Mirantis Docker Swarm Application Essentials

Duration: 1 Day Course Code: CN110 Delivery Method: Virtual Learning

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.

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Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

This course is targeted at students with the following:
Motivations: Develop, operate or manage scalable containerized applications orchestrated by Docker Swarm
Roles: General technical audiences & IT professionals

Objectives:

- **After this course participants should be able to:**
- 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

Prerequisites:

- 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 - Mirantis Docker Containerization Essentials

Testing and Certification

None

Follow-on-Courses:

- CN210 - Docker Enterprise Operations
- CN310 - Advanced Docker Enterprise Troubleshooting

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 connectivityAttendees 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 +1 (800) 268 7737

ilt.customerservice@globalknowledge.com

www.globalknowledge.com/en-us/

Global Knowledge Training LLC, 103 Foulk Road, Suite 202, Wilmington, Delaware, 19803