

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

**ID** XAM-CONT-1 **Price** 1,450.— €(excl. tax) **Duration** 2 days

This course is delivered in cooperation with the xamira networks GmbH.

## Course Overview

Docker has made application containers the quasi-standard for cloud native application delivery. Docker combines management tools for containers, networks, and volumes with a rather simple mechanism for automating the creation of container images. These principles also apply to the Docker alternative Podman. In addition to the administration of containers, it is necessary to package applications in container images, to precisely understand the requirements of containerized applications and to optimize applications specifically for containerized runtime environments. This course teaches all the essential features of Docker and Podman with numerous exercises.

## 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**

# About Fast Lane



Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

## Fast Lane Services

- ✓ High End Technology Training
- ✓ Business & Soft Skill Training
- ✓ Consulting Services
- ✓ Managed Training Services
- ✓ Digital Learning Solutions
- ✓ Content Development
- ✓ Remote Labs
- ✓ Talent Programs
- ✓ Event Management Services

## Training Methods

- ✓ Classroom Training
- ✓ Instructor-Led Online Training
- ✓ FLEX Classroom – Classroom & Online Hybrid
- ✓ Onsite & Customized Training
- ✓ E-Learning
- ✓ Blended & Hybrid Learning
- ✓ Mobile Learning

## Technologies & Solutions

- ✓ Digital Transformation
- ✓ Artificial Intelligence
- ✓ Cloud
- ✓ Networking
- ✓ Cyber Security
- ✓ Wireless & Mobility
- ✓ Modern Workplace
- ✓ Data Center



**Worldwide Presence**  
with high-end training centers  
around the globe



**Multiple Awards**  
from vendors such as AWS,  
Microsoft, Cisco, Google, NetApp,  
VMware



**Experienced SMEs**  
with over 19.000 combined  
certifications

### Germany

**Fast Lane Institute for Knowledge  
Transfer GmbH**  
Tel. +49 40 25334610  
info@flane.de / www.flane.de

### Austria

**ITLS GmbH**  
(Partner of Fast Lane)  
Tel. +43 1 6000 8800  
info@itls.at / www.itls.at

### Switzerland

**Fast Lane Institute for Knowledge  
Transfer (Switzerland) AG**  
Tel. +41 44 8325080  
info@flane.ch / www.flane.ch