# Mirantis - Docker Swarm Application Essentials

**Code:**       CN110
**Length:**     1 days
**URL:**        [View Online](#)

# Prerequisite Courses

### Cloud Native - Docker Containerization Essentials
[View Details](#)

In this course, youâ€™ll learn what a containerized application looks like when orchestrated by Docker Swarm. Weâ€™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.

# Skills Gained

- Setting up and configuring a Swarm
- Deploying workloads on Swarm
- Networking Swarm workloads
- Provisioning dynamic configuration
- Provisioning persistent storage
- Application rollout and upgrade
- Advanced scheduling control

# Who Can Benefit

- Motivations: Develop, operate or manage scalable containerized applications orchestrated by Docker Swarm
- Roles: General technical audiences & IT professionals

# Course Details

## Lab Requirements
- Laptop with WiFi connectivity
- Attendees should have the latest Chrome or Firefox installed, and a free account at [strigo.io](http://strigo.io)

## Course Objectives
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

# Follow-on Courses

Browse the suggested follow-on courses below and continue your training journey. We offer training in various learning formats, from instructor-led to virtual, so you can choose what works best for you. Get started by selecting a course to learn more.

### Cloud Native - Kubernetes Engine (MKE)

**Cloud Native - CN210: Docker Enterprise Operations (On Demand)**

# Schedule (as of 4 )

| Date | Location | |
| --- | --- | --- |
| Jun 11, 2024 – Jun 11, 2024 | Live Virtual | **Enroll** |

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