

Containerizing CFML Apps

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Description

In this workshop, you will gain knowledge and proficiency in utilizing Docker containers to develop and deploy ColdFusion (CFML) applications. Be it to docker swarms and or many orchestration services. Get ready to send your applications out in to the great wide world of containerization!

Prerequisites

- A working knowledge of CommandBox and CFML applications
- Have the latest stable versions of CommandBox and Docker installed, for your operating system platform
- Bring a sample application, with between 1-2 external dependencies (e.g. - database or caching server) to use for the hands-on segment of the training

Objectives

- Gain an understanding of containerization concepts and infrastructure
- Understanding of the benefits (and drawbacks) of implementing containerized deployment tiers
- Practical examples of integrating dependencies (databases, caching servers, etc.) within a unified Docker service stack
- An understanding of deploying CFML applications using Docker, including potential “gotchas” and takeaways from real-world experience.

Agenda

- **Introductions/checking prerequisites** - 15 mins
- **Overview and introduction to containerization** - 45 min
- Break - 10 min
- **Running your first Dockerized CFML application** - 1 hr
- Break - 10 min
- **Introduction to Dockerfile image deployments** - 40 min
- Lunch - 1 hr
- **Introduction to Docker Compose and stack deployments** - 1 hr
- **Multi-tier deployments and continuous integration** - 1 hr
- Break - 30 mins
- **Hands-on: Creating your first Dockerized Application** – 2.5 hr

Introductions/checking prerequisites

- Meet others in the class

- Gather each student's expectations for the class
- Ensure everyone has CommandBox and Docker installed and are ready to go

Overview and introduction to containerization

- Overview of containerization principles
- Introduction to Docker
 - Virtualization vs Containerization
 - Docker Networking Principles
 - Runtime environments and memory usage
- Deployment tools and options overview

Running your first Dockerized CFML application

- CommandBox Docker Image Overview
 - Environment variables
 - CFConfig usage
 - Directory conventions and mounting shared files
- Running a CFML application from a mounted directory
- Running a CFML application from a pre-built image
- Start it up!

Introduction to Dockerfile image deployments

- Dockerfile basics
 - Understanding layer assembly and storage
 - Customizing scripts and installation steps
 - Securing your builds
- Create your first Dockerfile
- Installing additional dependencies and modules

Introduction to Docker Compose and stack deployments

- Docker Compose Basics
 - Introduction to YAML
 - Introduction to services and volumes
 - Introduction to stack networking and hostname resolution
 - Introduction to Docker secrets
- Deploying your first compose stack
- Connecting up to stack services
- Using environment variables for multi-tier deployments
- Using Docker Compose in development

Multi-tier deployments and continuous integration

- Environment variable conventions in the CommandBox Docker image
- CFConfig Integration and deployment strategies
- Continuous integration for testing and deployment
- Securing your code and Introduction to private registries

Hands-on: Deploying your own code on Docker

- Deploy your own code hands-on time, with mentoring and shared learnings