

Docker Swarm Application Essentials

Duration: 1 Day Course Code: CN110

Overview:

In this course, you'll learn what a containerized application looks like when orchestrated by Docker Swarm. We'll cover scheduling workloads across a cluster, networking stateless and stateful applications, provisioning dynamic configuration and persistent storage, and scaling highly available applications in this course intended to set a strong foundation in orchestration for all technical roles.

Target Audience:

General technical audiences & IT professionals

Prerequisites:

Attendees should meet the following prerequisites:

- CN100 course or equivalent experience
- Familiarity with the Bash shell
- Filesystem navigation and manipulation
- Command line text editors like vim or nano
- Common tooling like curl, wget and ping
- Familiarity with YAML and JSON notation
- CN100 - Docker Containerization Essentials

Follow-on-Courses:

- CN212 - Mirantis Kubernetes Engine (MKE)
- CN254 - Mirantis Container Cloud (MCC) Bootcamp

Content:

Setting up and configuring a Swarm

- Operational priorities of container orchestration
- Containerized application architecture
- Swarm scheduling workflow ; task model
- Automatic failure mitigation
- Swarm installation ; advanced customization

Deploying workloads on Swarm

- Defining workloads as services
- Scaling workloads
- Container scheduling control
- Rolling application updates and rollback
- Application healthchecks
- Application troubleshooting
- Deploying applications as Stacks

Networking Swarm workloads

- Swarm service discovery and routing implementation
- Routing strategies for stateful and stateless workloads
- Swarm ingress traffic

Provisioning dynamic configuration

- Application configuration design
- Environment variable management
- Configuration file management
- Provisioning sensitive information

Provisioning persistent storage

- Storage backend architecture patterns
- NFS backed Swarms

Monitoring Swarm

- What to monitor in production-grade Swarms
- Potential Swarm failure modes ; mitigations
- Swarm workload monitoring

Additional Information:

Lab Requirements:

Laptop with WiFi connectivity Attendees should have the latest Chrome or Firefox installed, and a free account at strigo.io.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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