

DOCKER & Docker Swarm

Basics

Introduction to Docker
Containers Vs. Virtual Machines
Docker Architecture
The Docker Hub
Docker Installation
Creating Our First Image
Working with Multiple Images
Packaging A Customized Container
Container Commands with Docker
Container with Port Redirects
Installation and Image Setup
Creating Images from Containers
Exposing Container Ports to the Host

Dockerfile, Builds and Network

Configuration
Dockerfile Directives
 USER and RUN
 RUN Order of Execution
 ENV
 CMD vs. RUN
 ENTRYPOINT
 EXPOSE
Container Volume Management

Docker Network

List and Inspect
Create and Remove
Assign to Containers
Custom Image from a Dockerfile
Managing Containers
Adding External Content to Containers

Docker Commands & Structures

Inspect Container Processes
Previous Container Management
Controlling Port Exposure on Containers
Naming Our Containers
Docker Events
Managing & Removing Base Images
Saving and Loading Docker Images
Image History
Taking Control of Our Tags
Pushing to Docker Hub
Base Image Maintenance & Cleanup
Advanced Container Creation CLI

Docker orchestration - Swarm

Docker Swarm overview
Swarm cluster creation
Swarm service
Adding cluster nodes
How to get Docker Swarm
Try Swarm at scale
Swarm and container networks
Dockerized Basic Web Server
Deploying & Updating Services on Swarm
Service Discovery & Load Balancing
Docker Swarm Schedulers

Docker and Swarm Mode

Swarm master
Swarm Secondary Master
Swarm node
Promoting & Demoting Nodes

Apply Rolling Updates Across Swarm Cluster

Rolling up with updates
Rolling down with older version