Containerizing Angular Applications with Docker

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ANGULAR AND CONTAINERS

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Course Agenda

- Prerequisite knowledge
- Angular and containers
- Creating a multi-stage Dockerfile
- Deploying the image and running the container
- Running multiple containers

nginx

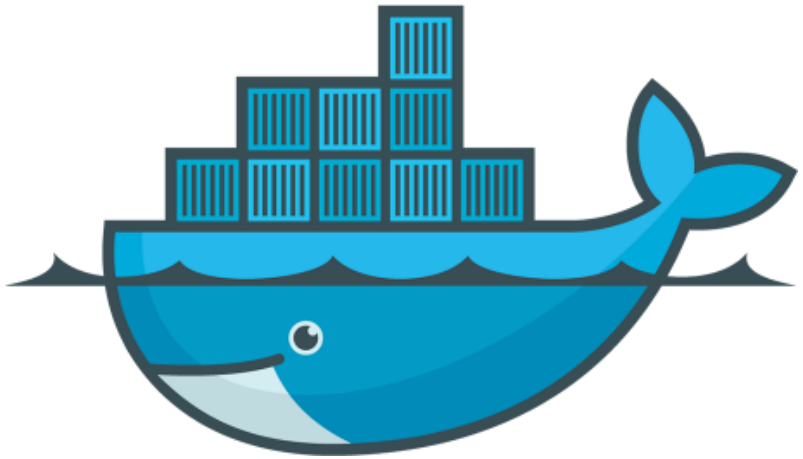
Angular

Docker Compose

Images

Dockerfile

Containers



Docker

Angular and Containers

Module Overview

Prerequisites to maximize learning

Key course concepts

Why use containers?

Running the Angular application locally

Running the Angular application in a Container

Source Code Link

https://github.com/DanWahlin/Angular-Core-Concepts

Prerequisites to Maximize Learning

Course Prerequisites

Images and Containers

Docker Commands

Angular Fundamentals

Additional Courses

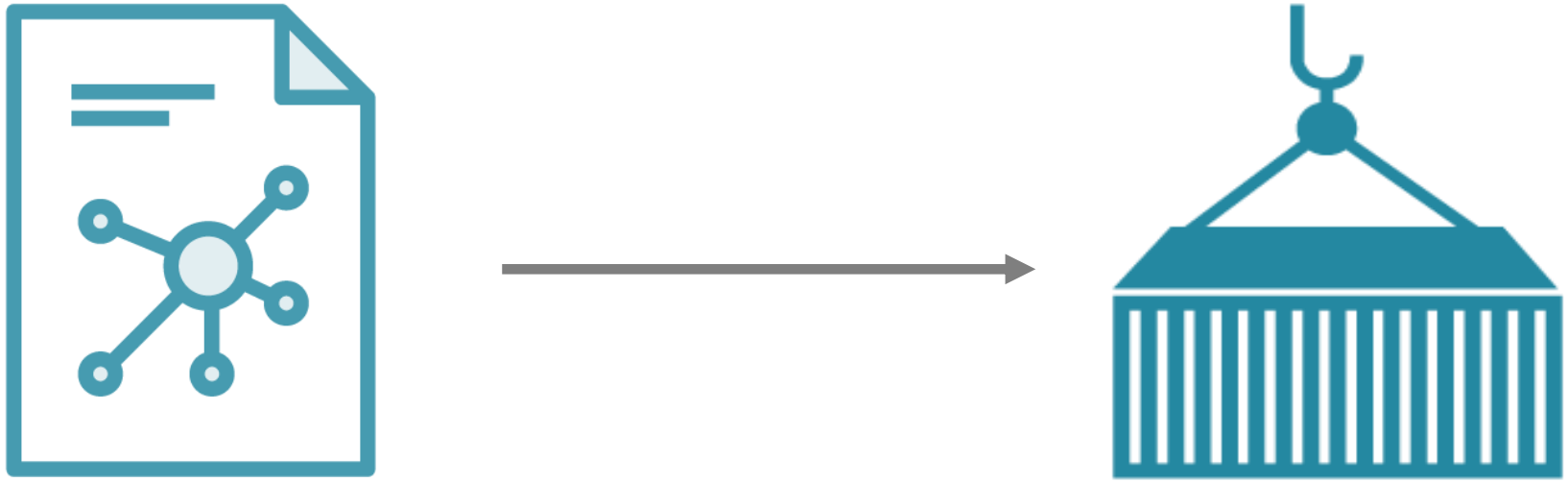
Docker for Web Developers

Integrating Angular with ASP.NET Core RESTful Services

Integrating Angular with Node.js RESTful Services

Key Course Concepts

Images and Containers



Docker Image

Example: nginx with Angular

Docker Container

Created by using an image, runs your application

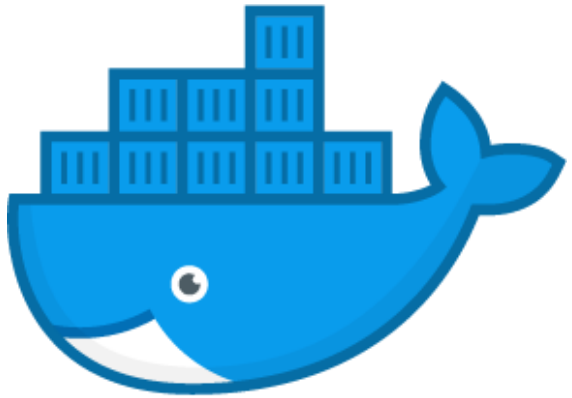
Image

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.

Key Docker Commands



docker pull <image name>

docker images

docker rmi <image ID>

docker build

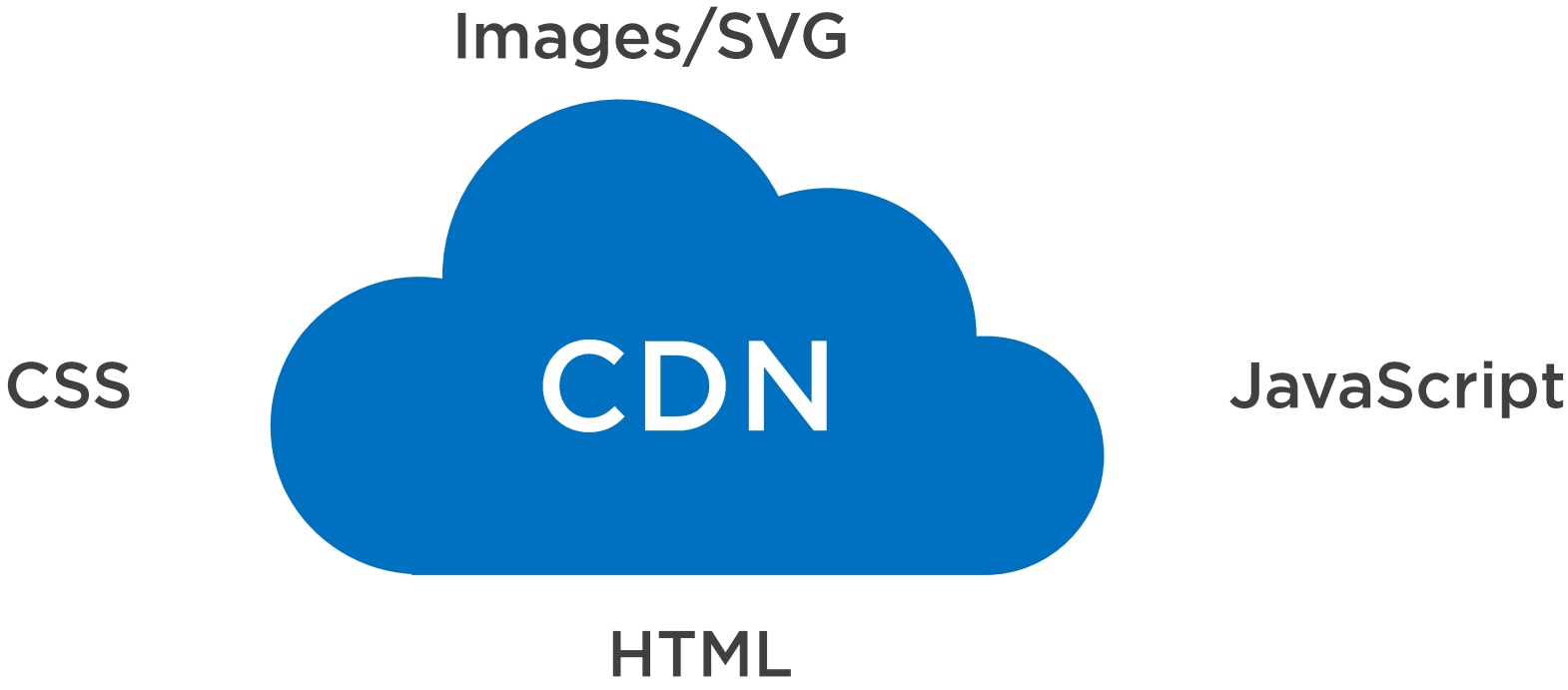
docker run <image name>

docker ps –a

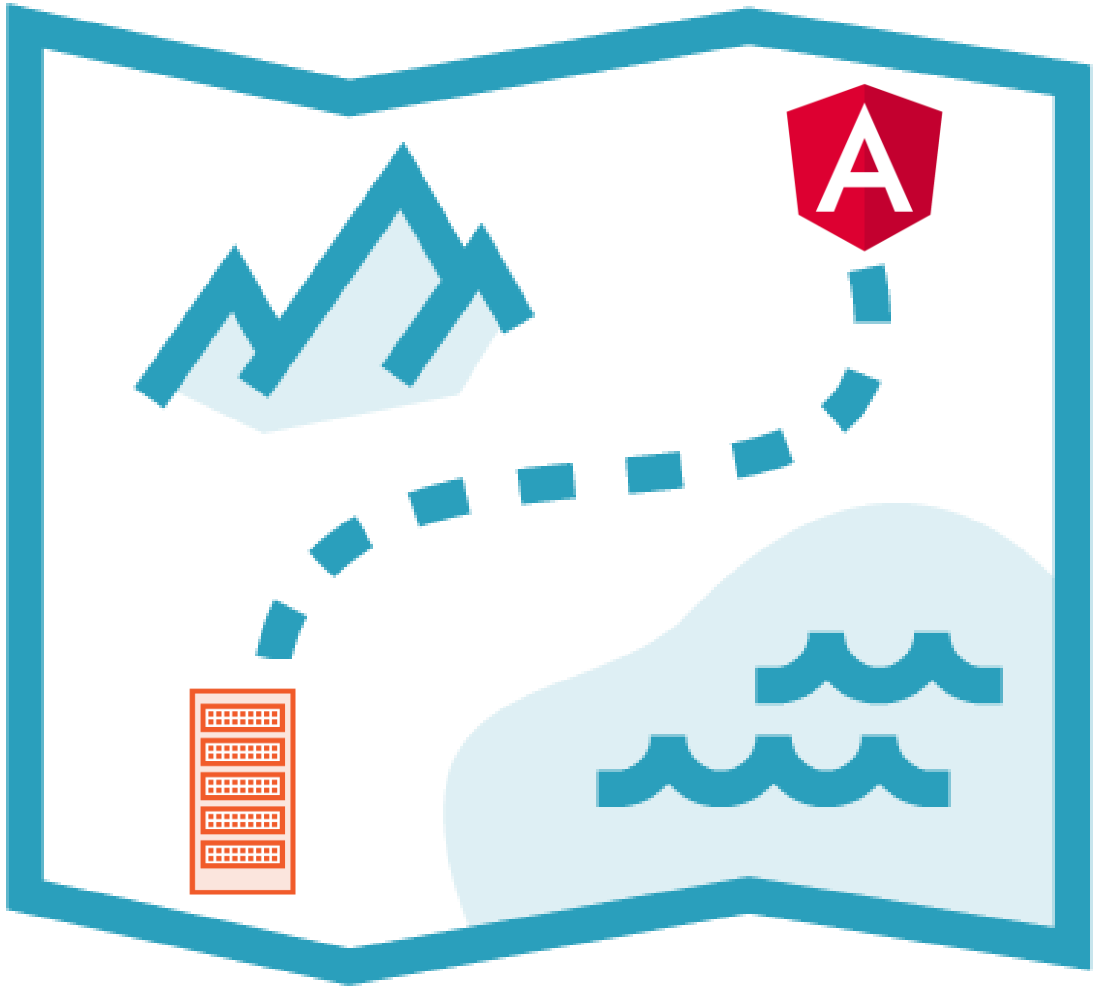
docker rm <container ID>

Why Use Containers?

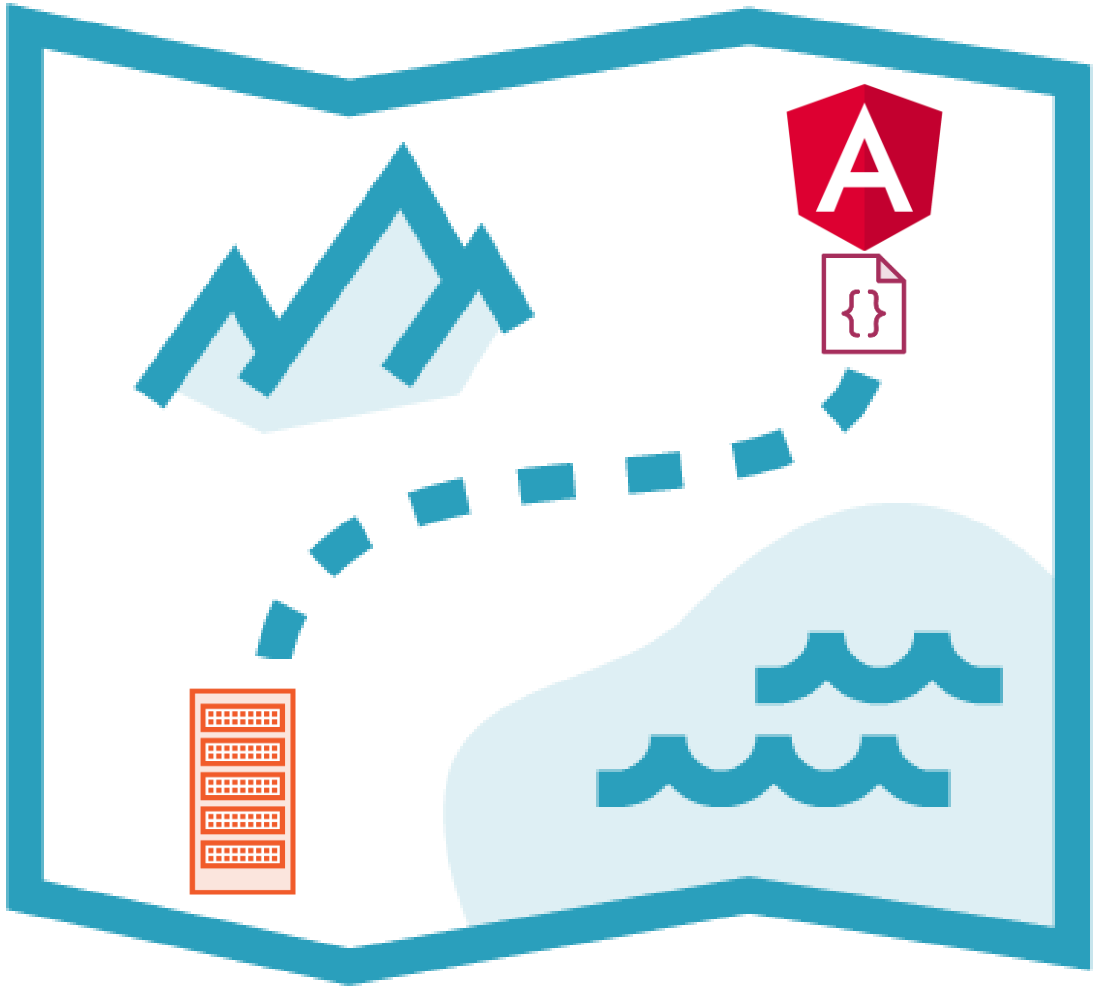
What About CDNs?



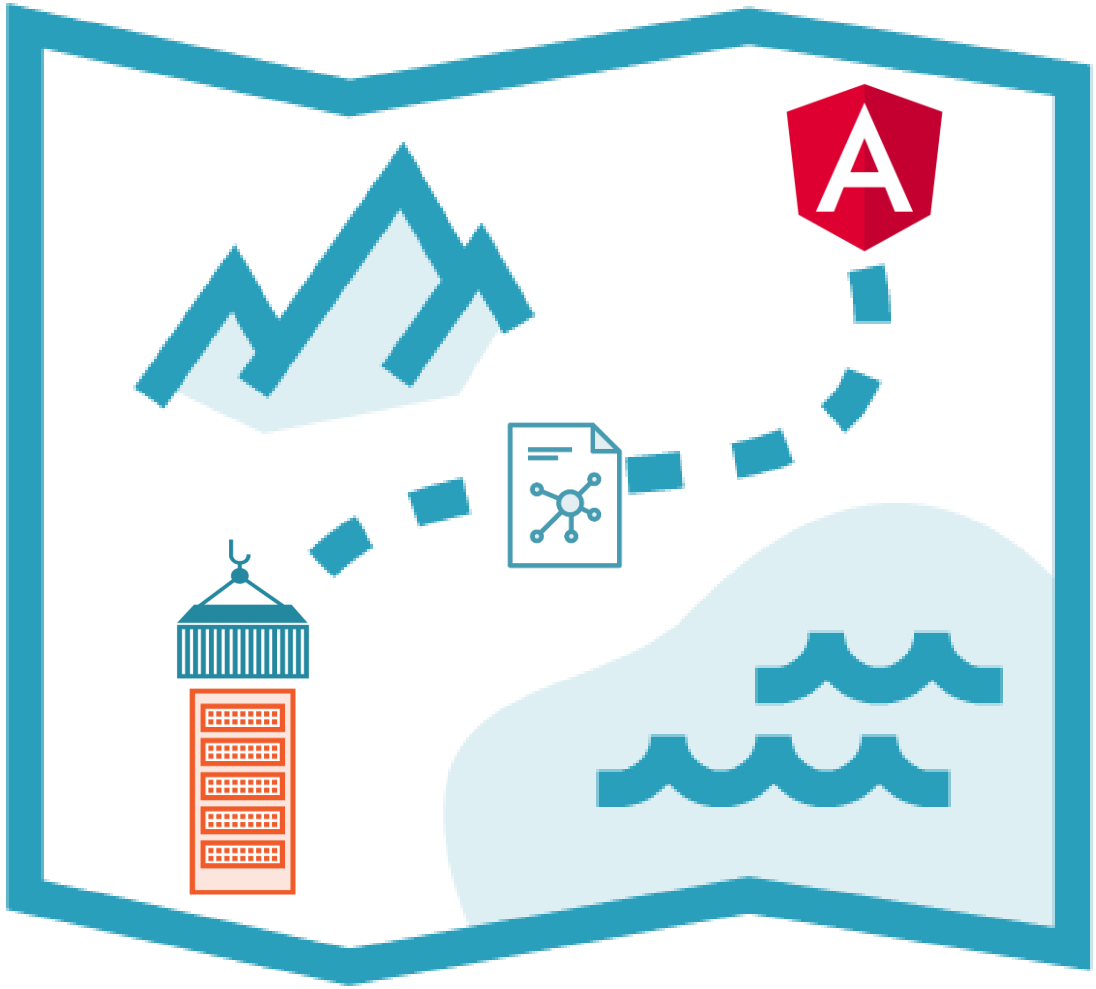
Shipping Code to a Destination



Option 1: Ship Source Code



Option 2: Ship a Docker Image

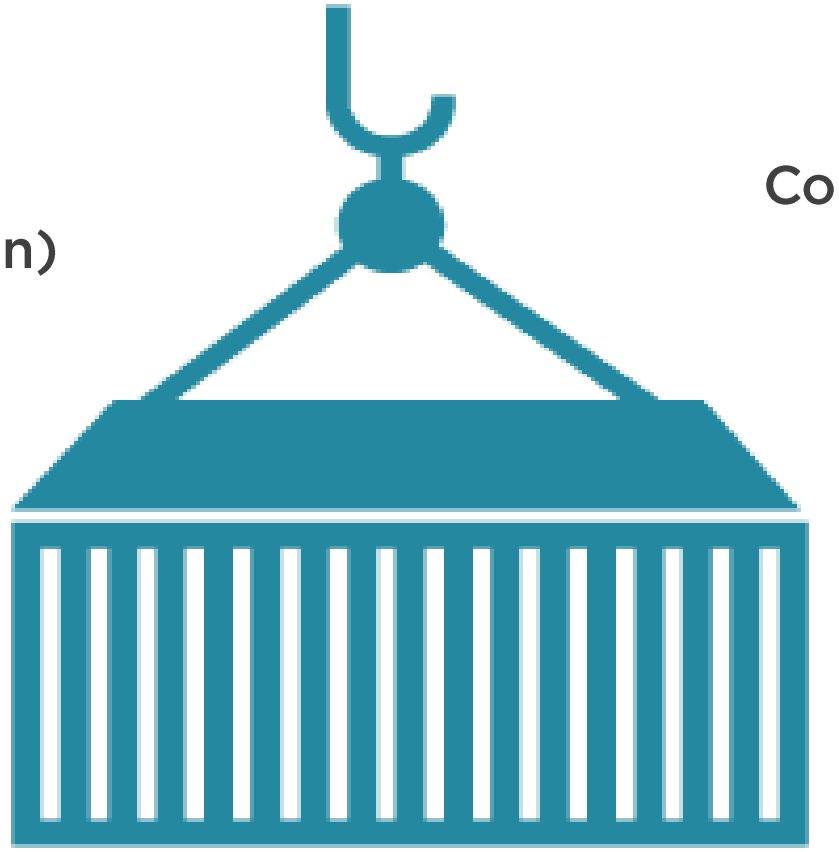


What Goes in a Container?

Code
(specific version)

Environment
variables

Server
(specific version)



Configuration

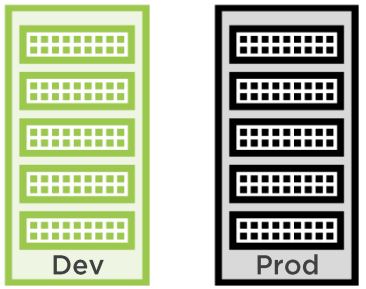
Security

Everything
needed

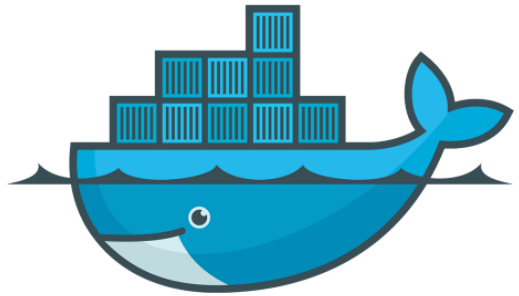
Benefits of Containers

Accelerate developer onboarding

Eliminate app conflicts



Environment consistency



Ship software faster

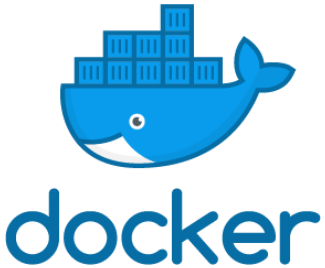
Running the Angular Application Locally

Running the Angular Application in a Container

Software Requirements

VS Code

https://code.visualstudio.com
(any editor can be used)



Docker Community Edition

https://docker.com

Summary

Containers provide several development and deployment advantages

Angular can be run in a container

Docker images and containers can be used to ship Angular applications between environments