COURSE ABSTRACT

Merative SPM on Kubernetes for Business Consultants

DL41001G

Course Description

As organizations move to the cloud, it is important for business consultants to have a basic understanding of cloud technologies and the value that they offer to organizations.

This course explains the essential terminology, concepts, and business benefits of cloud, DevOps, and containerization technologies, including Docker, Kubernetes, and Helm. After introducing these concepts, the course focuses on the SPM on Kubernetes solution and its benefits.

These topics are technical in nature and therefore require a technical explanation. However, the topics are explained at a high-level, and you do not require previous technical knowledge to understand them.

General Information

Delivery Method: Self-paced.

Audience: This course is intended primarily for business consultants and developers.

Topics: The course covers the following topics:

- Basic concepts of cloud computing
- Containerized solutions
- Continuous integration and delivery (CI/CD) by using DevOps
- SPM Kubernetes offering

Learning Objectives: After completing the course, learners should be able to:

- Define key cloud terms and concepts
- Briefly describe the cloud service models and deployment models
- Distinguish between monolithic solutions, virtual machines, containerized solutions, and microservices
- Outline the continuous integration/continuous delivery (CI/CD) process and where it fits into DevOps
- Briefly describe the SPM Kubernetes offering
- List the business benefits of deploying SPM on containers by using Kubernetes
- Summarize the importance of non-functional requirements, such as security and elasticity, for containerized and cloud solutions

Prerequisites: None

Duration: 8 Hours

Skill Level: Basic

Version: This course was developed and updated for SPM V7.0.11. The course covers core topics that do not change much.

Notes

The course duration gives learners an estimate of how much time they need to allocate to the course. The course duration does not specify the actual time required to complete the course, which varies by learner. In addition, the time it takes to cover the material depends on your current knowledge of the topics and which resources you want to review in detail.

Course Agenda

Unit 1 – Core Concepts

Lesson 1 – Overview of Cloud Computing

Duration: 90 minutes

Learning objectives: After completing this lesson, learners should be able to:

- Define the key cloud terms and concepts
- Distinguish between the different cloud service models
- Outline the features of private, public, and hybrid deployment models
- List typical use cases for each deployment model
- Identify the main cloud providers in the cloud services market.

Lesson 2 – Overview of Containerization

Duration: 175 minutes

Learning objectives: After completing this lesson, learners should be able to:

- Briefly explain what is meant by application modernization
- Define the following terms
    - Bare metal
    - Virtual Machines
    - Containers
    - Microservices
    - Cloud native
- List the advantage of using containers
- Describe the purpose of Docker, Kubernetes, and Helm
- Outline the broad approaches for moving applications to the cloud.

Lesson 3 – Overview of DevOps

Duration: 100 minutes

Learning objectives: After completing this lesson, learners should be able to:

- Define what is meant by DevOps
- List the benefits of DevOps
- Outline the continuous integration/continuous delivery (CI/CD) process

Unit 2 – Solutions and Benefits

Lesson 1 – SPM on Kubernetes

Duration: 45 minutes

Learning objectives: After completing this lesson, learners should be able to:

- Outline the purpose of Red Hat OpenShift and IBM Cloud Kubernetes Service (IKS)
- Describe the SPM on Kubernetes offering
- List the technology stack that is required to support SPM on Kubernetes
- Outline the value of using containers and Kubernetes for SPM

Lesson 2 – Developing Containerized Solutions

Duration: 50 minutes

Learning objectives: After completing this lesson, learners should be able to:

- List the key roles for designing and containerizing SPM on Kubernetes
- List the types of non-functional requirements (NFRs) that need to be considered for cloud solutions
- Access references for developing knowledge and skills