docker Cheat Sheet

GLOSSARY

Layer
A set of read-only files to provision the system.

Image
A read-only layer that is the base of your container. Might have a parent image.

Container
A runnable instance of the image.

Registery / Hub
Central place where images live.

Docker machine
A VM to run Docker containers (Linux does this natively).

Docker compose
A utility to run multiple containers as a system.

USEFUL ONE-LINERS

Download an image

```
docker pull image_name
```

Start and stop the container

```
docker [start|stop] container_name
```

Create and start container, run command

```
docker run -ti --name container_name
    image_name command
```

Create and start container, run command, destroy container

```
docker run --rm -ti image_name command
```

Example filesystem and port mappings

```
docker run -it --rm -p 8080:8080 -v
/path/to/agent.jar:/agent.jar -e
JAVA_OPTS=”-javaagent:/agent.jar”
tomcat:8.0.29-jre8
```

DOCKER CLEANUP COMMANDS

Kill all running containers

```
docker kill $(docker ps -q)
```

Delete dangling images

```
docker rmi $(docker images -q -f
    dangling=true)
```

Remove all stopped containers

```
docker rm $(docker ps -a -q)
```

DOCKER MACHINE COMMANDS

Use docker-machine to run the containers

Start a machine

```
docker-machine start machine_name
```

Configure docker to use a specific machine

```
eval “$(docker-machine env machine_name)”
```

DOCKER COMPOSE SYNTAX

docker-compose.yml file example

```
version: “2”
services:
web:
  container_name: “web”
  image: java:8 # image name
  # command to run
  command: java -jar /app/app.jar
  ports: # map ports to the host
    - “4567:4567”
  volumes: # map filesystem to the host
    - ./myapp.jar:/app/app.jar
mongo: # container name
  image: mongo # image name
```

Create and start containers

```
docker-compose up
```

INTERACTING WITH A CONTAINER

Run a command in the container

```
docker exec -ti container_name command.sh
```

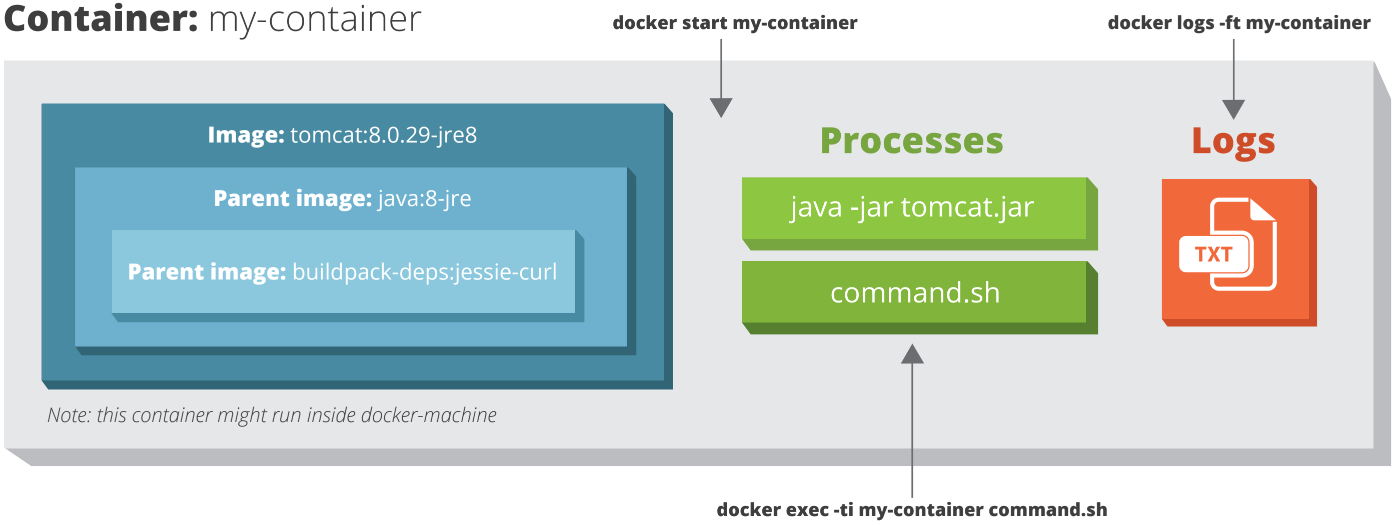
Follow the container logs

```
docker logs -ft container_name
```

Save a running container as an image

```
docker commit -m “commit message” -a “author”
    container_name username/image_name:tag
```

Container: my-container



docker start my-container

docker logs -ft my-container

Image: tomcat:8.0.29-jre8

Parent image: java:8-jre

Parent image: buildpack-deps:jessie-curl

Processes

java -jar tomcat.jar

command.sh

Logs

Note: this container might run inside docker-machine

docker exec -ti my-container command.sh