Docker
&
Linux Containers

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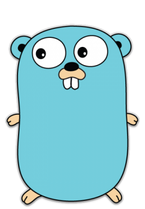
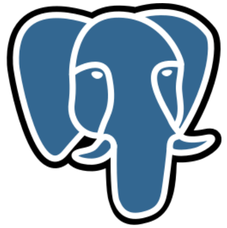
PATOS

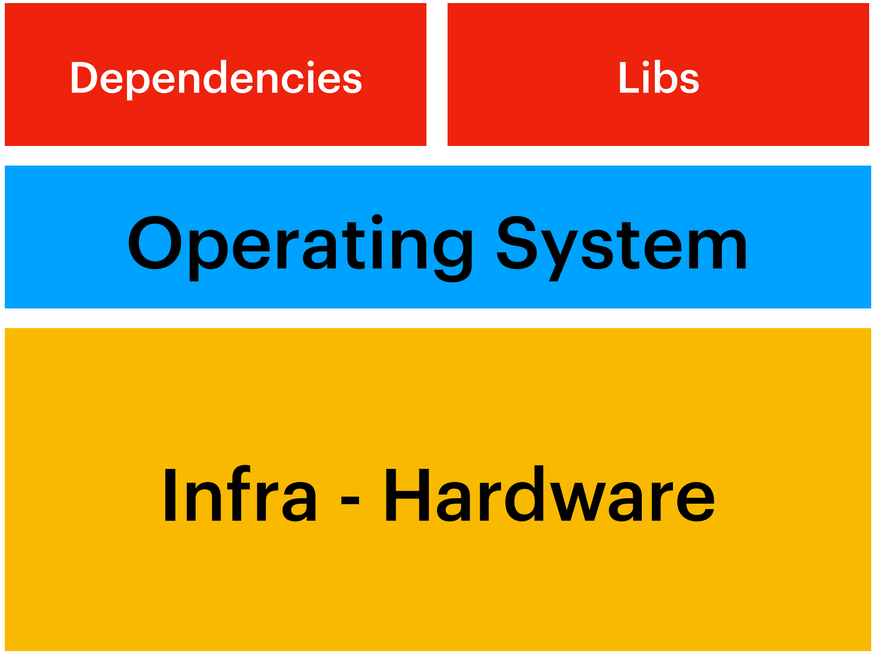
Pretty Awesome To Open Source

https://patos.dev

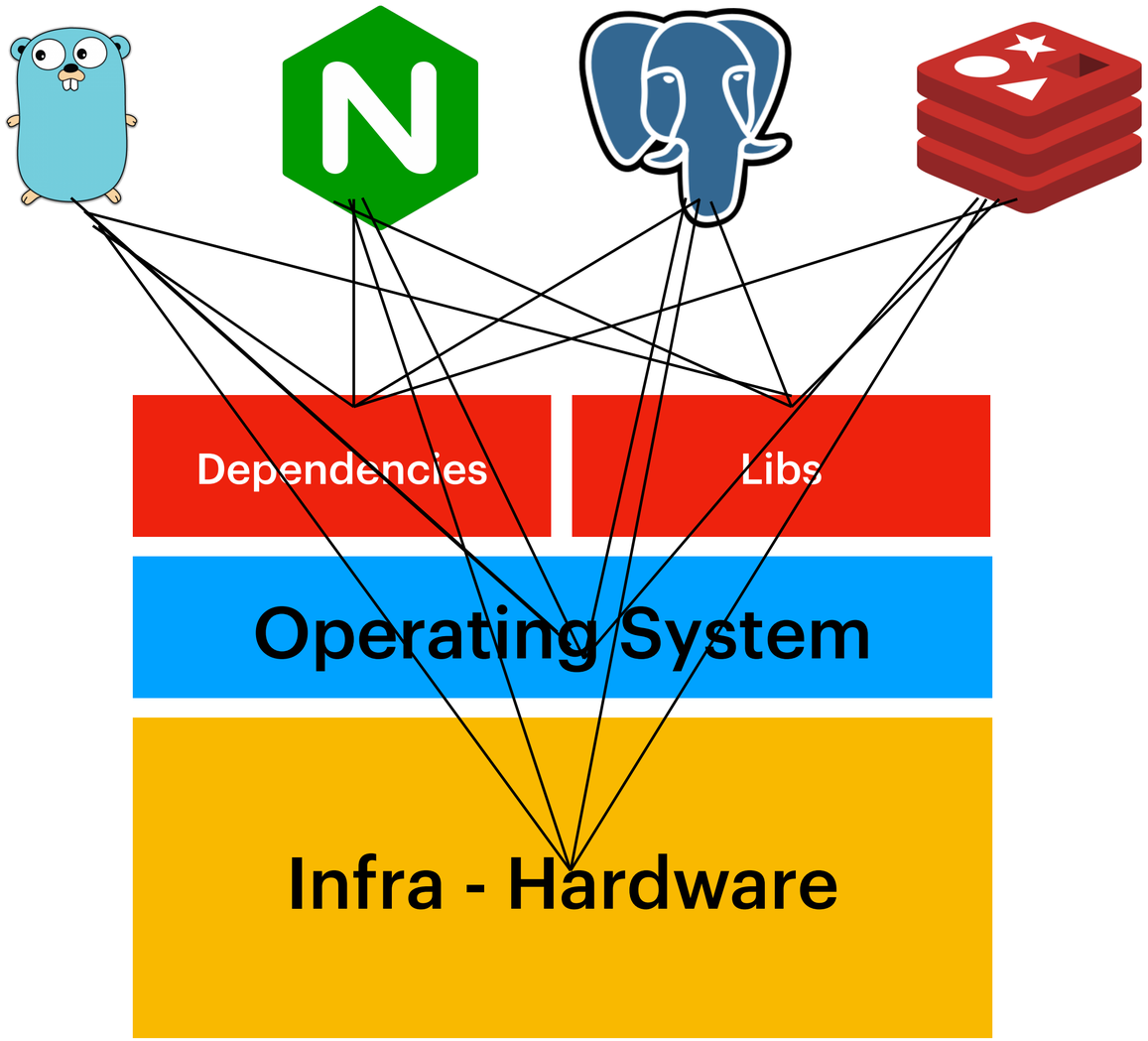
Why Containers?



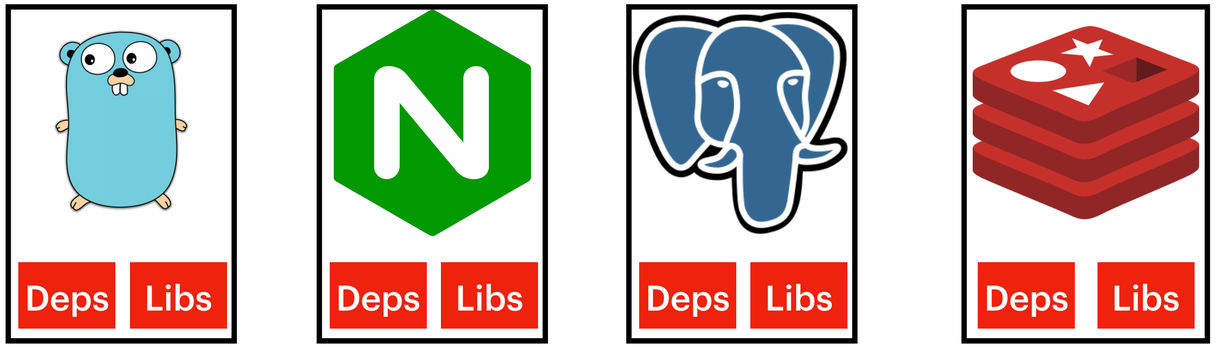


Why Containers?



Why Containers?

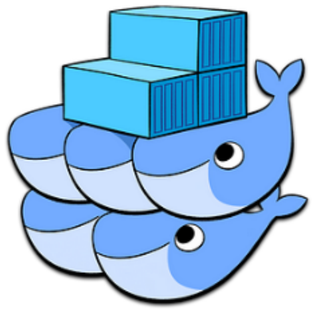


Operating System

Infra - Hardware

Containers

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

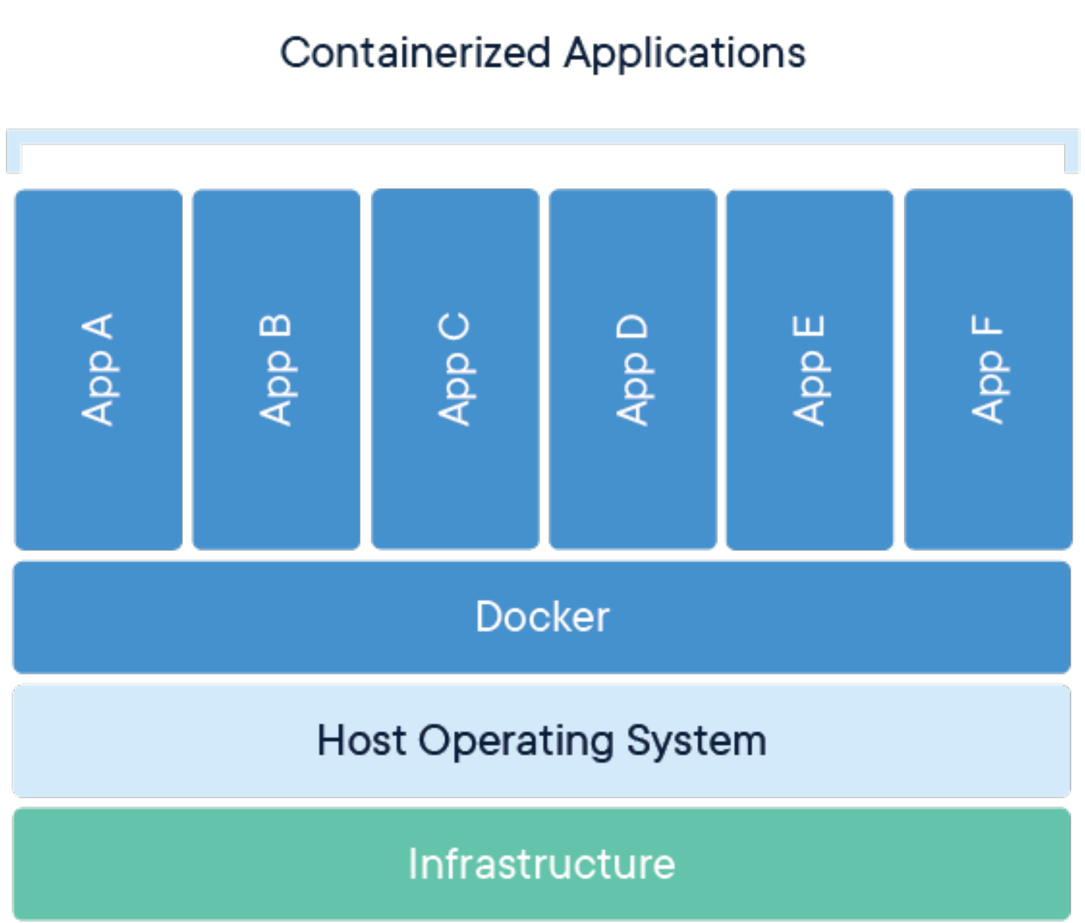


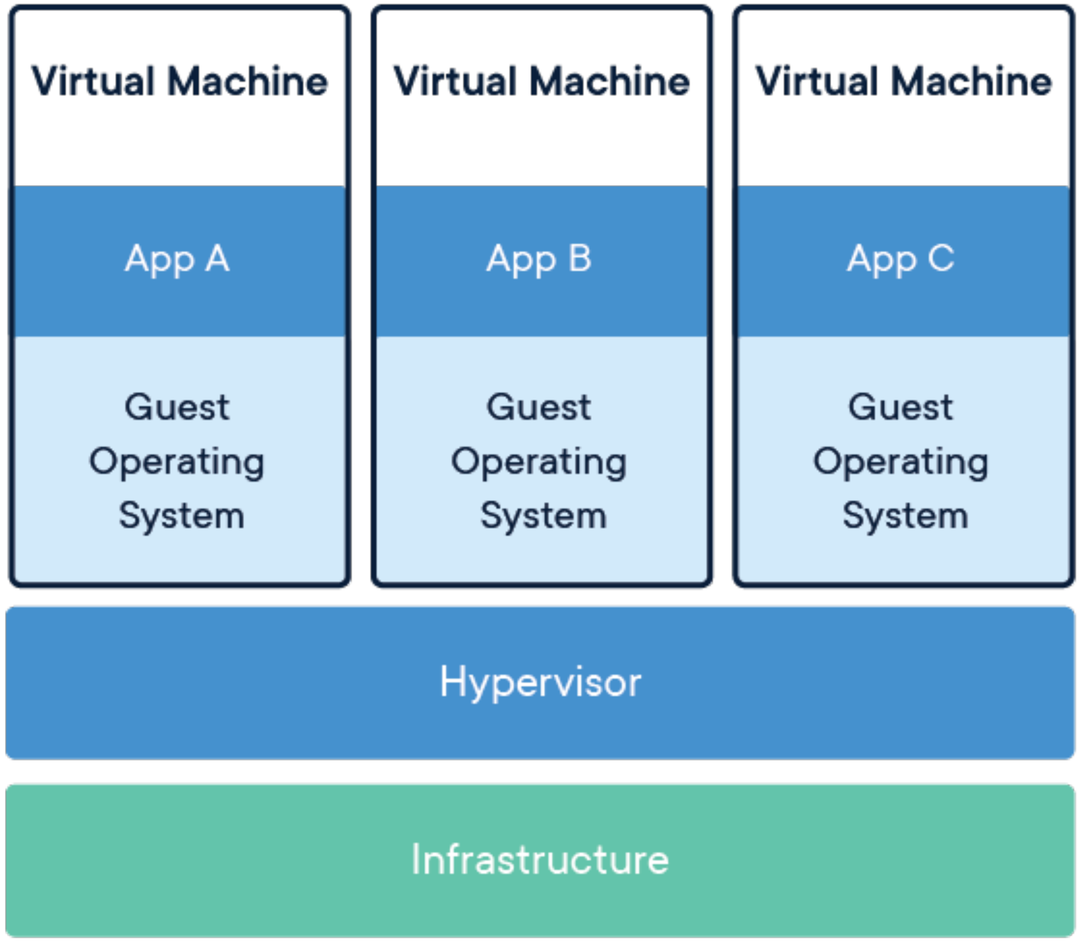
docker swarm

podman

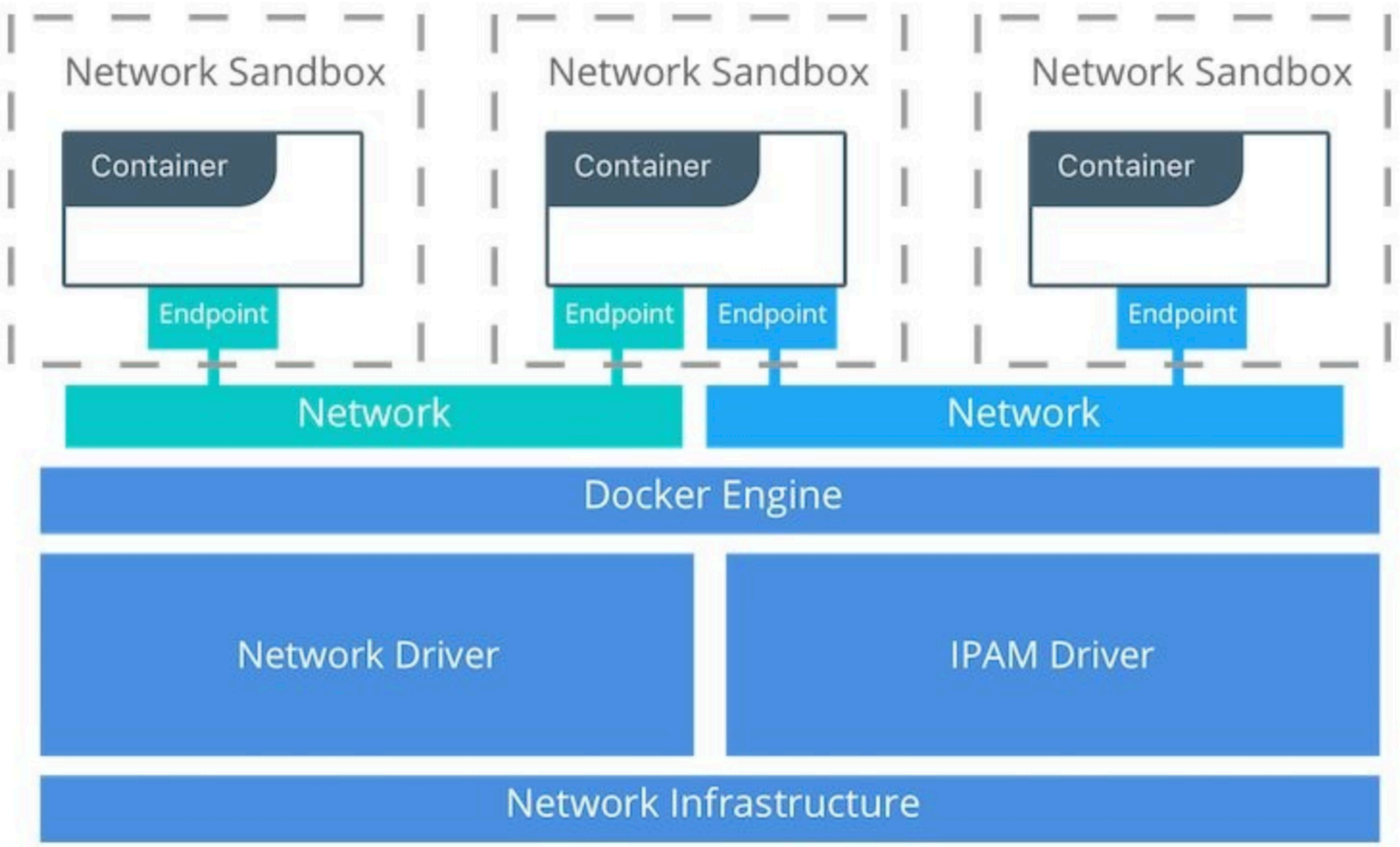
kubernetes

Containers vs. VMs



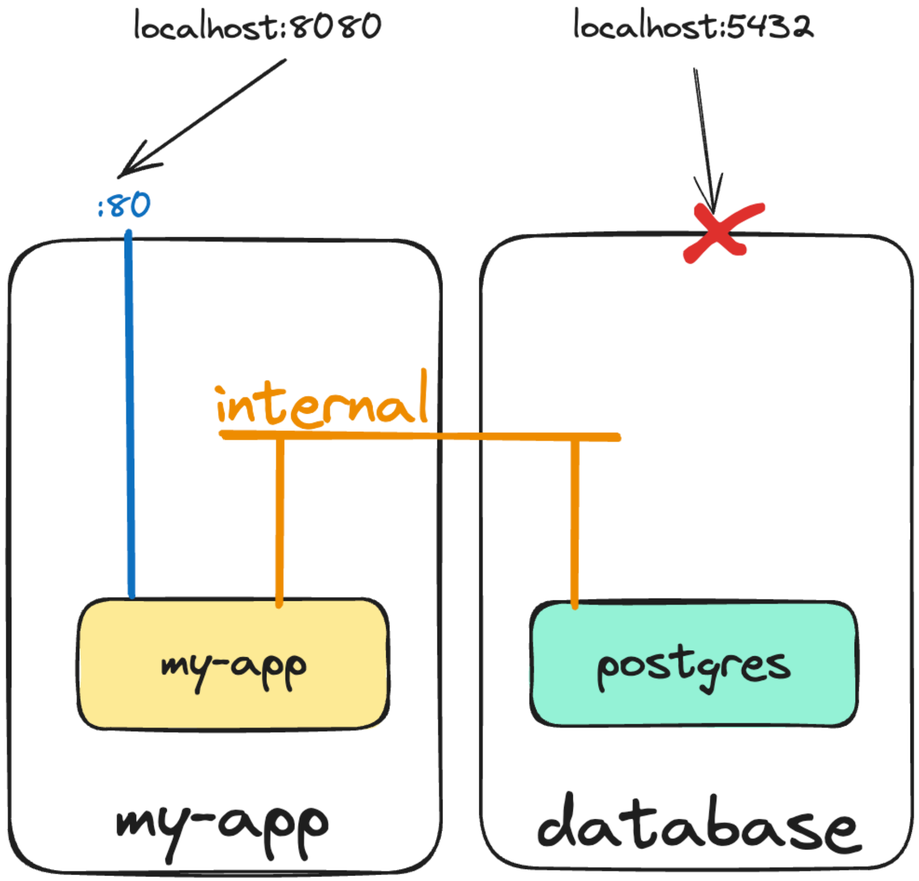


Networking

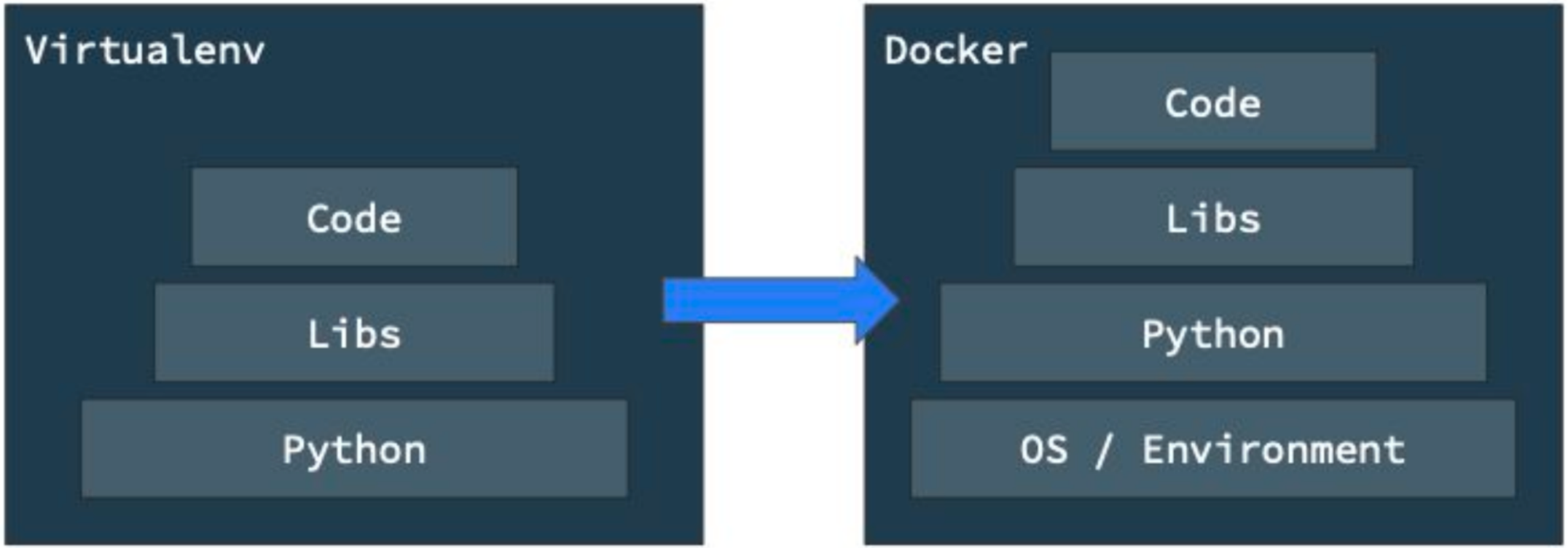

Network Sandbox
Container
Endpoint
Network Sandbox
Container
Endpoint
Endpoint
Network Sandbox
Container
Endpoint
Network
Network
Docker Engine
Network Driver
IPAM Driver
Network Infrastructure

Networking

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

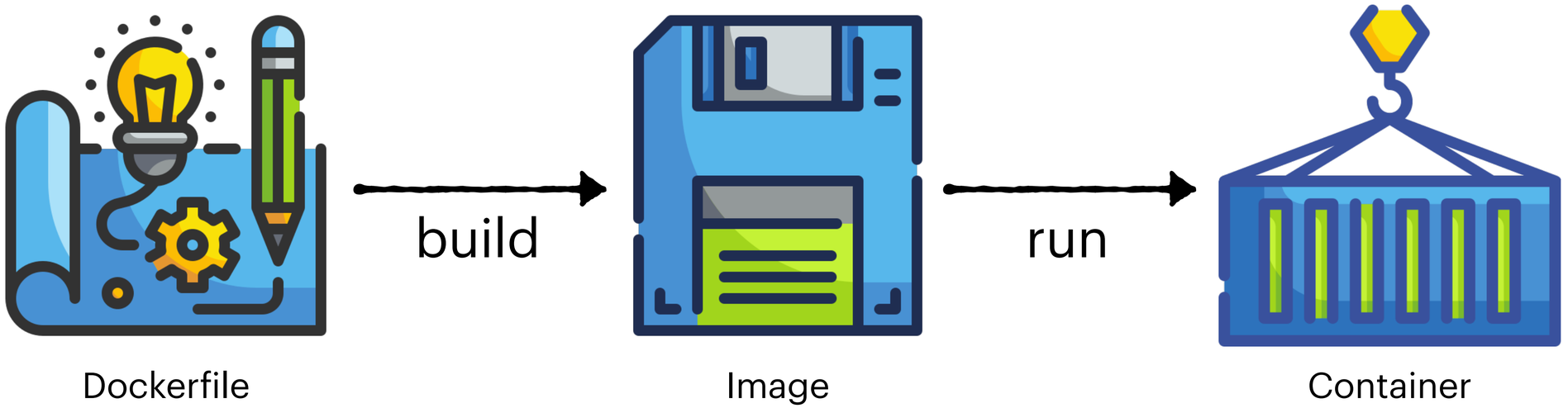


Parallel to Python's Virtual Env



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

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

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
```