Publication date : 03/14/2024

Course : Docker, advanced features

Practical course - 2d - 14h00 - Ref. DCK
Price : 1720 CHF E.T.

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This course will give you a deeper understanding of Docker containers. You'll be able to use Docker Machine, implement and administer Docker Compose, set up a swarm cluster... and many other advanced features.

Teaching objectives

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

- Managing virtual Docker networks
- Mass image management
- Implementing a high-availability architecture
- Deploying multi-container Docker applications with Docker Compose
- Administering and monitoring containers with Docker Swarm
- Set up a local register
- Securing access to containers

Intended audience

Developers, architects and system administrators.

Prerequisites

Good knowledge of how to implement and deploy Docker virtual containers for Linux.

Practical details

Teaching methods

Training alternates theory and practice. A great deal of practical work is carried out throughout the course.

Course schedule

PARTICIPANTS

Developers, architects and system administrators.

PREREQUISITES

Good knowledge of how to implement and deploy Docker virtual containers for Linux.

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.

1 The Docker engine

- Docker engine architecture.
- Advanced features and configuration.
- Role management and main options.
- Integrating Docker into an existing application infrastructure.
- Important orders.

2 Images and containers

- Images in detail. Mass image management.
- Image transfer and portability.
- Container architecture.
- Best practices and implementation.
- Dockerfiles in detail.
- Management of intermediate images.

3 The underlying network

- Docker network architecture.
- Advanced virtual network administration.
- Networking (intra/inter and container/host).
- Design scalable and portable networks.

4 Docker storage for high availability and production

- Different types of storage.
- Implementation and configuration.
- Deploy and manage multiple containers.
- Implementation of a high-availability architecture.
- Microservices management.
- Orchestration and automation of Docker processes.

5 Docker Compose

- Docker Compose architecture.
- Docker Compose implementation and administration.
- Advanced notions of Docker Compose.

6 Docker Swarm

- Docker Swarm architecture.
- The different types of node.
- Log management and monitoring.
- Implementation and administration.

7 Setting up a register

- Introduction to the different types of registers.
- Register deployment.
- Notions of service discovery and load-balancing with UCP.
- Notions "DTR" and "DDC".
- Object signature.

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

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.

8 Docker security and monitoring

- Overview of good security practices in Docker.
- Configuration of key best practices.
- Use of security modules.
- Vulnerability management.
- Isolation and limitation management.
- Monitoring analysis tools.
- Docker daemon logs.

Dates and locations

REMOTE CLASS
2026 : 9 Mar., 8 June, 21 Sep., 23 Nov.