Microservices Architecture

Course Summary

Description

In this course, you'll learn about the fundamentals of microservices with the help of a few examples.

Next, you will look at how to handle practical scenarios that will arise in microservices development, use the microservices architecture to see how to translate your learnings into practice and how the Spring Cloud project and/or Kubernetes can help in transforming your microservices use case to an Internet-scale deployment.

And to finalize, you'll examine the relationship between microservices and DevOps and the microservices development life cycle.

Topics

- Demystifying Microservices
- Microservice use cases
- Microservices Evolution
- Scaling Microservices with Spring Cloud
- The Kubernetes and Microservices Model
- The Microservices Development Life Cycle

Prerequisites

Before taking this course, students should have practical knowledge of Java and basic analytic or programming skills.

Duration

Three days
ProTech Professional Technical Services, Inc.

Microservices Architecture

Course Outline

I. Demystifying Microservices
   A. The evolution of microservices
   B. What are microservices?
   C. Characteristics of microservices
   D. Microservices examples
   E. Microservices benefits
   F. Relationship with other architecture styles

II. Microservice use cases
   A. Applying Microservices Concepts
   B. Patterns and common design decisions
   C. Microservices challenges
   D. The microservices capability model

III. Microservices Evolution
   A. Reviewing the microservices capability model
   B. Understanding the PSS application
   C. Death of the monolith
   D. Microservices to the rescue
   E. The business case
   F. Plan the evolution
   G. Target architecture

IV. Scaling Microservices with Spring Cloud
   A. Reviewing microservices capabilities and BrownField's PSS implementation
   B. What is Spring Cloud?
   C. Feign as a declarative REST client
   D. Ribbon for load balancing
   E. Eureka for registration and discovery
   F. Zuul proxy as the API gateway
   G. Streams for reactive microservices
   H. Summarizing the BrownField PSS architecture

V. The Kubernetes and Microservices Model
   A. Develop an understanding of Kubernetes
   B. Building Kubernetes Microservices

VI. The Microservices Development Life Cycle
   A. DevOps
   B. Microservices, DevOps, and cloud
   C. Practice points for microservices development

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