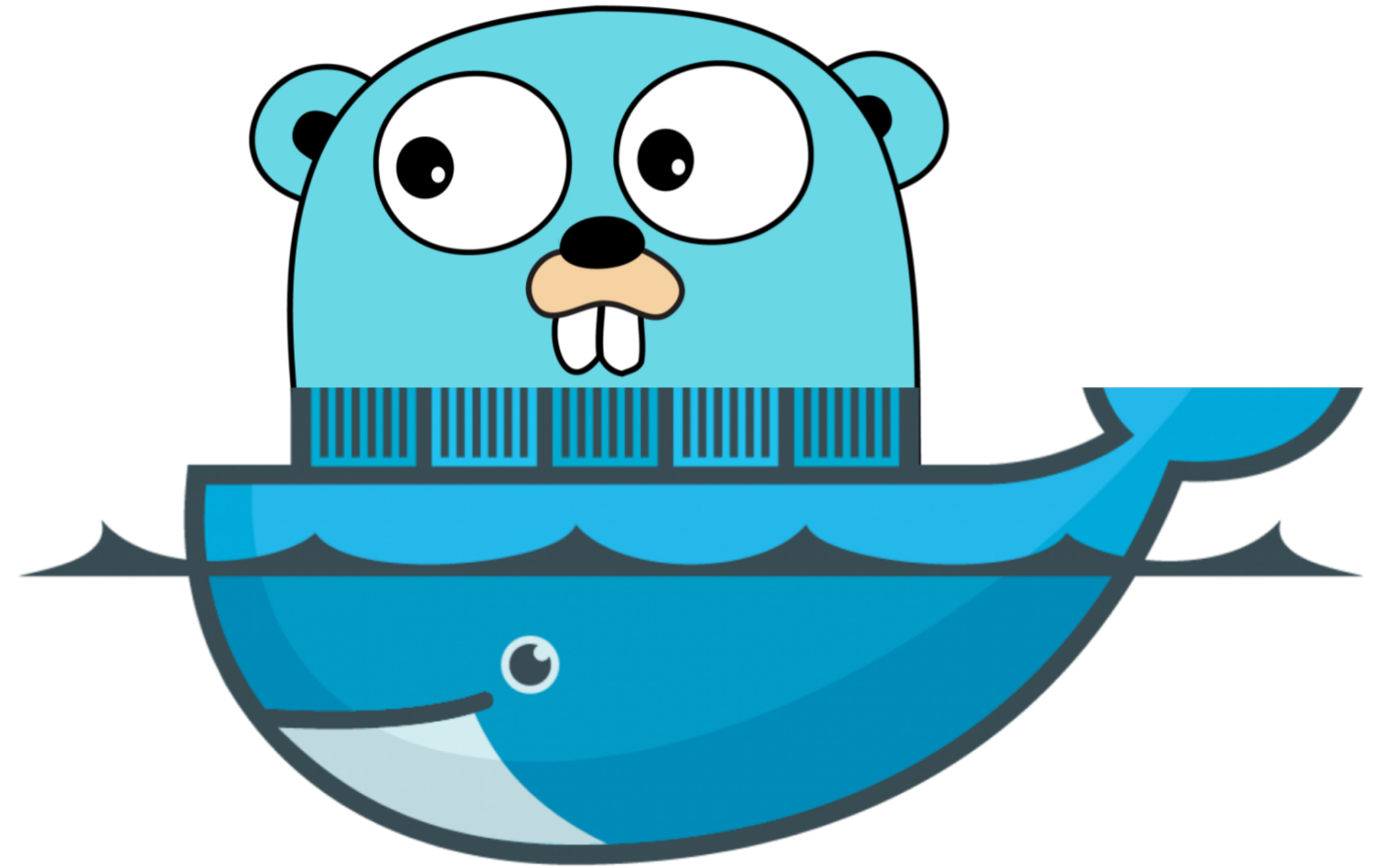


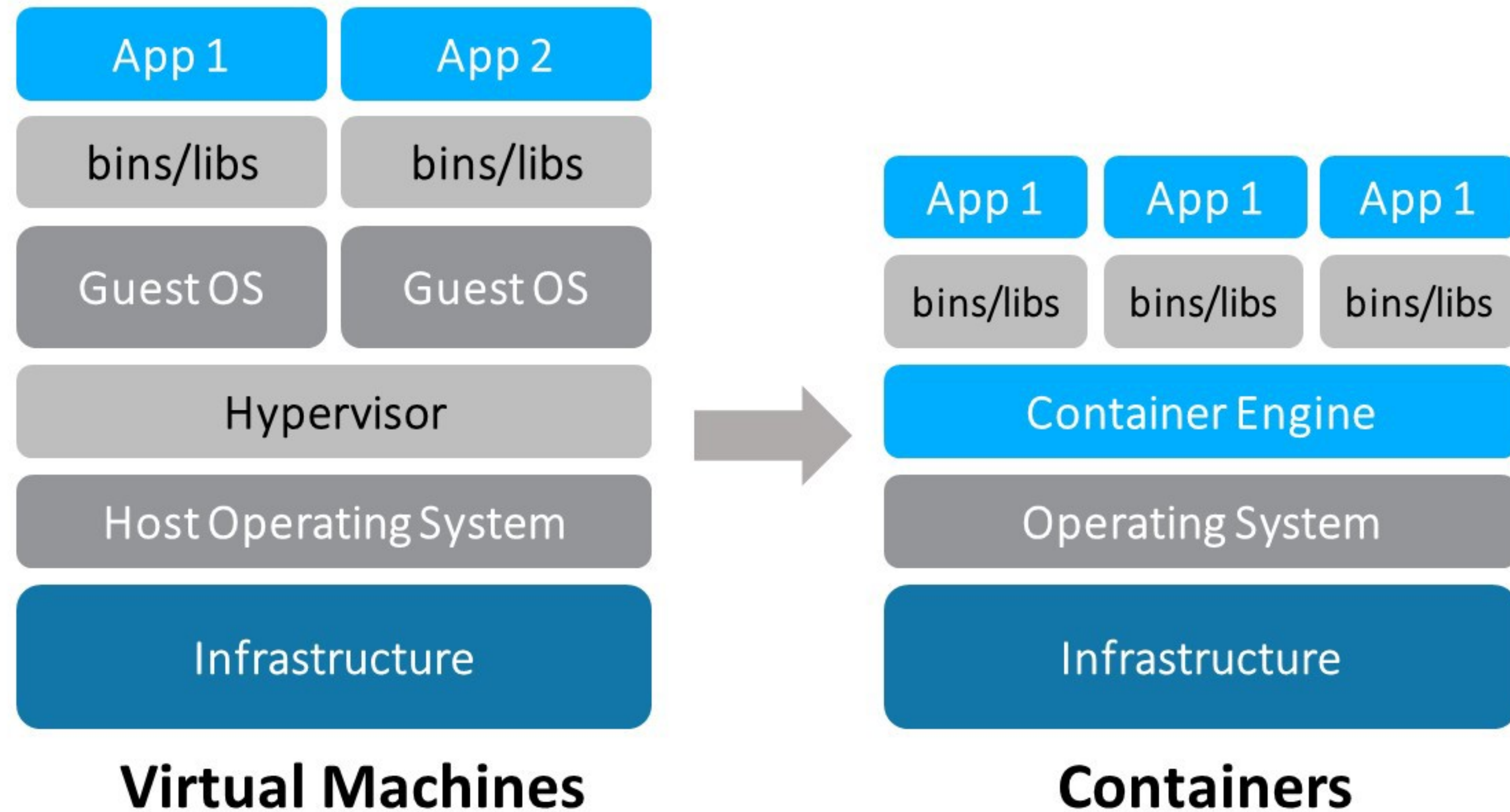
Deploy Golang service with Docker



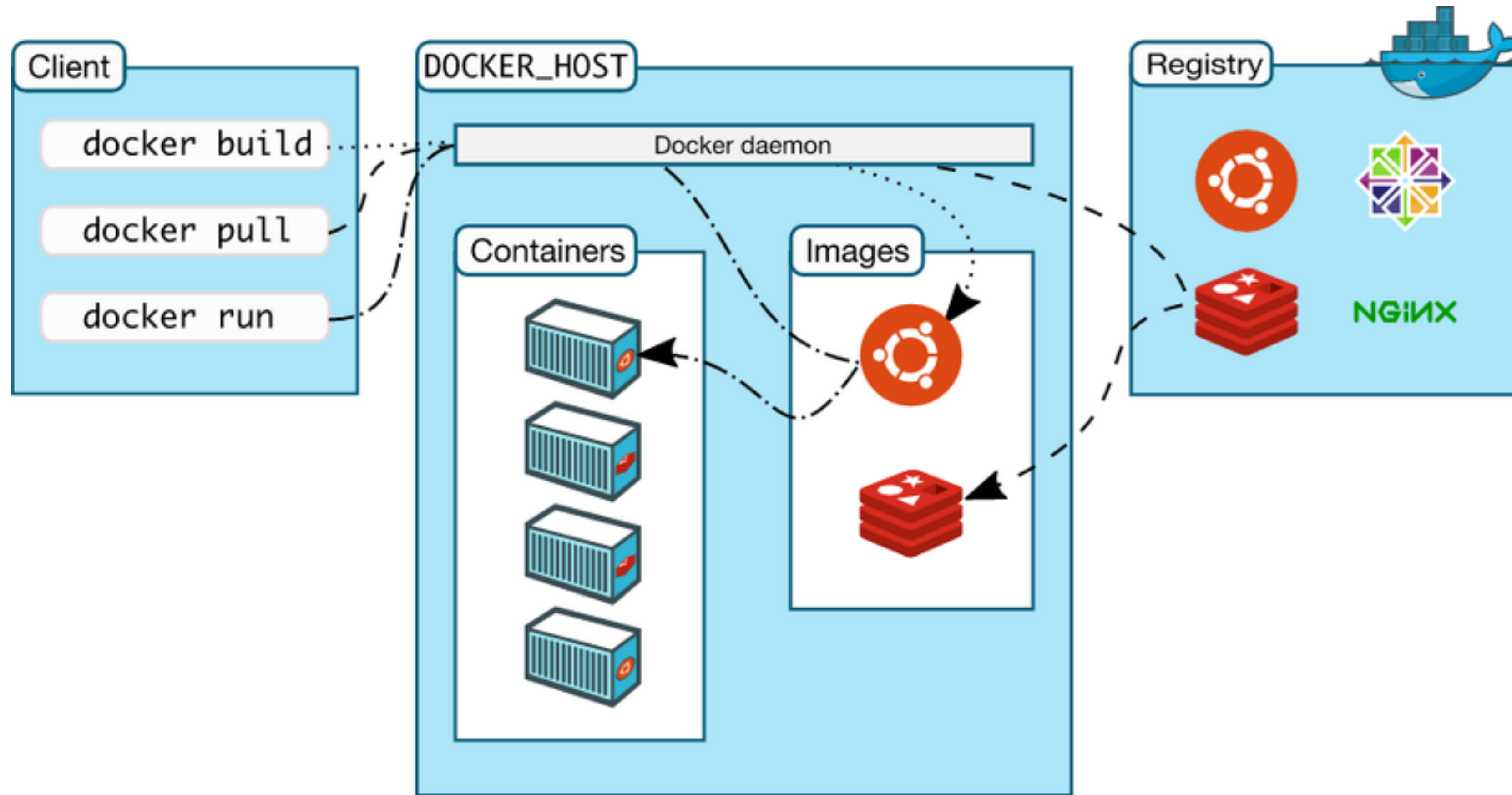
Agenda

- Docker introduction
- Build a docker image for Golang service
- Setup VPS (Digital Ocean / EC2)
- Deploy bash script (Simple case)
- Domain & FREE SSL (Let's encrypt)

Why Docker/Container?



Docker introduction



Docker Cheat Sheet



Build

Build an image from the Dockerfile in the current directory and tag the image

```
docker build -t myimage:1.0 .
```

List all images that are locally stored with the Docker Engine

```
docker image ls
```

Delete an image from the local image store

```
docker image rm alpine:3.4
```



Share

Pull an image from a registry

```
docker pull myimage:1.0
```

Retag a local image with a new image name and tag

```
docker tag myimage:1.0 myrepo/myimage:2.0
```

Push an image to a registry

```
docker push myrepo/myimage:2.0
```



Run

Run a container from the Alpine version 3.9 image, name the running container "web" and expose port 5000 externally, mapped to port 80 inside the container.

```
docker container run --name web -p 5000:80 alpine:3.9
```

Stop a running container through SIGTERM

```
docker container stop web
```

Stop a running container through SIGKILL

```
docker container kill web
```

List the networks

```
docker network ls
```

List the running containers (add `--all` to include stopped containers)

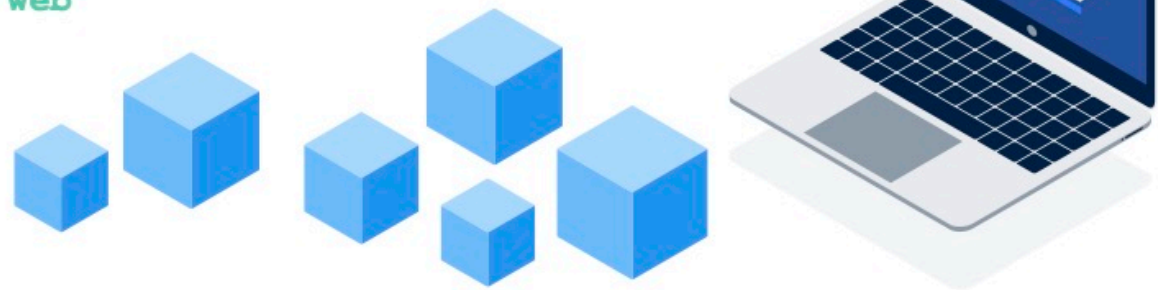
```
docker container ls
```

Delete all running and stopped containers

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

Print the last 100 lines of a container's logs

```
docker container logs --tail 100 web
```



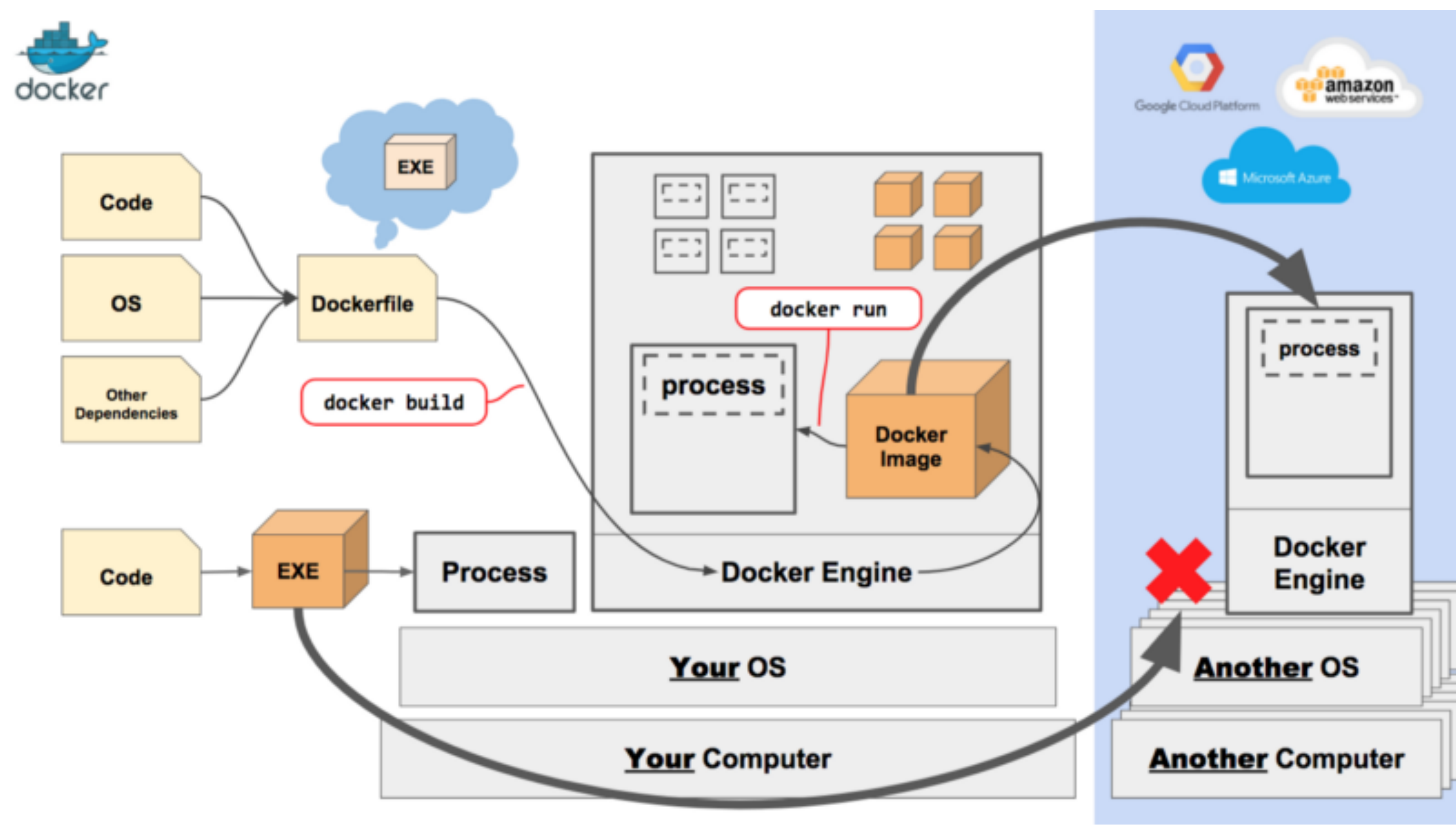
Docker Management

All commands below are called as options to the base `docker` command. Run `docker <command> --help` for more information on a particular command.

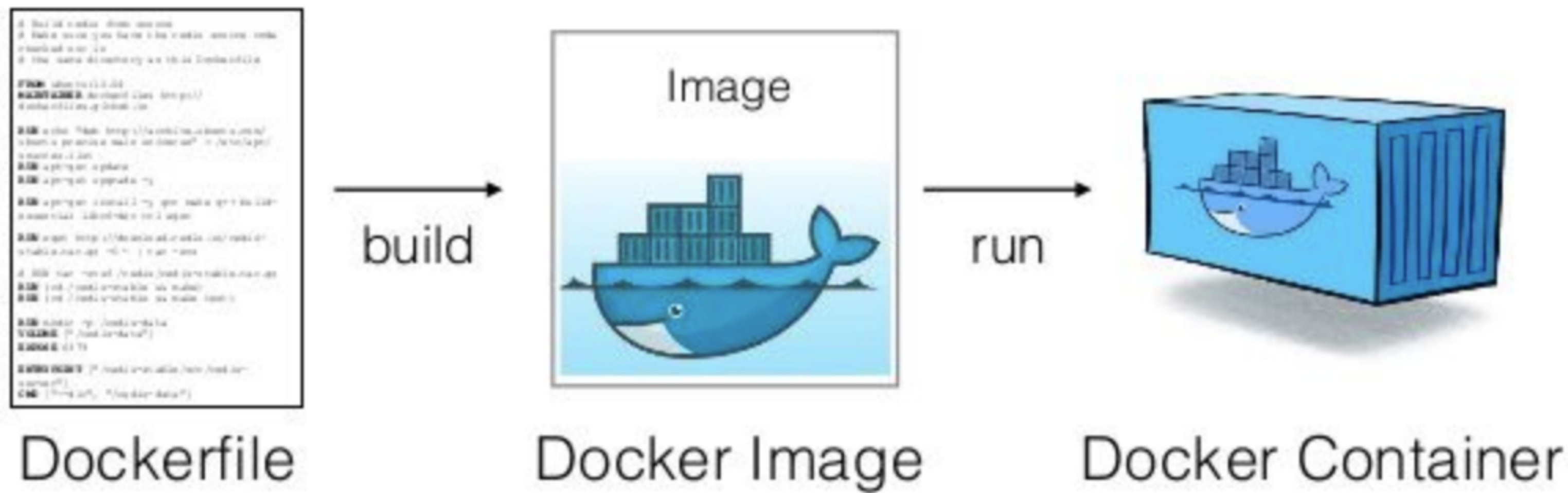
app*	Docker Application
assemble*	Framework-aware builds (Docker Enterprise)
builder	Manage builds
cluster	Manage Docker clusters (Docker Enterprise)
config	Manage Docker configs
context	Manage contexts
engine	Manage the docker Engine
image	Manage images
network	Manage networks
node	Manage Swarm nodes
plugin	Manage plugins
registry*	Manage Docker registries
secret	Manage Docker secrets
service	Manage services
stack	Manage Docker stacks
swarm	Manage swarm
system	Manage Docker
template*	Quickly scaffold services (Docker Enterprise)
trust	Manage trust on Docker images
volume	Manage volumes

*Experimental in Docker Enterprise 3.0.

Docker in practice



Build Docker image



Common commands in Dockerfile

Builder main commands

command	description
<code>FROM image scratch</code>	base image for the build
<code>MAINTAINER email</code>	name of the mainainer (metadata)
<code>COPY path dst</code>	copy <i>path</i> from the context into the container at location <i>dst</i>
<code>ADD src dst</code>	same as <code>COPY</code> but untar archives and accepts http urls
<code>RUN args. . .</code>	run an arbitrary command inside the container
<code>USER name</code>	set the default username
<code>WORKDIR path</code>	set the default working directory
<code>CMD args. . .</code>	set the default command
<code>ENV name value</code>	set an environment variable

Demo Dockerfile

Demo setup VPS & Deploy

Thank you