

Mastering Docker with Kubernetes and Swarm

This Docker and Kubernetes training teaches learners how to choose and optimize containerization platforms like Docker, Kubernetes, or Docker Swarm. Kubernetes orchestrates containers, while Docker handles containerization. Docker Swarm provides clustering for Docker containers. After completing this training, you'll know how to manage container storage, networking, load balancing, and security with the best platform for your needs.

[CBT Nuggets course material](#) →

WEEK 1

Setting Up Docker for Your OS

162 min.

Introduction to Docker Setup and Configuration	5
Install Docker Desktop for Windows 10	10
Configuration Options for Docker Desktop on Windows 10	11
Install Docker on Local Ubuntu Linux VM with Multipass	10
Explore Docker Daemon with Systemd on Linux	5
Securely Connect Docker CLI to Remote AWS EC2 Instance	12
Review and Conclusion on Docker Installation	2

Creating and Managing Docker Containers

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Configure a Docker Environment	7
Run Containers with Docker CLI	8
Create and Start Containers with Docker CLI	8
Stop and Pause Containers with Docker CLI	7
Create Interactive Containers with Docker CLI	11
Spawn Processes Inside Existing Containers with Docker CLI	6

Understanding and Building Docker Container Images

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Tagging Container Images with Docker CLI	7
Docker Container Image Build Context	10

Push Container Images to Remote Registry with Docker CLI 12

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Build a Docker Swarm Cluster

156 min.

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Initialize a Docker Swarm Cluster 12
Join Worker Node to Docker Swarm Cluster 8
Examine Overlay Ingress Network 4
Create Your First Docker Swarm Service 10
Scale Services on Docker Swarm Overlay Network 8

Managing Linux Containers with Docker Compose

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What is Docker Compose? 4
Install Docker Compose 5
Craft a Basic Docker Compose Configuration 13
Deploy a Custom Built Container in Compose 5
Expose Network Ports with Docker Compose 6
Configure Container Dependencies 6
Docker Compose Environment Variable Injection 9
Applying a Docker Compose Override File 8
Scale Docker Compose Services 8
Monitor Containers with Docker Compose 4
Review and Call to Action 2

Managing Amazon Elastic Kubernetes Service (EKS) with eksctl

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What is eksctl? 9
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Create Amazon EKS Cluster with eksctl 12

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Scaling Amazon EKS Node Groups with eksctl 7
Upgrade Amazon EKS Clusters with eksctl 11

Docker Integration with Microsoft Azure Container Services

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Install Dev Tools for Azure Container Instances 8
Create Azure Container Instances Context in Docker CLI 9
Run NGINX Container on ACI with Docker CLI 8
Explore Containers Interactively on ACI with Docker CLI 6
Mount Persistent Azure Files Storage Into ACI Containers 11
Deploy Containers on ACI from Private Azure Container Registry 8

Deploying and Managing Containers on Kubernetes

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Introduction to Kubernetes Resources and Pods 10
Understanding Kubernetes API Resources and Versions 11
Deploy Kubernetes Cluster on Amazon EKS with eksctl 12

Create Individual Pods with Kubectl using Imperative Approach	12
Deploy Pods on Kubernetes with Kubectl and Declarative Spec Files	14

Manage Docker Containers with Portainer

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5 min.

Explore Portainer Container Management Features	1
Deploy Portainer Client Agent in Alternate Cloud	1
Run Docker Containers from Portainer Web UI	1
Limit Access to Portainer Environments and Containers	1