

## Workshop Docker Advanced

- **Formato do curso:** Live training
- **Preço:** 990€
- **Duração:** 14 horas

This Docker Advanced workshop covers advanced topics related to working with Docker Swarm clusters and Docker images.

**Esta formação é ministrada em Inglês.**

Em parceria com a entidade acreditada:



### Destinatários

- DevOps engineers
- Linux system administrators
- Systems design engineers
- Architects

### Pré-requisitos

- Basic knowledge of Docker
- Interacting with Docker containers from the command line (start and stop containers, attach, exec, etc.)
- Working with Docker bridge networks and volumes
- Creating Docker images (Dockerfiles)

Nice to have:

- Recommended training: [Docker Fundamentals](#)

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# Programa

## **Building a secure Docker Swarm**

- What is Docker Swarm?
- Docker Secure Swarm Cluster
- Docker Modes
- Creating a Swarm Cluster
- Deleting the Swarm
- Orchestration
- Service Types
- Creating, updating, inspecting and deleting a Service

Hands-on Lab : The Lab Environment

Hands-on Lab: Initializing, extending and putting the Docker Swarm to work.

## **Labels and Filters. Working with Secrets**

What are Labels?

Keys and Values

Label behavior

Filtering Images, Containers and other Objects

Hands-on Lab: Labels and Filters

## **Network types. Network services. Load balancing**

Docker Networking

Swarm Networking

Mapping Ports in Swarm

Customizing the Ingress Network

Hands-on Lab: Networking

## **Compose Files & Docker Stack**

- Docker Compose vs. Docker Stack
- Installing Docker Compose
- Supported Compose Commands
- Environment Variables
- Docker Stack
- Inspecting the Stack Deployment
- Updating a Running Stack

Hands-on Lab:Compose- files, Docker Stack

## **Advanced Node Management. Constraining container resources. Availability**

- Container Resource Restriction
- Swarm-Service Resource Constraints
- Swarm Service Placement Preference
- Auto - Restarting Containers
- Swarm Auto - Restart
- Service Rolling Updates
- Service Rollback
- Health Check

## **Monitoring and Logging. Collecting Metrics. InfluxDB/Grafana and Prometheus**

- Logging Plugins
- Simple Monitoring
- Docker Events
- Prometheus - Monitoring the Docker Daemon
- Configuring Prometheus - Docker Engine
- Prometheus - Runtime Metrics, App Metrics
- Running Grafana
- Grafana - Prometheus Configuration
- Configuring Grafana

Hands - on Lab: Configuring Prometheus and Grafana for Monitoring your Swarm

## **Docker Security**

- Container Security
- Network Encryption
- Swarm Security
- Secrets
- Securing the Docker Socket
- Docker Bench for Security

Hands-on Lab: Limits, Security

## **Advanced Docker Image Creation. Multi-stage Builds. Automated Builds**

- Private Registries
- Containerized Private Registry
- Multi-Stage Builds
- Docker Content Trust
- Signing Images
- Github-Triggered Builds

Hands-on Lab: Image Management