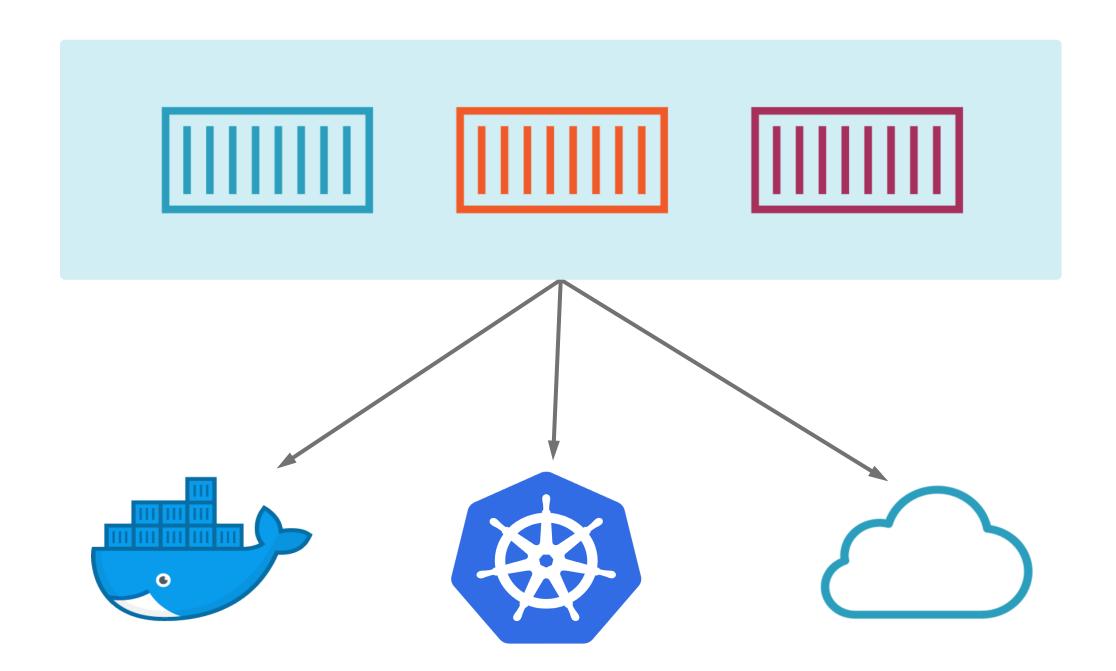
# Deploying Containerized Applications

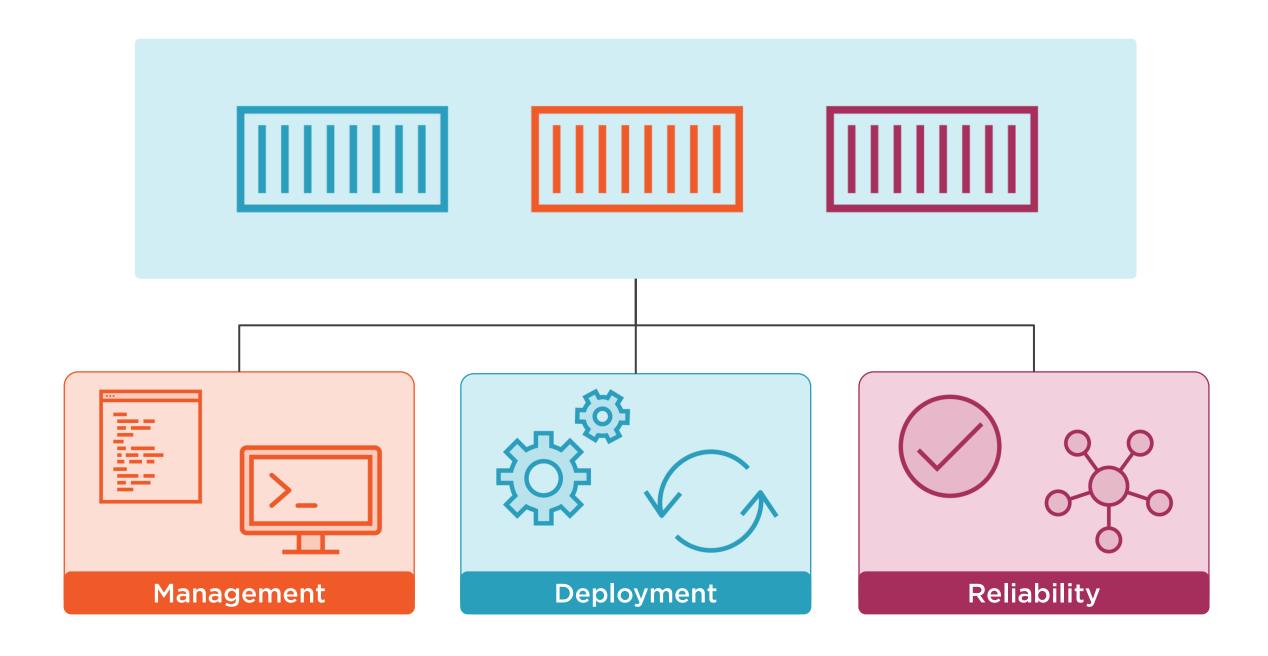
#### DEPLOYING CONTAINERS WITH DOCKER COMPOSE

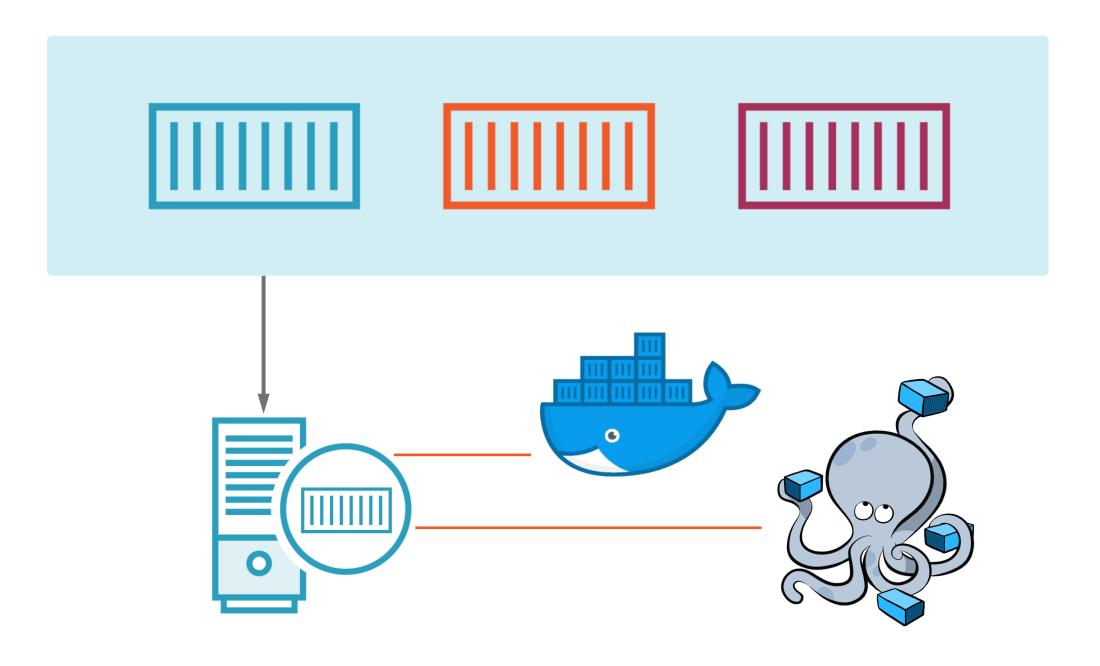


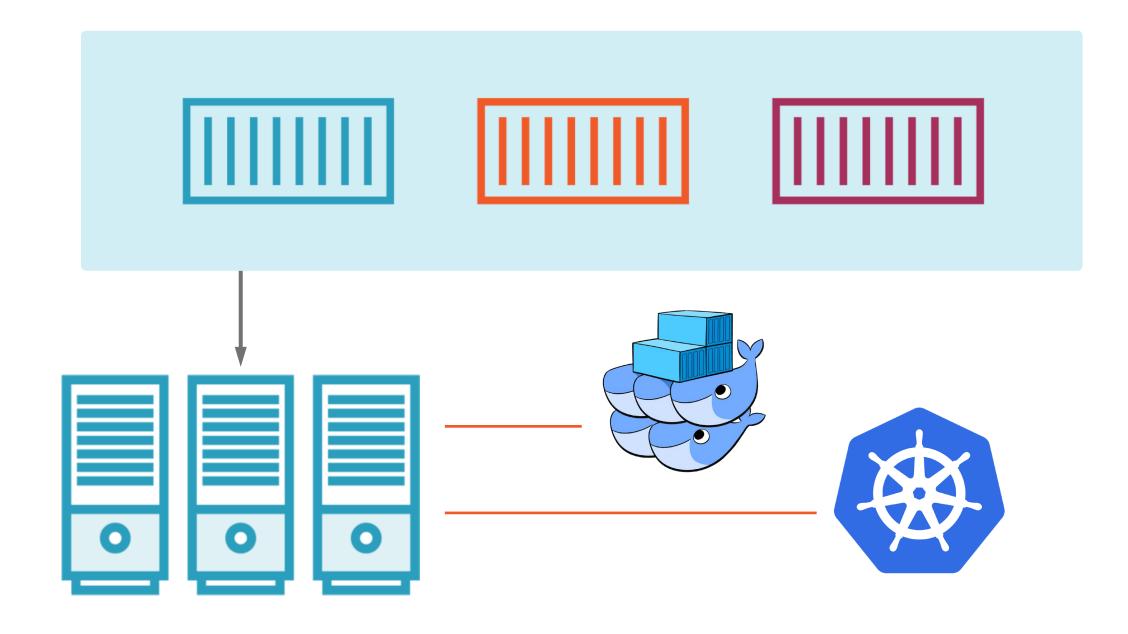
Elton Stoneman CONSULTANT & TRAINER

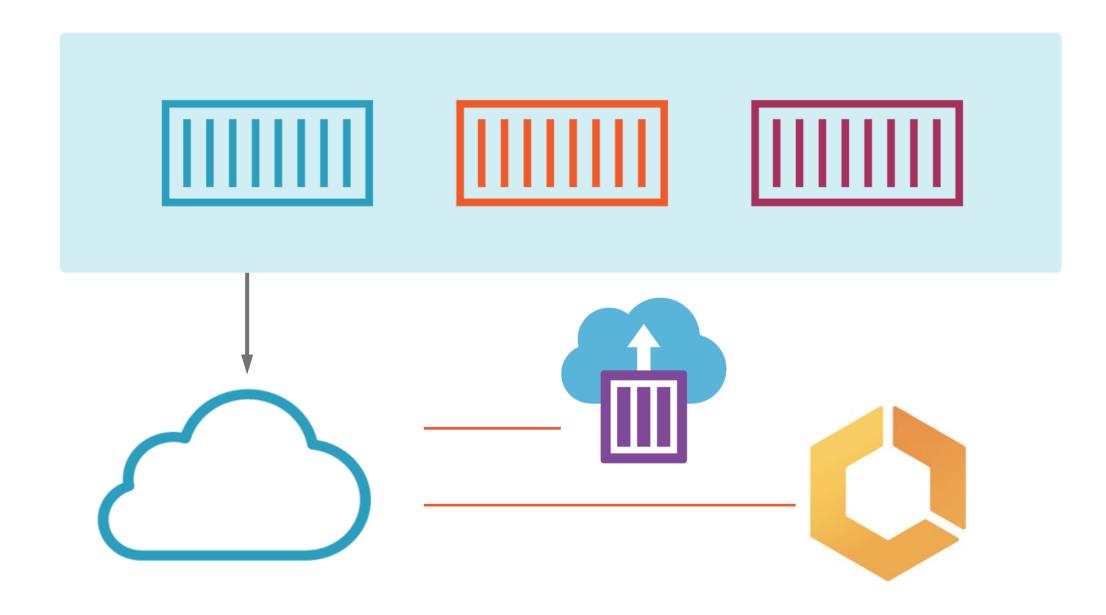
@EltonStoneman | blog.sixeyed.com

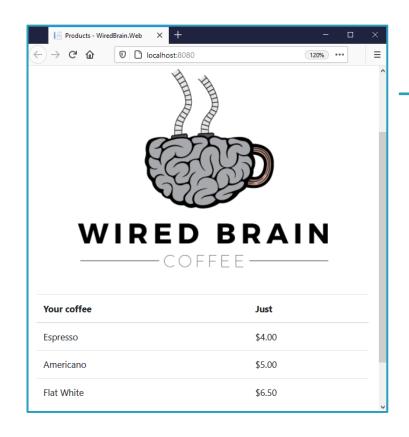


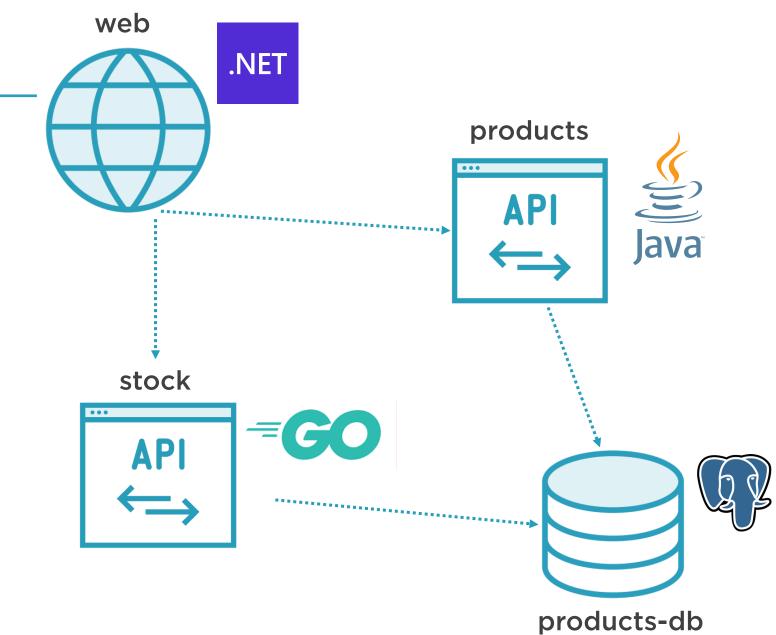










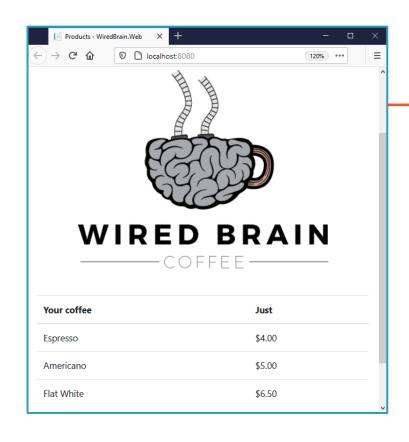


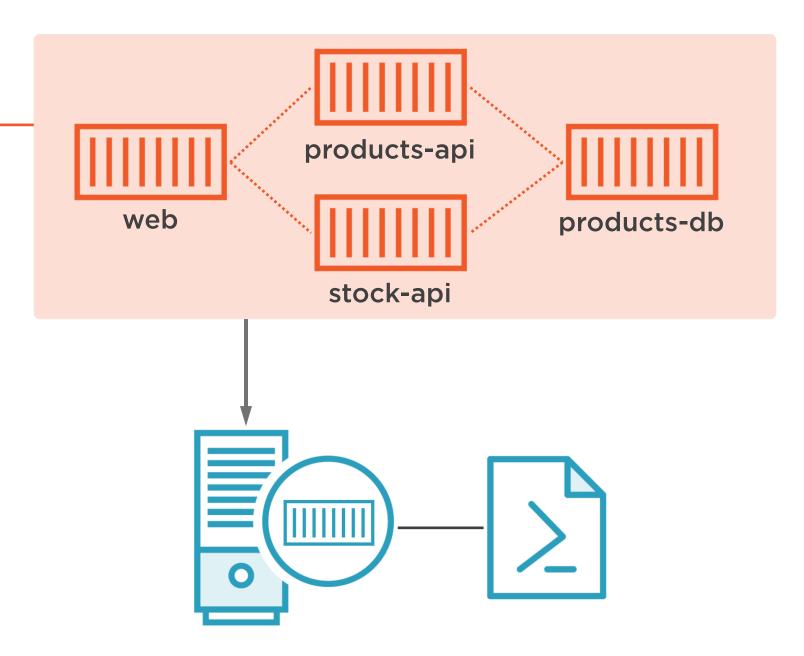
## Demo



#### Running containers with scripts

- Scripting the Docker CLI
- Managing app configuration
- Ensuring reliability





```
docker network create wired-brain
docker run -d --network wired-brain `
   --name products-api -p 8081:80 `
   psdockerrun/products-api
```

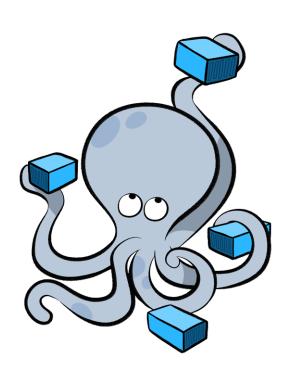
Scripting Container Deployment Brittle configuration; not repeatable

```
docker run -d --network wired-brain --name web-test `
-p 8080:80 -e Environment='TEST-2'
-v "$(pwd)/config/web/config:/app/config"
--restart=always --memory=250M `
psdockerrun/web
```

Configuration and Reliability

Scripts hard to read & maintain

# Docker Compose



#### Compose specification

- Generic app modelling language
- YAML app definition
- Deployment-agnostic

#### docker-compose CLI

- Management tool
- Deploys to a Docker server

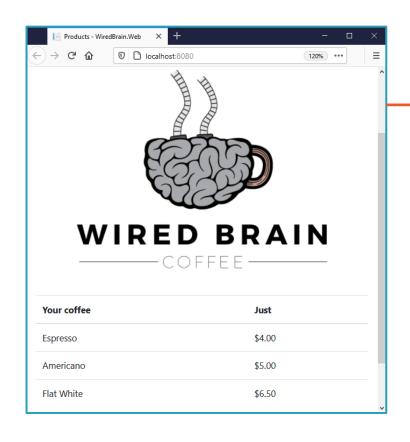
```
services:
  products-db:
    image: psdockerrun/products-db
    ports:
      - "5432:5432"
    environment:
      - POSTGRES_PASSWORD=wired
    networks:
      - wb-net
networks:
 wb-net:
```

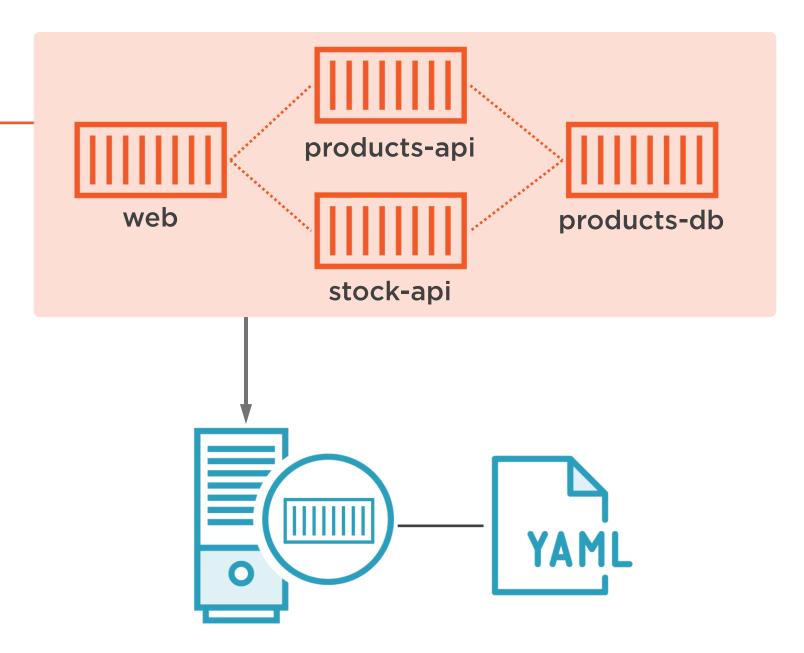
### Demo



#### Running apps with Docker Compose

- Specifying resources in YAML
- Deploying with the Compose CLI
- Modelling config and reliability

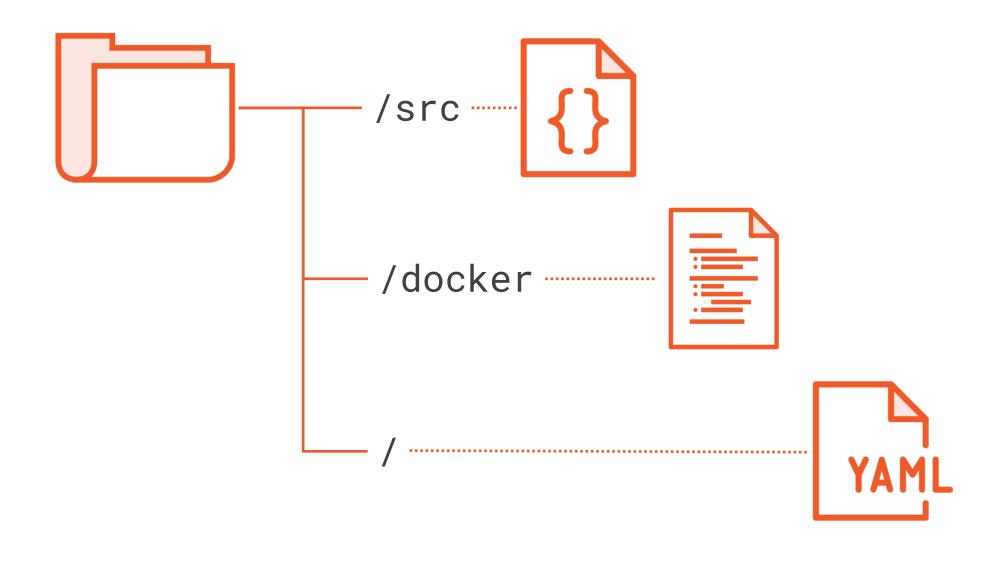




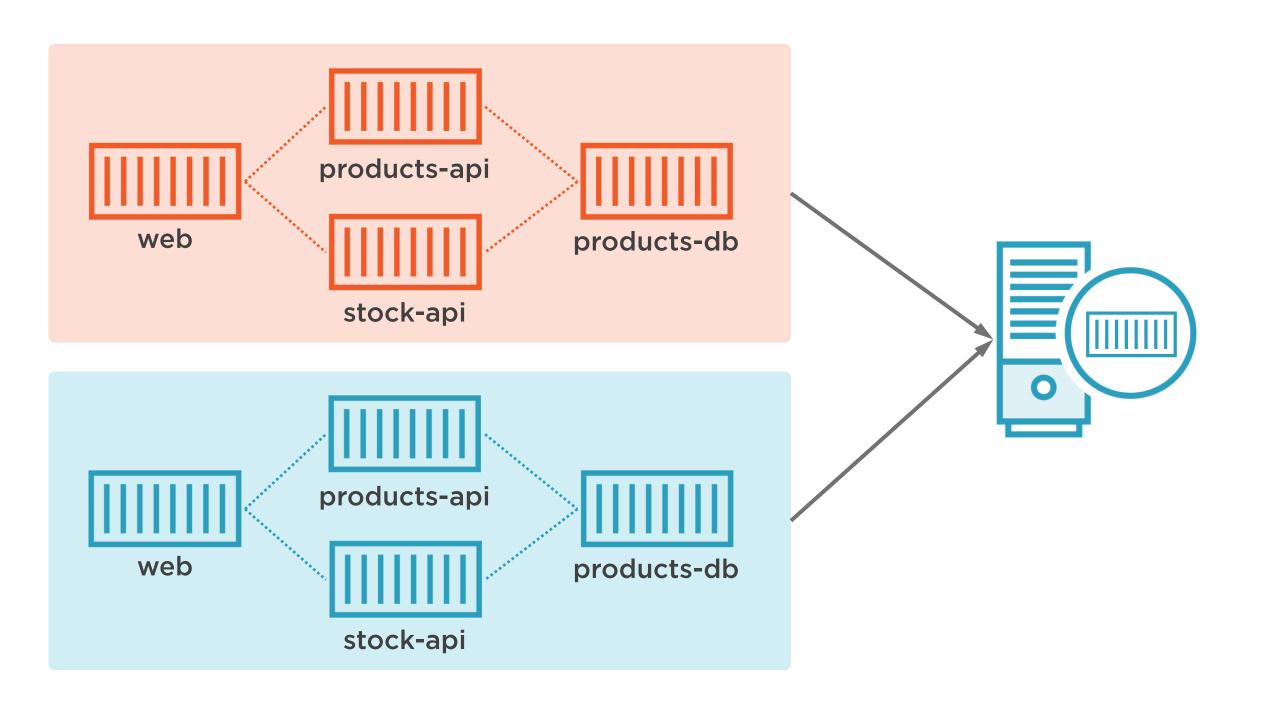
docker-compose up -d

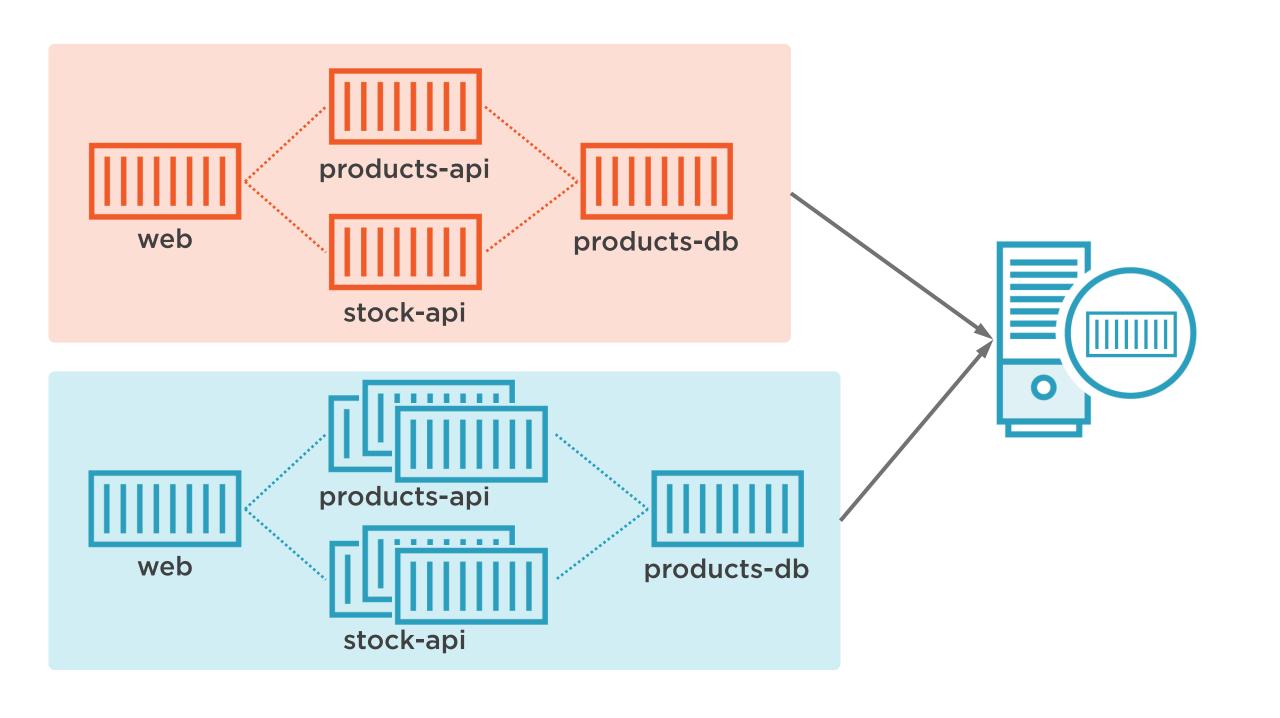
Desired State Deployment

Repeatable - declarative vs. imperative



> git clone; docker-compose up -d



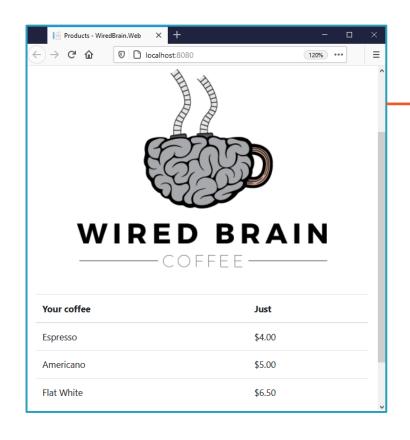


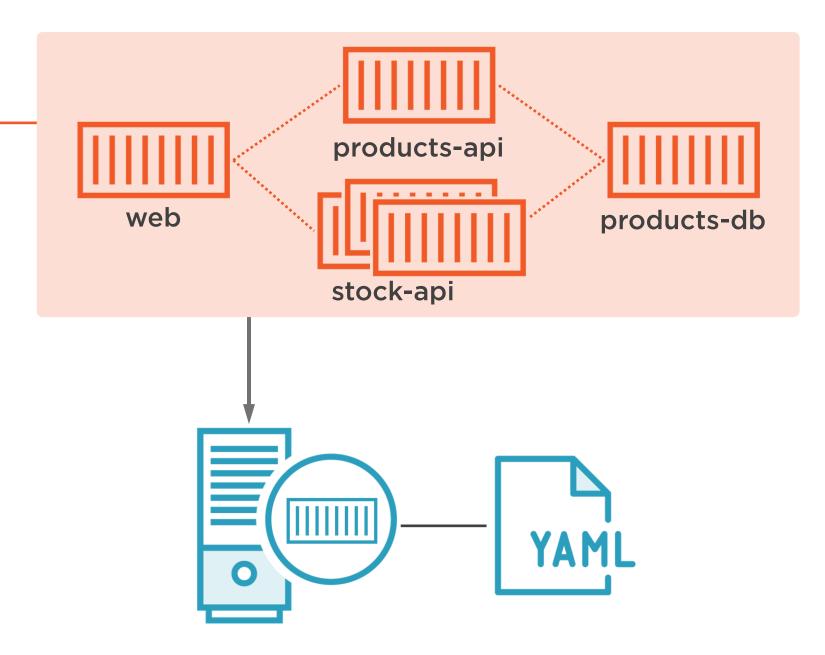
### Demo



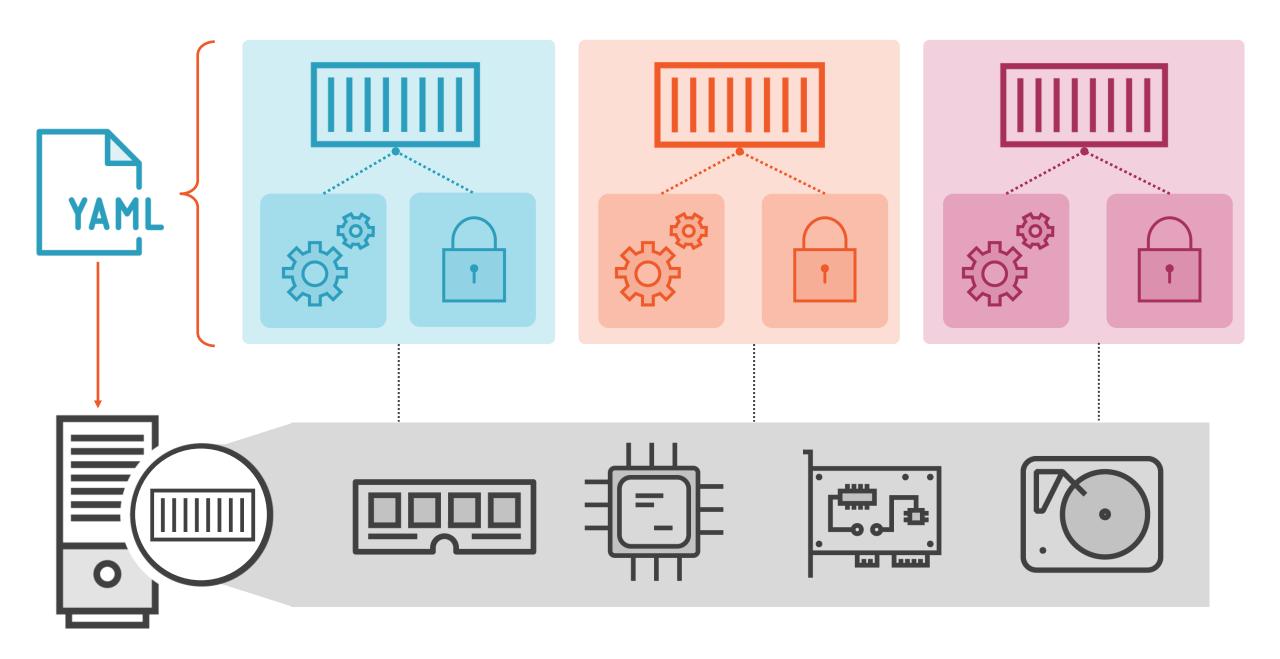
#### Modelling scale with Docker Compose

- Scaling with the command line
- Specifying scale in the model
- Understanding Compose limitations





```
stock-api-test:
  image: psdockerrun/stock-api
  ports:
    - "8080" # publishes to a random port on the host
  environment:
    - POSTGRES CONNECTION STRING=host=products-db-test...
  restart: always
  mem_limit: 125M
  scale: 3 # don't use a `version` attribute to use `scale`
  networks:
    - wb-net
  depends_on:
    - products-db-test
```



# Summary



#### Choosing a container platform

- Management modelling & ops
- Deployment settings & upgrades
- Reliability resources & scale

#### **Docker Compose**

- YAML specification
- Declarative container setup
- Desired-state deployment

#### **Docker Compose CLI**

- Client-side tool
- Manages a single Docker server

Up Next:

Exploring Orchestration with Docker Swarm