

Building Docker Images

`docker build -t <image_name>:<tag> <path_to_Dockerfile>` Build an image from a Dockerfile

Dockerfile layering template

FROM <image_name>:<tag>	Includes the OS & sometimes the runtime environment
WORKDIR /app	Specifies which directory to work in
COPY . .	Copying everything in the root directory into app directory
RUN npm install	Installing dependencies
EXPORT port_number	Specifies port number
CMD ["command"]	Command runs in the container not image

`docker build -t <image name> .`

Managing Docker Images

<code>docker images</code>	List all images
<code>docker image rm <image_name_or_ID></code>	Remove one or more images
<code>docker image rm <image_name> -f</code>	Forcefully delete an image even if it is used

Running Docker Containers

<code>docker run --name <name> -p local_port:container_port<image_name>:<tag></code>	Run a command in a new container with name and specifying the local port
<code>docker ps</code>	List running containers
<code>docker ps -a</code>	List all containers
<code>docker stop <container_name_or_ID></code>	Stop one or more running containers
<code>docker start</code>	<code>docker start <container_name_or_ID></code>
<code>docker container rm <container_name></code>	Deleting containers

Managing Docker Containers

<code>docker rm <container_name_or_ID></code>	Remove one or more containers
<code>docker exec -it <container_name_or_ID> <command></code>	Run a command in a running container
<code>docker logs <container_name_or_ID></code>	Fetch the logs of a container

Docker Compose

<code>docker-compose up</code>	Start services defined in a docker-compose.yml file
<code>docker-compose down --rmi all -v</code>	Stop and remove containers, networks, images, and volumes

for managing multi-container applications

Docker Compose Template

```

1 version: "3.8"
2 services:
3   api:
4     build: ./api
5     container_name: api_c
6     ports:
7       - '4000:4000'
8     volumes:
9       - ./api:/app
10      - ./app/node_modules
  
```

Miscellaneous

<code>docker pull <image_name>:<tag></code>	Pull an image or a repository from a registry
<code>docker tag <source_image> <target_image></code>	Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
<code>docker push <image_name>:<tag></code>	Push an image or a repository to a registry
<code>docker inspect <container_or_image_name_or_ID></code>	Display detailed information on one or more containers or images
<code>docker system prune -a</code>	Delete everything

References

<https://youtube.com/playlist?list=PL4cUxeGkcC9hxjeEtdHFNYMtC-pjNBm3h7&si=sfdexWN70frLfUah>

