**MIRANTIS**

# Mirantis - CN110: Docker Swarm Application Essentials

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

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.

## 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

## 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

# Course Details

## Lab Requirements

- Laptop with WiFi connectivity

- Attendees should have the latest Chrome or Firefox installed, and a free account at [strigo.io](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

# Schedule (as of 4 )

| Date | Location | |
|------|----------|---|
| **Nov 17, 2020 – Nov 17, 2020** | [iMVP](#) | **Enroll** |
| Dec 8, 2020 – Dec 8, 2020 | [iMVP](#) | **Enroll** |