



Workshop Docker Advanced

Devops

- **Nível:**
 - **Duração:** 14h
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Sobre o curso

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
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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
- Labels and Filters. Working with Secrets
- Network types. Network services. Load balancing
- Compose Files & Docker Stack
- Advanced Node Management. Constraining container resources. Availability
- Monitoring and Logging. Collecting Metrics. InfluxDB/Grafana and Prometheus
- Docker Security
- Advanced Docker Image Creation. Multi-stage Builds. Automated Builds

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