
Kubernetes Design Patterns and Extensions

Duration: 1 Day Course Code: LO035426

Overview:

This course complies with instructional designing principles for all the 3 lessons. This will ensure that you repeat and reinforce your gained knowledge at every step. Each and every minute spent during this 1-day course will incrementally take you to a next level.

Target Audience:

DevOps engineers with basic knowledge of Docker will find this course useful. Anyone who is interested in configuring and troubleshooting Kubernetes clusters and developing microservices-based applications on Kubernetes clusters, will find this course very useful.

Objectives:

- ensure that your container-based applications sail into production without hiccups, you need robust container orchestration. This course teaches you the art of container management with Kubernetes.
 - The course will provide enough knowledge of the following:
 - Understand and classify software designs patterns as per the cloud-native paradigm
 - Apply best practices in Kubernetes with design patterns
 - Access the Kubernetes API programmatically using client libraries
 - Extend Kubernetes with custom resources and controllers
 - Integrate access control mechanisms and interact with the resource lifecycle in Kubernetes
 - Develop and run custom schedulers in Kubernetes
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Prerequisites:

Hardware:

For an optimal experience with hands-on labs and other practical activities, we recommend the following hardware configuration:

- Processor: Intel Core i7 or equivalent
 - Memory: 8GB RAM
 - Storage: 35 GB available space
- Software:

- Access to a Kubernetes cluster with a version equal to or higher than 1.10 Local Kubernetes solutions such as minikube or clusters living in cloud providers:
<https://github.com/kubernetes/minikube>
 - The Kubernetes command-line tool kubectl is required for accessing Kubernetes from the Terminal:
<https://kubernetes.io/docs/tasks/tools/install-kubectl/>
 - The Docker client and server with a minimum version of 18.03 are required for building and testing the client libraries:
<https://www.docker.com/get-started>
 - Python and Go installation is not required but is recommended for playing around with the client libraries locally:
<https://www.python.org/downloads/>
<https://golang.org/>
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Content:

LESSON 1: KUBERNETES DESIGN PATTERNS

- Software Design Patterns
- Kubernetes Design Patterns

LESSON 2: KUBERNETES CLIENT LIBRARIES

- Accessing Kubernetes API
- Official Client Libraries
- Community Maintained Client Libraries

LESSON 3: KUBERNETES EXTENSIONS

- Kubernetes Extension Points
 - Extending Kubernetes Clients
 - Extending Kubernetes API
 - Kubernetes Dynamic Admission Control
 - Extending Kubernetes Scheduler
 - Extending Kubernetes Infrastructure
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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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