Mirantis Kubernetes Engine (MKE)

Duration: 1 Day Course Code: CN212

Overview:

In this product-focused course, you'll deep dive into all the features of Mirantis Kubernetes Engine, and discover how it simplifies, secures and accelerates Kubernetes and Swarm cluster management at enterprise scale.

We'll discuss installing and configuring MKE, managing MKE user permissions and orchestrator resources, and advanced networking features included in the platform, as well as MKE troubleshooting and support.

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Target Audience:

This course is targeted at students with the following:
- Motivations: Leverage all the features of Mirantis Kubernetes Engine in order to securely manage large-scale, many-user Kubernetes and Swarm clusters.
- Roles: System Operators & Administrators

Objectives:

- **After this course participants should be able to:**
- Understand MKE architecture.
- Deploy highly available MKE clusters.
- Configure RBAC and access controls.
- Secure MKE with authentication and PKI.
- Manage networking and traffic routing.
- Troubleshoot MKE issues and support dumps.
- Monitor and audit cluster activities.
- Perform backup, restore, and disaster recovery.
- Manage enterprise Kubernetes and Swarm environments.

Prerequisites:

- CN110 OR CN120 OR CN211 course and prerequisites therein, 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

Testing and Certification

None

Content:

Mirantis Kubernetes Engine architecture

- Production-grade deployment patterns
- Containerized components of MKE
- Networking ; System requirements for MKE
- Installing MKE via Launchpad for high availability

Access control in MKE

- MKE RBAC systems
- PKI, client bundle and API authentication
- Swarm and Kubernetes access control comparison

L7 networking features

- Interlock for Swarm
- Istio for Kubernetes
- Sticky sessions, canary or blue/green deployments, and cookie usage for both orchestrators

MKE Support Dumps

- Generating and understanding MKE support dumps
- Finding critical information in support dumps for troubleshooting MKE
- Enabling and exporting API audit logs for disaster post-mortem

MKE Troubleshooting

- Correlating MKE symptoms with components
- Probing and reading MKE state databases
- Recovering failed MKE managers
- MKE backups ; restore
- Disaster recovery in event of critical MKE failure

Further Information:

For More information, or to book your course, please call us on +1 (800) 268 7737

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