

Docker JumpStart

Running and Managing Docker Containers

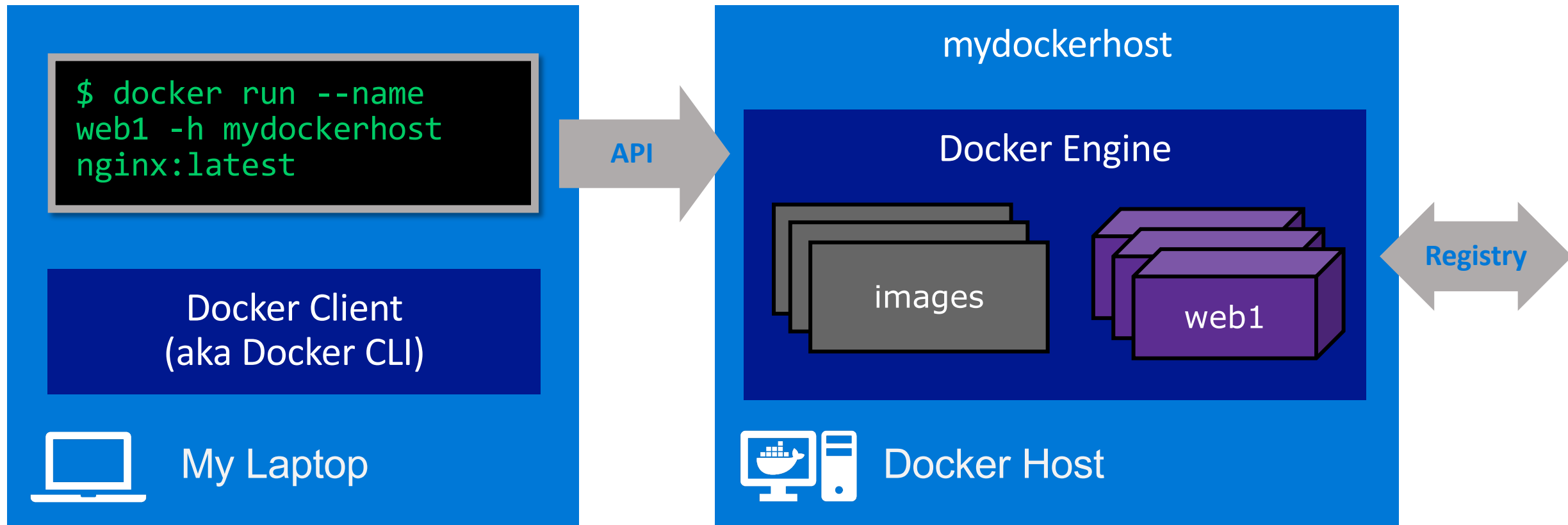
Agenda

- Docker Client & Remote Hosts
- Essential Docker CLI Commands
- Understanding Container Names & Id's



Docker CLI & Remote Hosts

Docker - Client & Remote Hosts



Docker Client & Engine interaction

Essential Docker CLI Commands

Docker CLI - Run Command

```
$ docker run --name mycache redis
$ docker run -it ubuntu
$ docker run -d -p 80 nginx
$ docker run -e MYSQL_ROOT_PASSWORD=r00t mysql
$ docker run -it --rm busybox
$ docker run busybox ls -la
```

--name = assign name to container

-it = run interactively with TTY

-d = detached (in background)

-p 80 = expose or map ports

-e = set environmental variables

--rm = remove container when it exits

Pass command/start-up executable to container

Note. Most of the time `docker pull` is unnecessary as `docker run` will automatically pull any image it can not find locally

Docker CLI - Other Common Commands

docker ps - List Containers

```
$ docker ps
$ docker ps -a
$ docker ps -f status=paused
```

docker images - List Images

```
$ docker images
$ docker images node
$ docker images -f dangling=true
```

docker rm - Remove Containers

```
$ docker rm myoldcontainer
$ docker rm -f mycontainer
$ docker rm 8fd
```

docker rmi - Remove Images

```
$ docker rmi mysql
```

docker kill - Stop Containers

```
$ docker kill mycontainer
```

docker inspect, log & top - Debug

```
$ docker inspect mycontainer
$ docker inspect myimage
$ docker logs mycontainer
$ docker top mycontainer
```

Note. There is a [newer command format introduced in Docker 1.13](#), but these older commands are still the most commonly used

Container Names & Id's

Container Names and IDs

- Containers have both names and IDs
- Docker assigns a 12 character ID to every container, e.g. 8f5d81e5853b
- You can assign a name (with `--name`) or the Docker engine will invent a funny name, e.g. “wizardly_edison”
- Names and IDs must be unique
- The CLI accepts either name or ID when referring to a container
 - E.g. `docker kill mycontainer` or `docker kill 8f5d81e5853b`
- When using the ID, starting few characters can be used and will be matched
 - E.g. `docker rm 8f5`

Summary

- Docker CLI communicates with remote hosts
- Remote hosts run the Docker engine
- Command Docker CLI commands consists of:
 - run (create a new container)
 - rm (remove containers)
 - kill (stop containers)
 - inspect (examine containers)
- Containers have id's and optional names
- Docker CLI commands can target containers based on id or name

