

# Docker & Linux Containers

Daniel Lombardi

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SWE Intern @ 



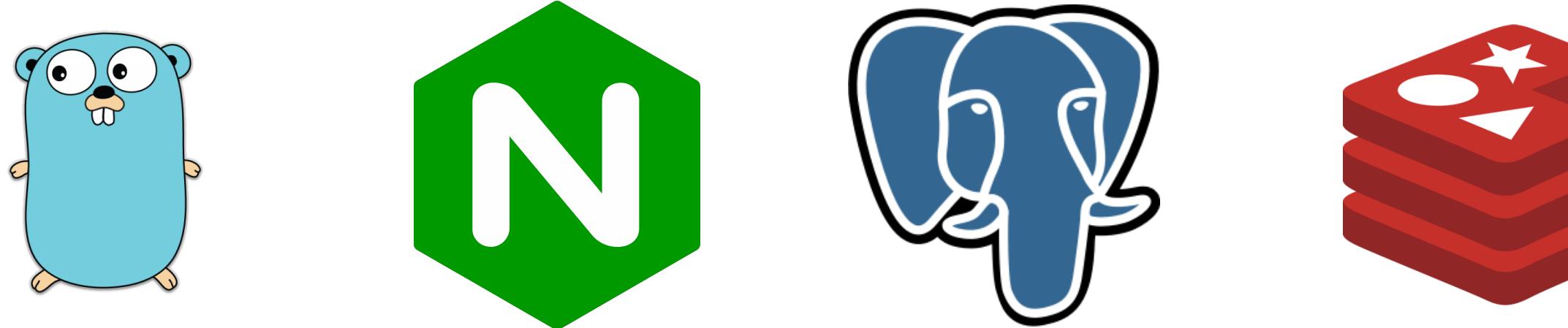
# PATOS

Pretty Awesome To Open Source

<https://pato.dev>



# Why Containers?



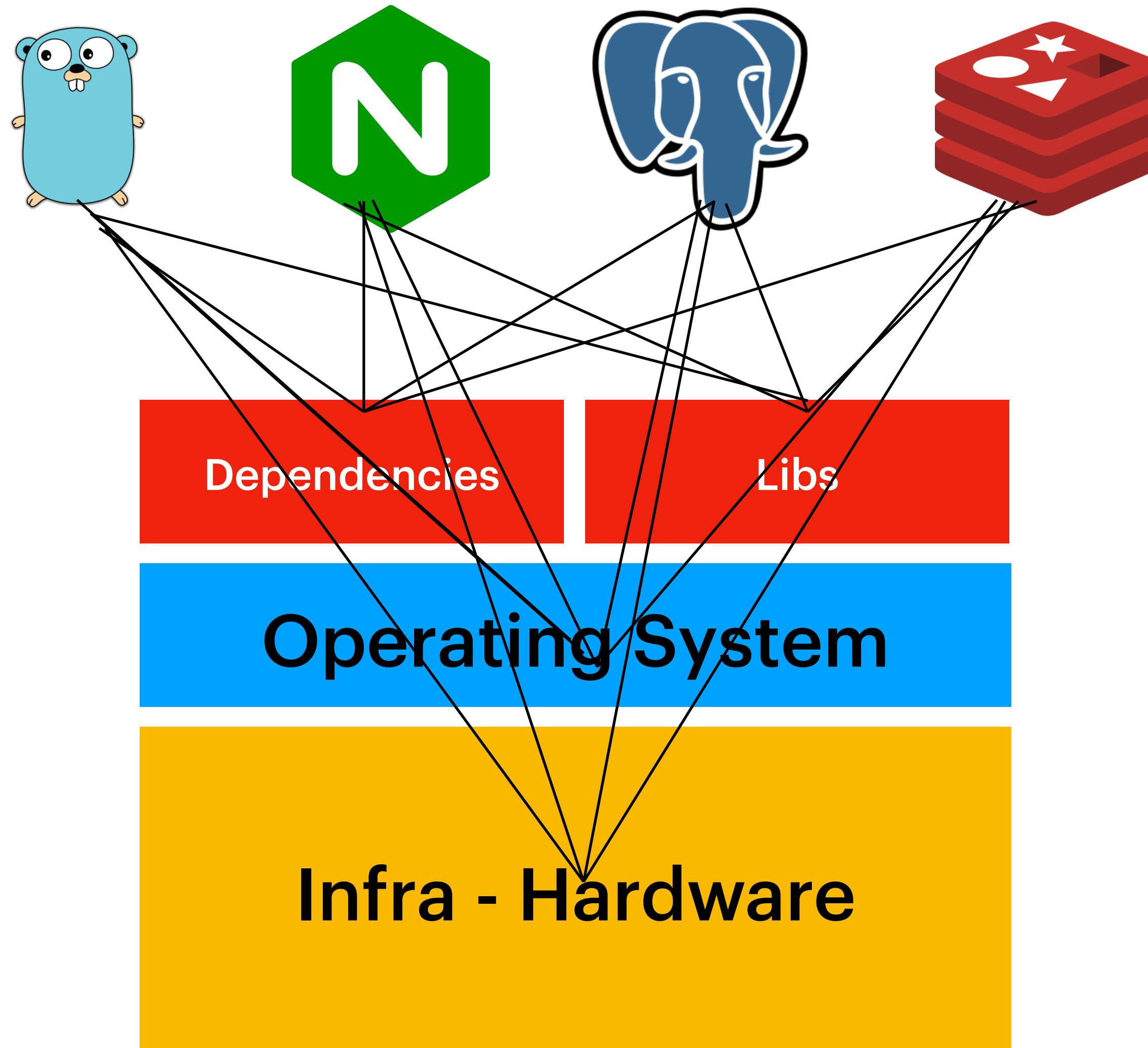
Dependencies

Libs

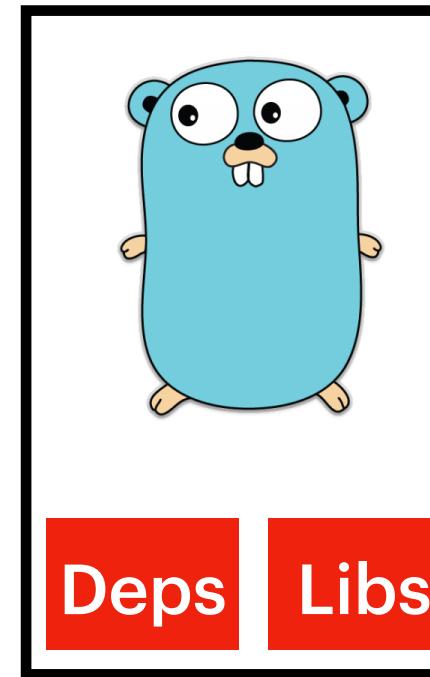
Operating System

Infra - Hardware

# Why Containers?



# Why Containers?



Deps    Libs



Deps    Libs



Deps    Libs



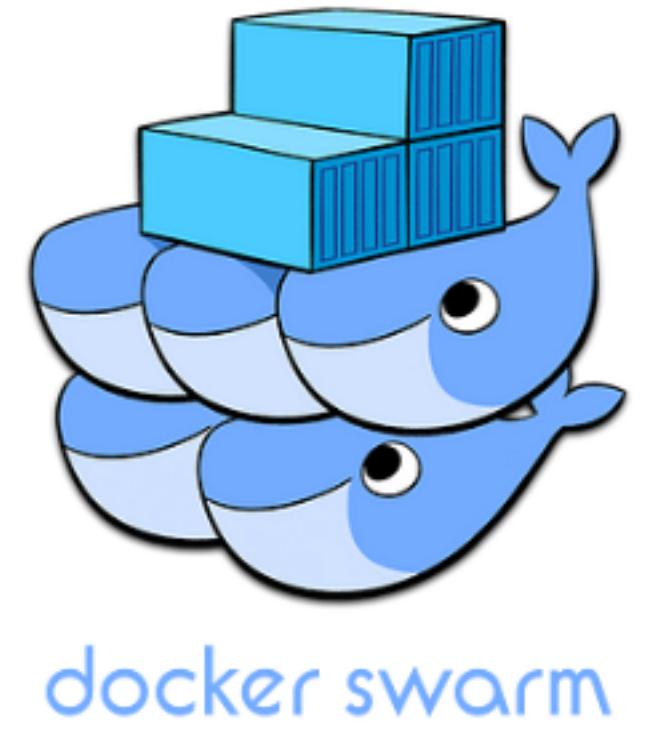
Deps    Libs

Operating System

Infra - Hardware

# Containers

- Isolated Environments
- Portable
- Lightweight
- Simple
- Development & Deploy
- Active Community

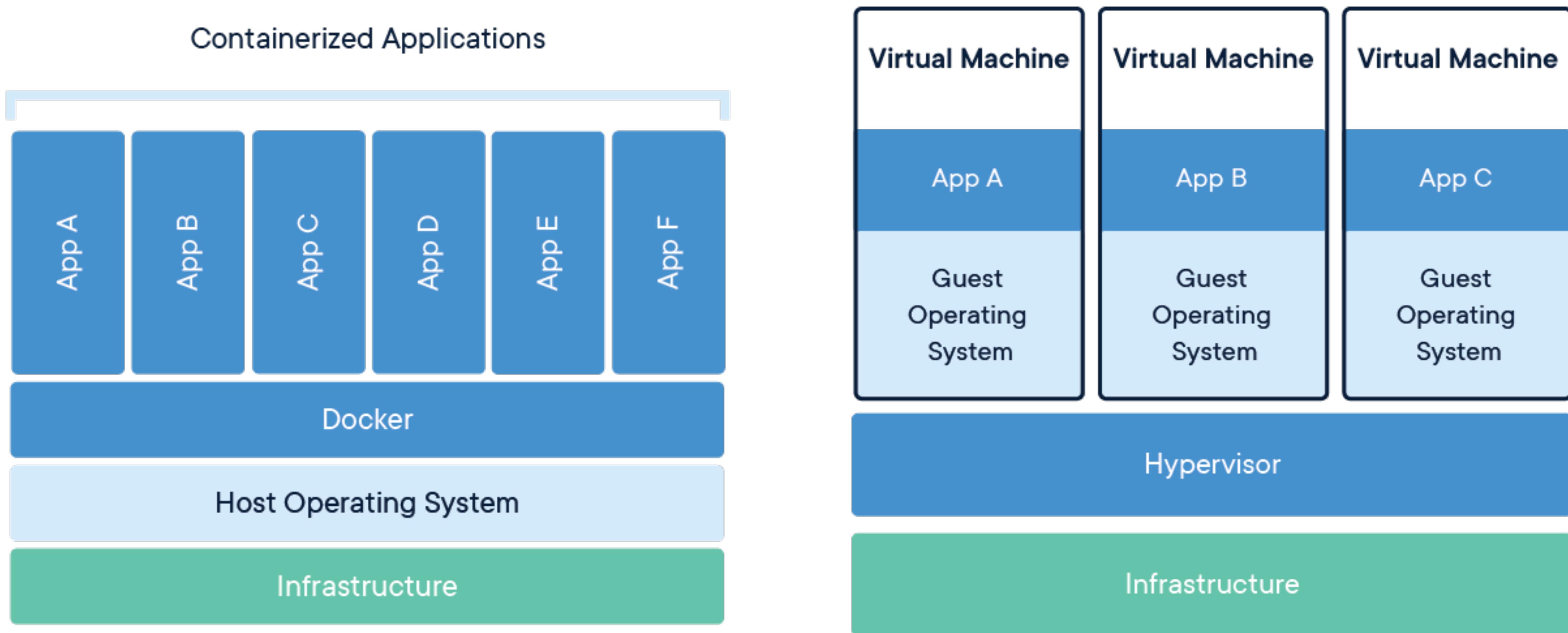


kubernetes

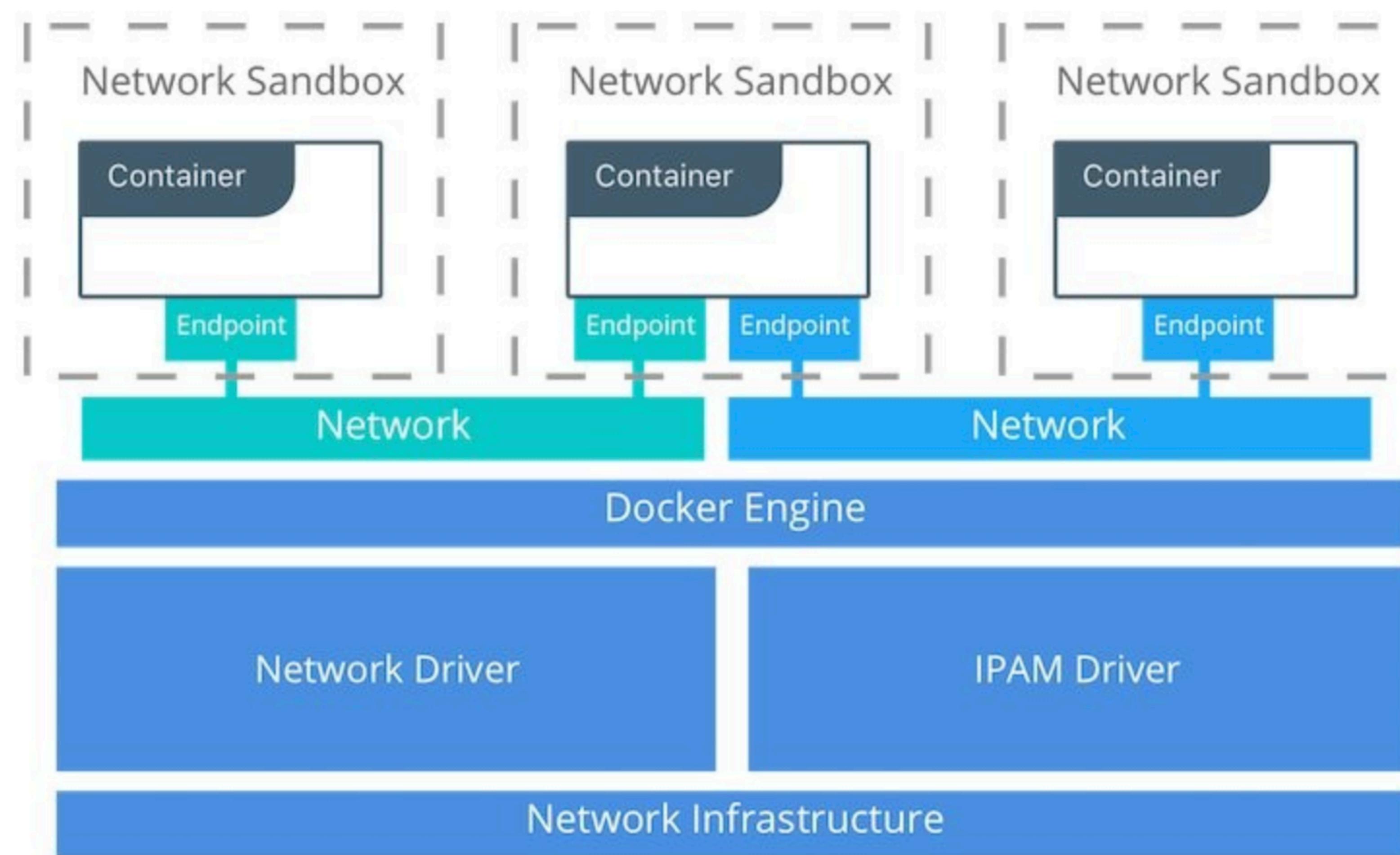


podman

# Containers vs. VMs

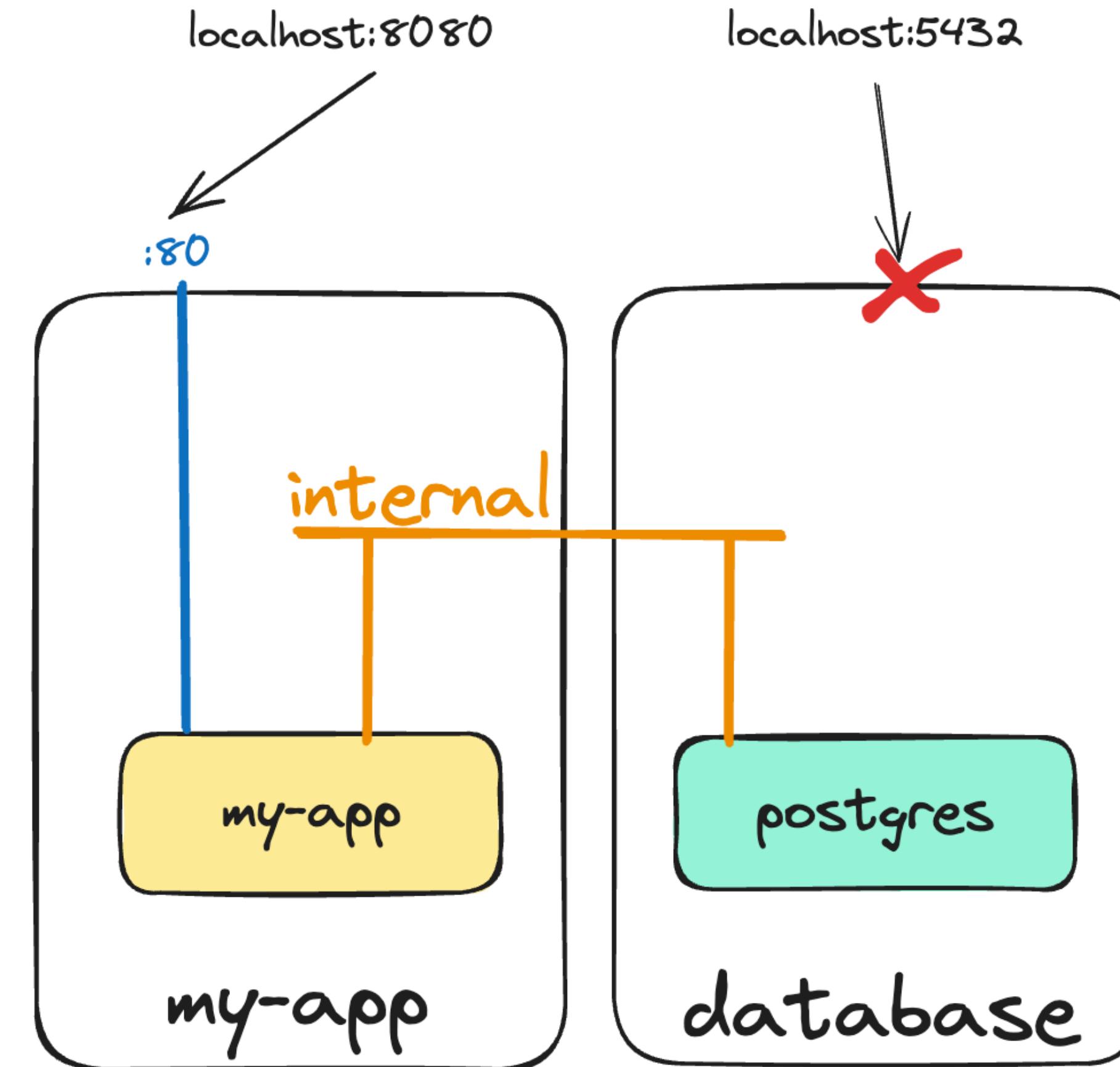


# Networking

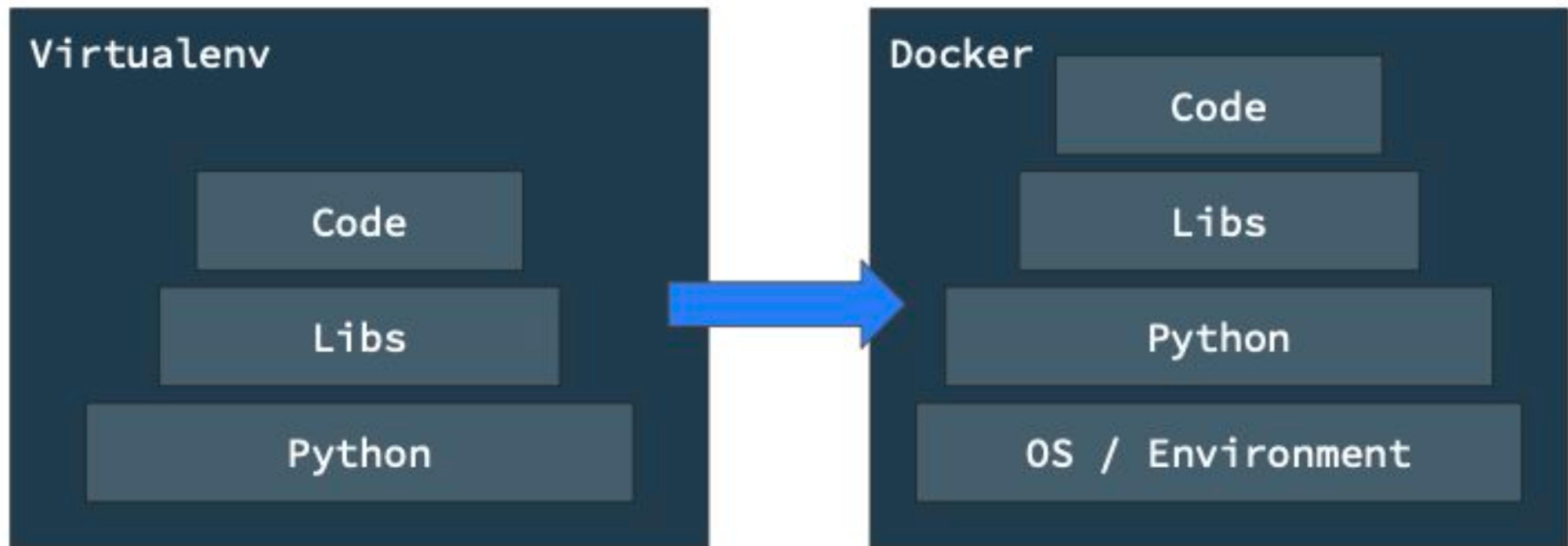


# Networking

- Isolated networks
- Can be mapped to host's ports
- Various drivers
- EXPOSE vs. PORT

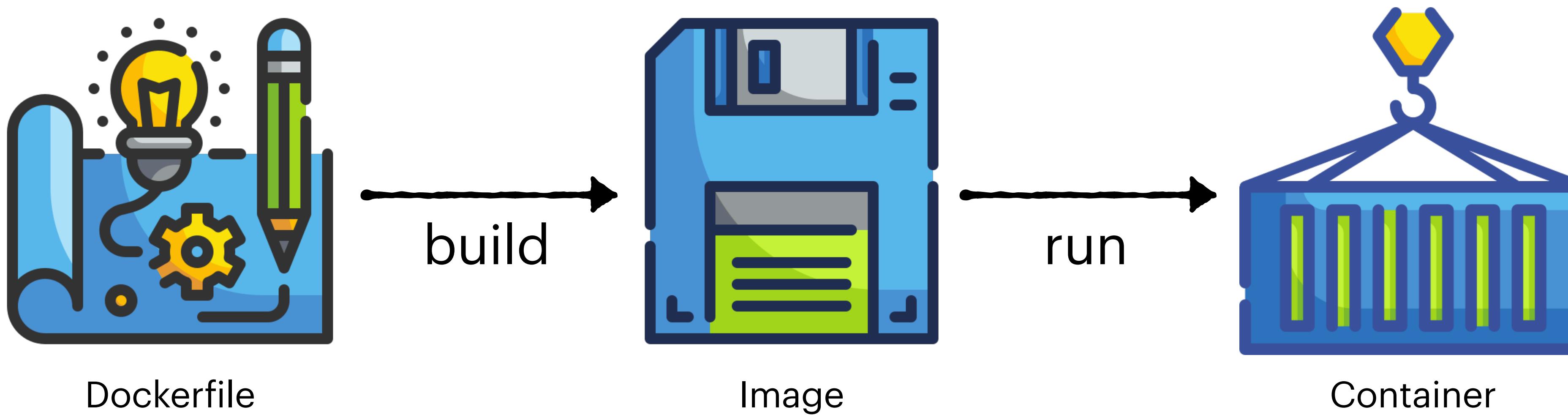


# Parallel to Python's Virtual Env



# Docker

# Dockerfile, Image and Container



# Dockerfile, Image and Container



Dockerfile



```
FROM ubuntu:20.04
```

```
RUN apt-get update && apt-get install neofetch -y
```

```
CMD ["neofetch"]
```

# Dockerfile, Image and Container



Dockerfile



```
FROM ubuntu:20.04
```

```
RUN apt-get update && apt-get install neofetch -y
```

```
CMD ["neofetch"]
```



```
docker build -t myimage .  
docker run myimage
```

# Docker Hands-On

# Docker

## Hello World

```
docker run -ti debian /bin/bash
```

- Attach container to terminal
- Image/Blueprint
- Command to be executed



```
curl -fsSL https://get.docker.com/ | sh
```