Service-Oriented Architecture (SOA) Introduction

Course: **00036**

Filter: **Beginner**

Duration: **20 hours**

Category:: **Software Engineering**

Price: **2800,00 €**

About Course

Support the modern applications that your organization relies on by gaining the skills to design, build, and maintain a Service-Oriented Architecture (SOA). In this SOA training course, you learn how to create an effective SOA by modeling, designing, and orchestrating services that merge the business and technical requirements of your organization.

What you'll learn

- Develop and manage a modern SOA
- Map an organization as a set of services
- Model the SOA messages from business use cases
- Design to facilitate integration and performance

Pre-requisites

- Some involvement creating business applications

Curriculum

Module 1: Overview of SOA

- Integrating business processes with SOA

- Deriving services from the organization's purpose
- Merging SOA design and project management processes

Module 2: Service-oriented design process

- Progressing from conceptual to buildable services
- Structuring business requirements into an SOA
- Aligning services with the organization

Module 3: Turning services into modern applications

- Working forward to deliver applications
- Realizing the key SOA design patterns

Module 4: Discovering conceptual services

- Defining the service domain
- Recognizing service opportunities
- Drilling down into atomic services
- Consolidating into composite services

Module 5: Refining the conceptual design

- Identifying the underlying resource for the service
- Selecting services to include in the SOA
- Merging existing assets with new opportunities

Module 6: Developing logical services

- Integrating consumers
- Exploiting the five composition styles
- Bus
- Hierarchical
- Star
- Network
- Circular

Module 7: Achieving effective designs

- Supporting loose coupling
- Establishing relationships between services
- Handling sequential processing

Module 8: Addressing the business needs

- Designing for reuse and integration
- Decomposing to create reusable services

Module 9: Factoring in brokers

- Identifying "services for services"
- Leveraging the seven categories of brokers

Module 10: Specifying operations

- Deriving operations from use cases
- Identifying design flaws early to take corrective action
- Focusing on resources rather than actions

Module 11: Communicating the specification

- Constructing reusable service actions
- Expressing your design as a specification

Module 12: Messaging for services

- Formatting the operation's messages
- Evolving messages from the SOA design

Module 13: Finalizing the service design

- Specifying operations and endpoints
- Binding messages to operations

Module 14: Planning for implementation

- Picking the right technology set
- Matching technology to the three SOA scenarios
- Dealing with long-running business processes

Module 15: Building services

- Creating services from the SOA modeling process
- Developing service consumers
- Orchestrating services to deliver new functionality

Module 16: Structuring services

- Merging interoperability performance with Star pattern
- Providing for responsive Ajax applications

Module 17: Applying "Lessons Learned" to improve designs

- Facilitating asynchronous services
- Dealing with change and growth

Module 18: Ensuring performance

- "Chatty" vs. "Chunky" messages
- Combining services through effective message design

Module 19: Instituting an SOA infrastructure (SOAIS)

- Advancing up the Services Integration Maturity Model
- Leveraging Enterprise Services Buses (ESB)