Building and Running Your First Docker App

Setting Up Your Development Environment

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Course Overview

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Setting Up Your Development Environment

Create an Application Image

Run an Application Container

Communicate Between Multiple Containers

Orchestrate Multiple Containers with Docker Compose

Target Audience

Developers looking to learn how to run applications using Docker

Course Pre-Reqs

Basic understanding of Docker concepts

Comfortable using command-line tools

Experience building applications

Code Samples

https://github.com/DanWahlin/NodeExpressMongoDBDockerApp


Gain the freedom to run
your applications anywhere!

Module Overview

- The case for Docker
  - Review Docker concepts
  - What are key benefits of using Docker?
- Software Installation
  - Install Docker Desktop
  - Explore preferences
- Examine the Application

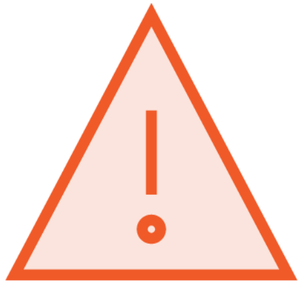
The Case for Docker

Shipping Applications the Traditional Way

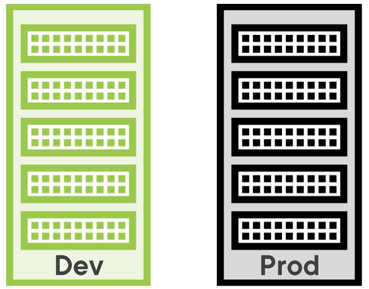
Shipping Applications with Docker

The Case for Docker

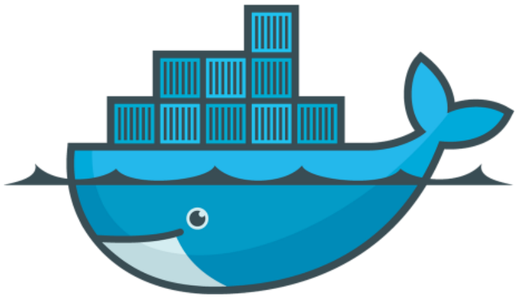
Accelerate Developer Onboarding



Eliminate App Conflicts

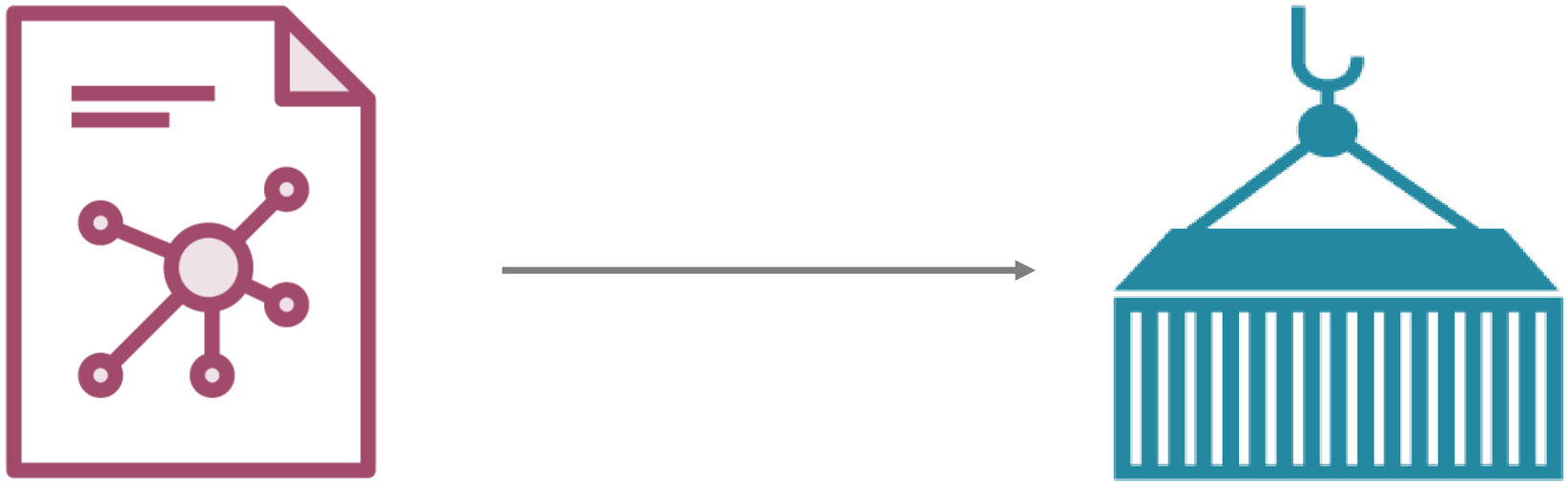


Environment Consistency



Ship Software Faster

Images and Containers

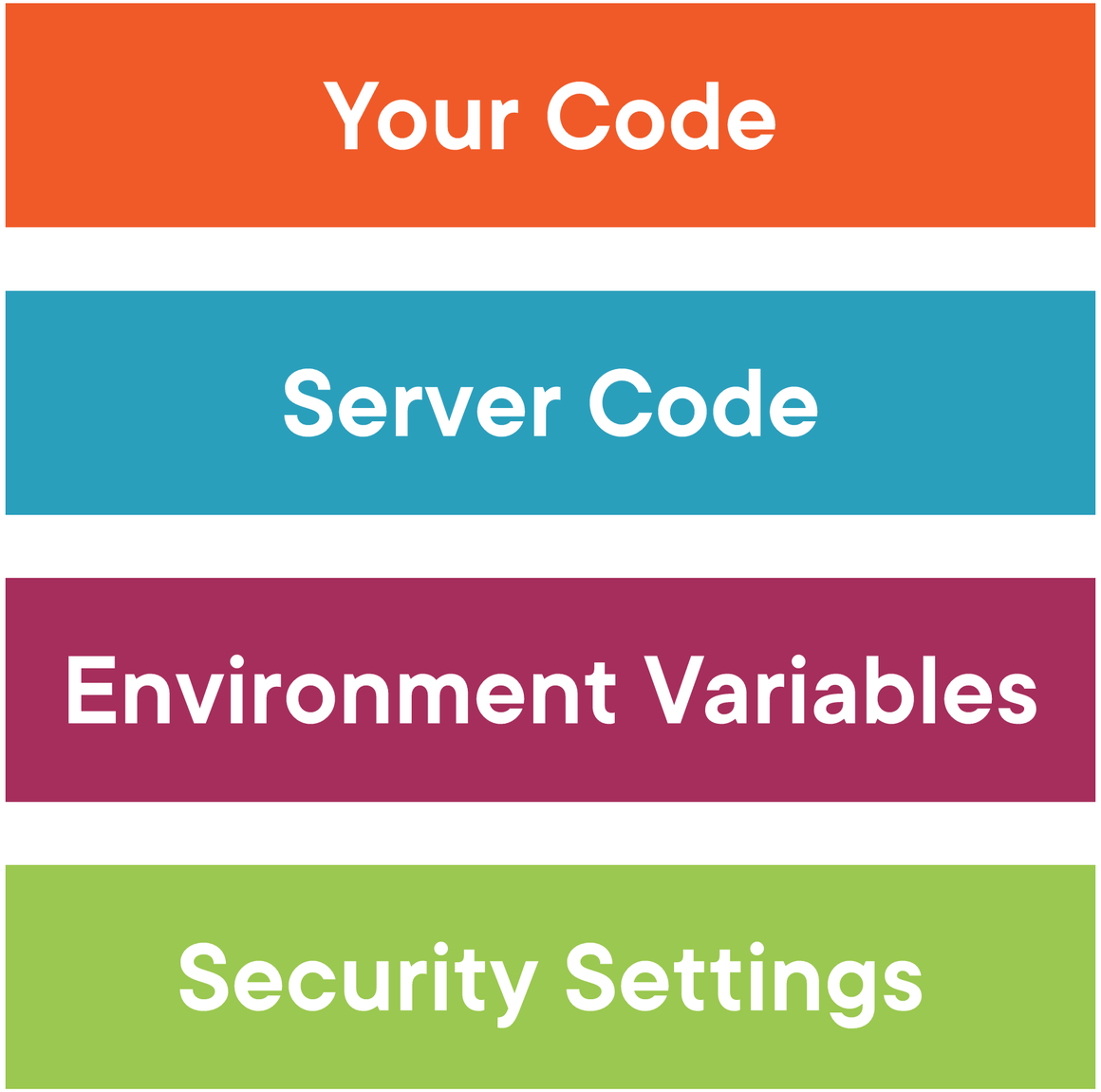


Docker Image

Define the contents that are needed to run a container

Docker Container

Runs your application


Your Code
Server Code
Environment Variables
Security Settings

Image

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

Container

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

Software Installation

Docker Desktop

Docker Desktop (Windows or Mac)

Provides image and container tools

Linux can run Docker Engine

Windows and Mac use a hypervisor

https://www.docker.com/get-started

Examine the Application

Summary

- Docker provides many benefits to the development/deployment workflow
  - Onboarding
  - Environment consistent
  - Ship software faster
- Docker Desktop can run on Windows or Mac
- Docker Engine can be used with Linux
- Docker works with many frameworks and languages