

Course : Docker: Creating and administering your virtual application containers.

Practical course - 3d - 21h00 - Ref. DOK

Price : 2310 CHF E.T.

 4,6 / 5

BEST

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Understand where Docker and containers are used
- ✓ Work with Docker's command-line interface to create containers
- ✓ Implement and deploy applications in containers
- ✓ Administer containers

Practical details

Hands-on work

The real-world cases and hands-on work will be done in a Linux environment.

Course schedule

1 From virtualization to Docker

- Different types of virtualization.
- Containerization: LXC, namespaces, control-groups.
- Where Docker is used.
- Docker vs. virtualization.

2 Overview of Docker

- Docker's architecture.
- Docker's availability for different platforms (Windows, Mac and Linux) and how to install it on them.
- Creating a virtual machine for modeling.
- The command line and the environment.

Hands-on work

Creating a virtual machine to create a model.

PARTICIPANTS

PREREQUISITES

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

3 Command-line implementation

- Setting up your first container.
- The Docker Hub: Centralized resources.
- Pooling storage across containers.
- Pooling TCP ports across containers.
- Publishing network ports.
- Interactive mode.

Hands-on work

Configuring a container with the command line.

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

4 Creating a custom container

- Producing the image of a container state.
- What is a Dockerfile?
- Automating the creation of an image.
- Implementing a container.
- Container hosting multiple services: Supervisor.

Hands-on work

Creating a custom container.

5 Implementing a multicontainer application

- Using Docker Compose.
- Creating a YAML configuration file.
- Deploying multiple containers at once.
- Linking all of the application's containers.

Hands-on work

Implementing a multicontainer application.

6 Administration interfaces

- The Docker API and Web Services.
- Administration interface in Web mode.
- Hosting your own registry: Docker Registry, Gitlab-CE, etc.

Hands-on work

Building and using your own registry.

7 Administering containers in production

- Automatically starting containers on boot.
- Managing resources assigned to containers.
- Container log management.
- Backups: What tools and what strategy?

Hands-on work

Administer containers.

8 Orchestration and clusterization

- Overview of Docker Machine.
- The orchestrator Swarm: nodes, services, secrets, configs.
- Deploying services and stacks in a Swarm.
- Reverse-proxy and load-balancer for Web Services in a cluster (Traefik, etc.).

Hands-on work

Creating a Swarm cluster. Managing nodes in the cluster. Publishing and scaling a service in the cluster.

Dates and locations

REMOTE CLASS

2026: 9 Mar., 13 Apr., 4 May, 20 May, 10 June, 24 June, 24 June, 6 July, 10 Aug., 2 Sep., 2 Sep., 21 Sep., 12 Oct., 2 Nov., 25 Nov., 25 Nov., 16 Dec.

LAUSANNE

2026: 10 June, 12 Oct.

GENÈVE

2026: 10 June, 12 Oct.