL/FILE]	create an image from a tarball
docker commit [CONTAINER] [NEW_IMAGE_NAME]	create an image from a container
docker rmi [IMAGE]	remove an image
docker load [TAR_FILE/STDIN_FILE]	load an image from a tar archieve as stdin
docker save [IMAGE] > [TAR_FILE]	save an image to a tar archive stream to stdout with all parent layers, tags, and versions

Start & Stop

docker start [CONTAINER]	start a container
docker stop [CONTAINER]	stop a running container
docker restart [CONTAINER]	stop a running container and start it up again
docker pause [CONTAINER]	pause processes in a running container
docker unpause [CONTAINER]	unpause processes in a container
docker wait [CONTAINER]	block a container until other containers stop
docker kill [CONTAINER]	kill a container by sending SIGKILL to a running container
docker attach [CONTAINER]	attach local standard input, output, and error streams to a running container

Information

docker ps	list running containers
docker ps -a	list running and stopped containers
docker logs [CONTAINER]	list the logs from a running container
docker inspect [OBJECT_NAME/ID]	list low-level information on an object
docker events [CONTAINER]	list real time events from a container
docker port [CONTAINER]	show port (or specific) mapping from a container
docker top [CONTAINER]	show running processes in a container
docker stats [CONTAINER]	show live resource usage statistics of containers
docker diff [CONTINAER]	show changes to files (or directories) on a filesystem
docker images ls	show all locally stored images
docker history [IMAGE]	show history of an image