

## Docker Containerization Deep Dive

**Length:** 3 Days

**Summary:** This is a continuous hands-on workshop which teaches you how to use Docker and the workloads for which it is best suited. From your clean new Docker install on the first day, you will work through continuous real-world use cases to learn pragmatic, immediately useful skills. Our real-world format gets you up and running as quickly as possible with the technology, and focuses on making sure you understand how to best integrate Docker into your workflow for maximum productivity as soon as you return to work.

**Who Should Attend:** This Docker Containerization training workshop is ideal for developers and operations staff who want to containerize and improve reliability throughout the entire software development life cycle.

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### COURSE CONTENT

#### MODULE 1: INTRODUCTION

- What can you use Docker for?
- A logical segregation of duties
- The relationship between Docker and SOA
- How Docker fits into the development lifecycle
- How Docker ensures consistency from development through UAT and staging, and on to production
- Example use cases of Docker in the real world

#### MODULE 2: GETTING SET UP TO START USING DOCKER

- Getting set up on Windows
- Getting set up on the Mac
- Trying out our first container
- Getting set up for production on Linux
- Tweaking your production environment for best performance
- User interfaces for Docker management

#### MODULE 3: CONTAINER MANAGEMENT

- Container naming
- Starting and stopping containers
- Attaching to a container
- Seeing what is happening in a container
- Running a process inside a container
- Daemonizing a container
- Automatic container restarts
- Deleting containers when we are finished with them

#### MODULE 4: DOCKER IMAGES AND REPOSITORIES

- Docker images explained
- How Docker images work
- Getting a list of images
- Searching for images on a repository
- Pulling an image
- Creating our own image
- Specify an image in a Dockerfile
- Building Dockerfile images
- Using the build cache for templating
- Viewing the image we have created
- Launching a container using our new image

#### MODULE 5: REGISTRIES

- What is the Docker hub?
- Pushing images to the Docker hub
- Running your own internal Docker registry
- Testing the internal registry

#### MODULE 6: A SIMPLE USE CASE

- A single container static website
- Setting up a container running Nginx
- Launching our static site
- Updating our static site from git or bitbucket

**MODULE 7: SECURING DOCKER CONTAINERS**

- Building & Deploying Secure Images
- Troubleshooting security related issues with images
- Enhancing existing images with security
- Best practices associated with Docker Image Security

**MODULE 8: A MORE COMPLEX USE CASE: MULTI CONTAINER APPLICATION STACKS**

- A container for our NodeJS application
- A base image for our Redis containers
- Creating our Redis back-end cluster
- Capturing logs
- Managing containers

