



## Docker – Administration

### Description

Docker training allows you to master container administration in a modern cloud environment. Whether you are a cloud engineer, a developer, or a system administrator, this course will provide you with all the tools to use Docker effectively and efficiently. You will learn how to create and manage images, configure networks and volumes, and secure your Docker deployments with advanced strategies.

### Master Docker and manage your containers with confidence

Through this training, you will discover best practices for managing containerized infrastructures with Docker Swarm, as well as essential tools for passing the Docker Certified Associate® certification. You will deepen your Docker administration skills by understanding its key aspects, such as networking, security, and storage volume management.

### Course Content

#### Module 1: Orchestration

- Configure a Docker Swarm cluster with managers and workers
- Lock a Swarm cluster for security
- Compare running a container with running a service
- Interpret the output of "docker inspect" commands
- Use templates with "docker service create"
- Apply node labels for task placement
- Manage a stack of running services

#### Module 2: Image creation, management, and registry

- Use advanced Dockerfile options
- Store and manage images in a Docker registry
- Create a Docker image from a file
- Tag an image for better management
- Understand and configure image cleanup processes
- Set up a Docker registry for deployments
- Modify a Docker image for layer optimization

#### Module 3: Installation and configuration

- Set up backups for UCP and DTR
- Manage Docker users and teams
- Correctly size the Docker environment before installation
- Configure logging drivers (Splunk, journald)
- Update and maintain the Docker engine

## **Module 4: Networking**

- Configure Docker to use external DNS
- Load-balance HTTP/HTTPS traffic for a Docker application
- Deploy services on a Docker overlay network
- Publish a port to make an application accessible externally
- Understand Docker's network model and its interface with network drivers
- Differentiate between "host" and "ingress" port publishing modes

## **Module 5: Security**

- Configure RBAC (role-based access control) in UCP
- Integrate Docker UCP with LDAP/Active Directory
- Understand Docker Swarm's default security settings
- Configure mutual TLS (MTLS) security
- Create UCP client bundles for enhanced security
- Describe Docker engine's default security features

## **Module 6: Storage and volumes**

- Understand how volumes are used for persistent storage in Docker
- Configure and manage Docker storage drivers
- Compare object storage and block storage for Docker environments
- Clean up unused images to optimize filesystem space
- Configure "devicemapper" for Docker volume management

## **Documentation**

- Digital course materials included

## **Participant profiles**

- Cloud engineers
- Backend and frontend developers
- System administrators
- Technical architects

## **Prerequisites**

- Basic knowledge of Linux
- Understanding of virtualization concepts
- Basic networking knowledge
- Familiarity with operating systems

## **Objectives**

- Master Docker Swarm

- Use Dockerfile to create images
- Configure Docker networks and volumes
- Secure a Docker environment
- Manage Docker registries
- Pass the Docker Certified Associate® certification

**Description**

Docker Training: Preparation for the Docker Certified Associate Certification

**Niveau**

Intermédiaire

**Classroom Registration Price (CHF)**

2700

**Virtual Classroom Registration Price (CHF)**

2550

**Duration (in Days)**

3

**Reference**

DOCK-02