# Docker: Praxiskurs Applikationscontainer (XAM-CONT-1)

**ID** XAM-CONT-1   **Price** on request   **Duration** 2 days

## Who should attend

The training is aimed at developers and administrators as well as architects and decision-makers with a high level of technical interest.

## Prerequisites

The participants have to master the basics of Linux system administration. They need to be proficient in using the command line, editing files on the command line, and managing system services.

## Course Objectives

Participants learn how to use application containers with Docker and/or Podman. This includes configuring individual containers, networks, and volumes, as well as orchestration with Docker Compose. In addition, participants will learn how to create Dockerfiles / Containerfiles for packaging applications in container images.

## Course Content

### Introduction to application containers

- Principle of container virtualization
- Properties of application containers
- Architecture of Docker and Podman
- Similarities and differences between Docker and Podman

### Container management

- System environment of an application container
- Networks
- Volumes
- Images
- Start, stop and manage containers
- Interactive containers
- Container for non-interactive services

### Create and manage container images

- Dockerfiles / Containerfiles
- Images
- Tags
- Registries

### Orchestration with Docker Compose

### Container anatomy

- Container runtimes
- Overview of namespaces, CGroups and capabilities
- Representation of container networks in Linux
- Representation of container volumes in Linux

### Overview(!) of advanced topics

- Clustering with Docker Swarm
- Request routing with Traefik
- Docker on Windows
- Continuous Integration / Continuous Delivery and DevOps

### Application aspects

- Microservices and immutable servers
- Status and persistence in containers
- Output and logging
- Design patterns for containers

### Best practices

**Training Centres worldwide**





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