

Advanced Docker Administration

Learn to install, manage and orchestrate Docker containers, from custom images and networking to Compose and Swarm clusters.

2 Days

DURATION

7

MODULES

33

TOPICS

COURSE OVERVIEW

This course covers installing Docker and understanding its architecture and components, then moves into running and managing containers through the Docker client. It explains how to build custom images with Dockerfiles and commit, tag and push images to public or private registries, and examines container internals such as cgroups, namespaces and resource limits. It also addresses storage through volumes and bind mounts, container networking with bridges, defining multi-container applications with Docker Compose, and orchestrating services, nodes, secrets, scaling and updates with Docker Swarm.

WHO THIS COURSE IS FOR

Docker Administrators

System Administrators

DevOps Engineers

Infrastructure Engineers

Container Orchestration Engineers

PREREQUISITES

- Advance users on container technology

LEARNING OBJECTIVES

- Explain Docker architecture and its core components
- Install Docker and configure the host environment
- Manage the lifecycle of containers using Docker client commands
- Build custom images using Dockerfiles and Docker commit
- Tag, pull and push images to private registries
- Analyse container resource limits using cgroups and namespaces
- Configure storage with volumes and bind mounts
- Deploy multi-container applications with Docker Compose

7 Modules, 33 Topics

01

Installation of Docker

TOPICS

- Introduction to Docker
- Docker Architecture
- **Docker Components:** Docker Client, Docker Host and Docker Registry
- Installation of Docker

02

Docker Client Operations

TOPICS

Running a Container · Container Lifecycle ·
Managing Containers · Executing Commands in
Running Containers

03

Building Custom Images and Docker Registry

TOPICS

Creating Docker Images using Docker Commit ·
Building a Dockerfile · Tagging an Image · Pull and
Push Images · Creating Private Registries

04

Container Deep Dive

TOPICS

Cgroups · Namespaces · Container Resource Limits

05

Storage & Container Networking

TOPICS

Storage Overview · Creating and Managing Volumes ·
Using Bind Mounts · Overview of Container
Networking · Managing Network Bridges

06

Docker Compose

TOPICS

Understand YAML · Create Docker Compose Files ·
Deploying and configuring applications · Build Images

07

Docker Swarm

TOPICS

Container Orchestration · Creating Swarm Cluster ·
Manage Nodes in Swarm Node Cluster · Manage
Services · Secrets · Rolling Service Updates ·
Monitoring · Scaling

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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