
Kubernetes Design Patterns and Extensions

Duration: 1 Day Course Code: LO035426 Delivery Method: Virtual Learning

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.

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:

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/>
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- 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/>

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

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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