

Docker for Web Developers

Why Use Docker Containers as a Developer?



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Course Overview



Why Use Docker Containers as a Developer?

Setting Up Your Dev Environment

Hook Your Source Code Into a Container

Building Custom Images with Dockerfile

Communicating Between Containers

Managing Containers with Docker Compose

Moving to Kubernetes



Pre-requisites



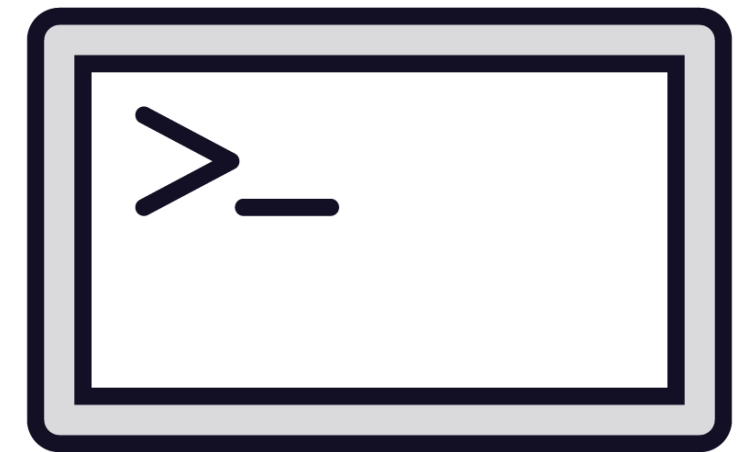
Cloud

Basic experience



Containers

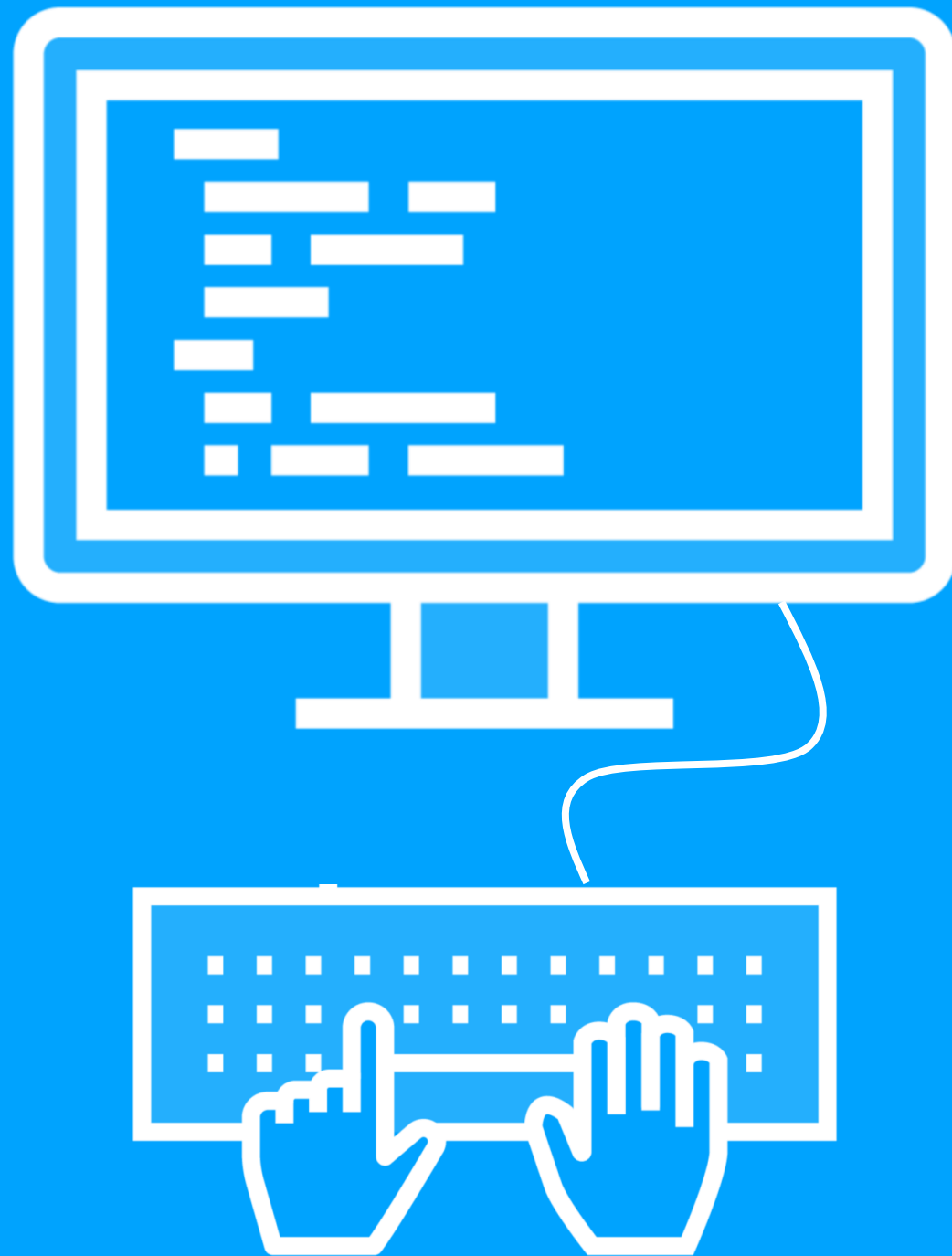
Basic experience



Command Line

Hands-on experience





GitHub Repo

[https://github.com/DanWahlin/
Docker-for-Web-Developers](https://github.com/DanWahlin/Docker-for-Web-Developers)





@danwahlin

- ▶ Building and Running Your First Docker App
- ▶ Docker for Web Developers
- ▶ Containerizing Angular Applications with Docker
- ▶ Kubernetes for Developers: Core Concepts
- ▶ Kubernetes for Developers: Deploying Your Code
- ▶ Kubernetes for Developers: Moving from Docker Compose to Kubernetes
- ▶ Certified Kubernetes Application Developer: Application Deployment
- ▶ Certified Kubernetes Application Developer: Application Observability and Maintenance



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Overview



What is Docker?

Docker Benefits

Docker Containers in Action

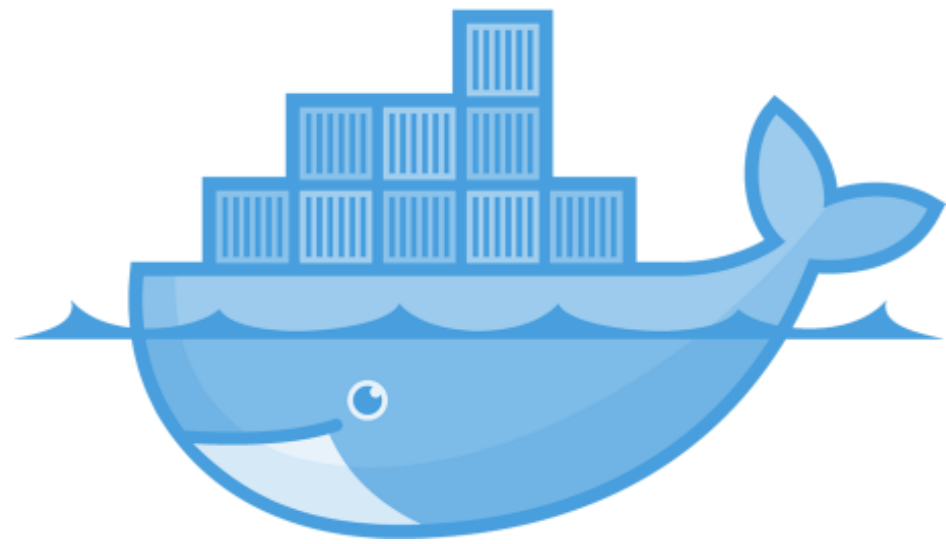




What is Docker?



What is Docker?



Lightweight, open, secure platform

Simplify building, shipping, running apps

Shipping container system for code

Runs natively on Linux or Windows Server

Runs on Windows, Mac, or Linux development machines

Relies on *images* and *containers*





Image

A read-only template composed of layered filesystems used to share common files and create Docker container instances.



The Role of Images and Containers



Docker Image



Docker Container



Container

An isolated and secured shipping container created from an image that can be run, started, stopped, moved and deleted.



Where Does Docker Run?

Docker Client



Linux



Windows

Docker Engine
(daemon)

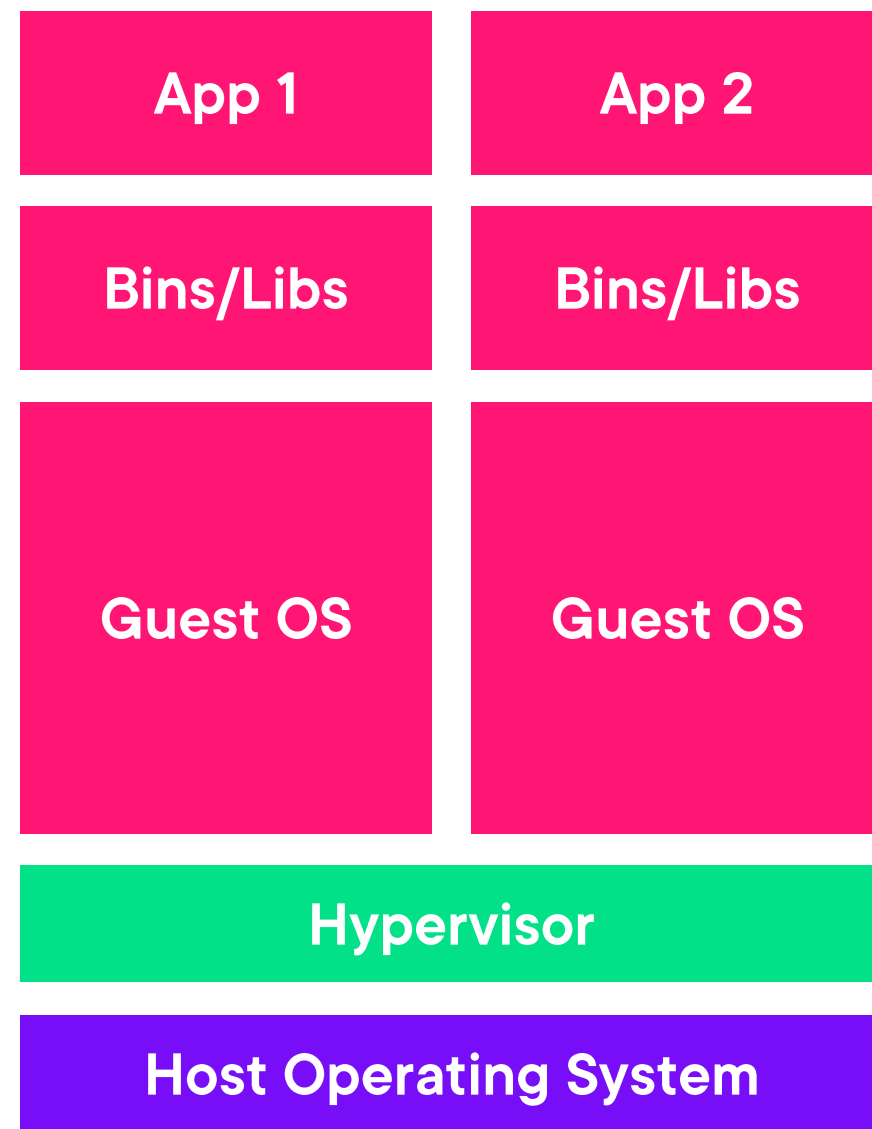
Docker Engine
(daemon)

Linux Container Support
(LXC)

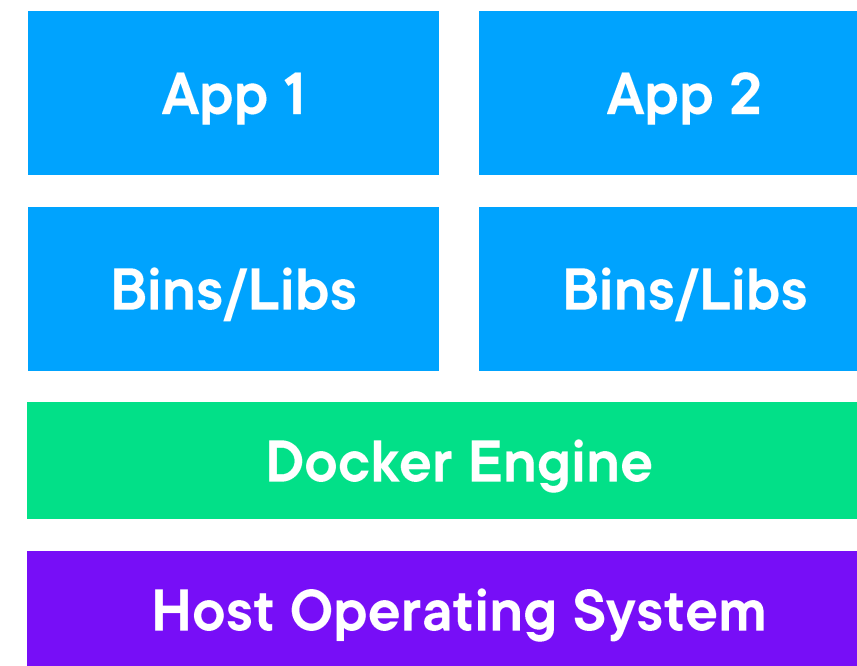
Windows Server
Hyper-V
WSL



Docker Containers Versus Virtual Machines



Virtual Machines



Docker Containers

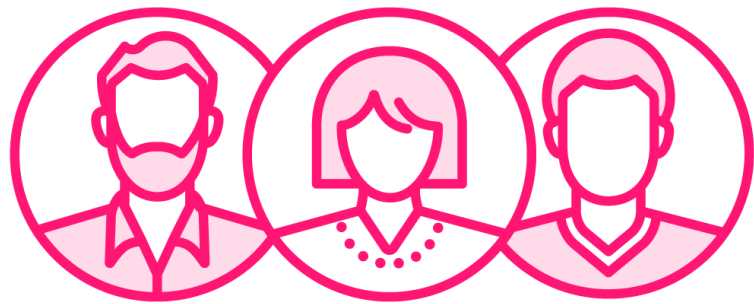




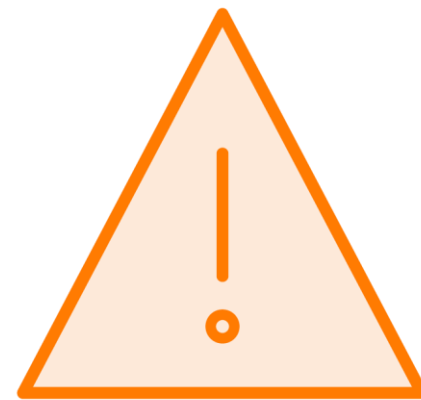
Docker Benefits



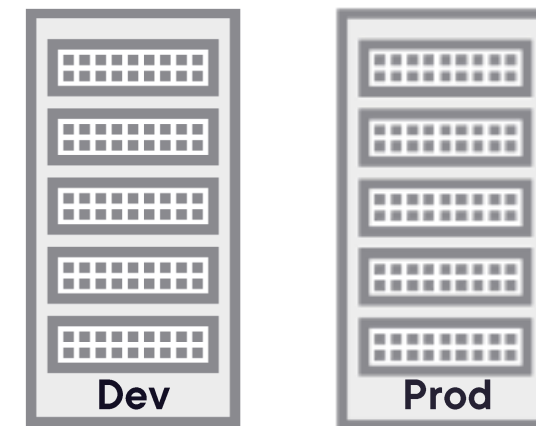
Docker Benefits



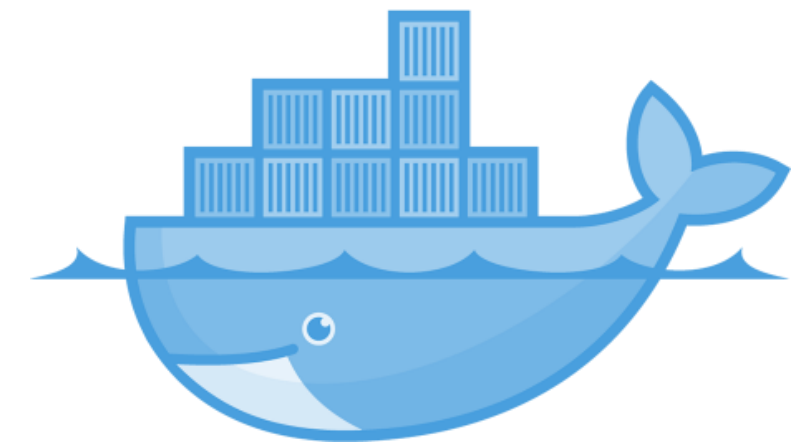
**Accelerate
Developer
Onboarding**



**Eliminate App
Conflicts**



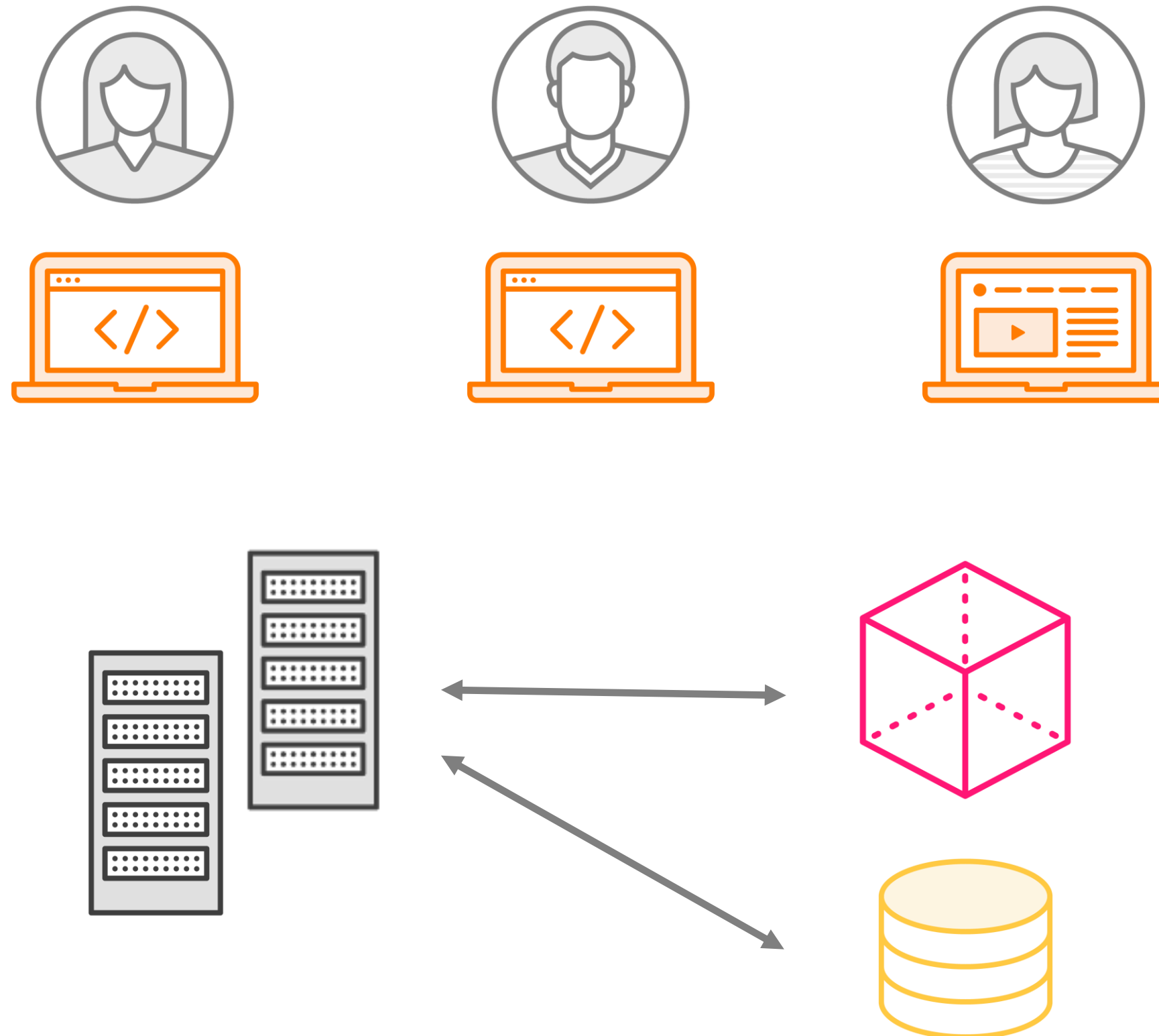
**Environment
Consistency**



**Ship Software
Faster**



Accelerate Developer Onboarding

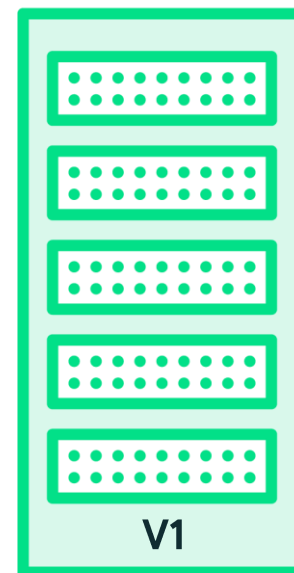


Eliminate App Conflicts

App1 App2 App3

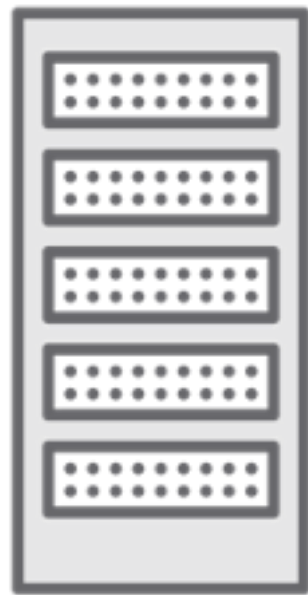


App1 App2 App3

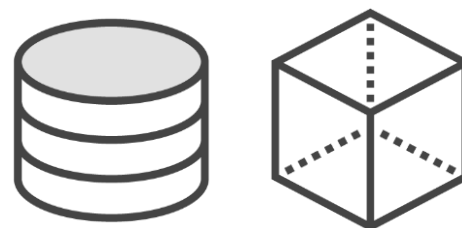
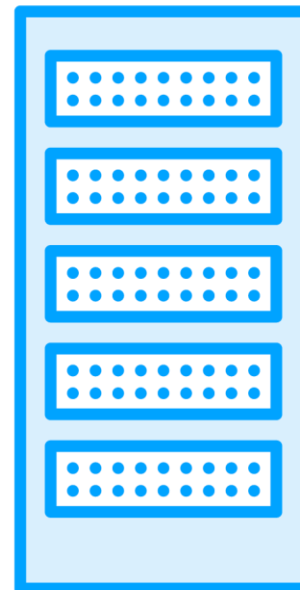


Environment Consistency

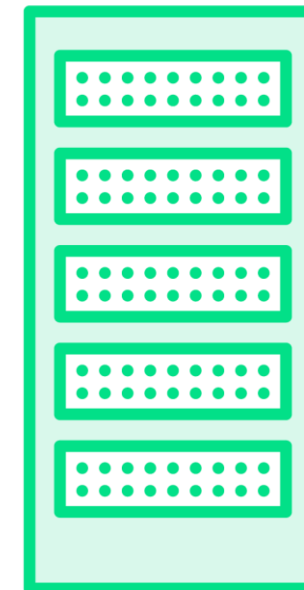
Development



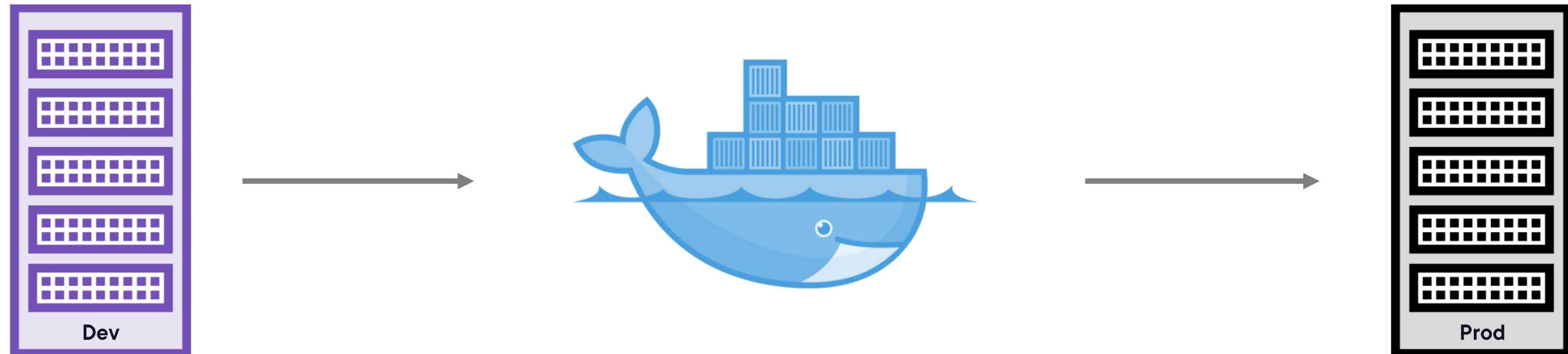
Staging



Production



Ship Software Faster





Docker Containers in Action



Summary



Docker simplifies building, shipping and running apps

Runs natively on Linux and Windows Server

Docker containers are NOT the same as using Virtual Machines

Key benefits to Web Developers:

- Accelerate developer onboarding
- Simplify working with multiple apps
- Consistency between environments
- Ship faster!



Up Next:

Setting Up Your Dev Environment

