

# **Architect Enterprise Applications with Java EE**

## **Introducing Enterprise Architecture**

- What is Enterprise Architecture?
- An Architect's Roles and Responsibilities

## **Introducing Fundamental Architectural Concepts**

- Distinguish between architecture and design
- Architectural Patterns
- Architectural Deliverable Artifacts
- What is an Enterprise Architecture Framework
- 4 + 1 View Model
- Architectural Modelling Using UML
- Architecture Workflow
- What is an Enterprise Architecture Framework

## **Developing a Security Architecture**

- Analyzing the Impact of Security in Distributed Computing
- Examining Security in the Java EE Technology
- Understanding Web Services Security

## **Understanding Non-Functional Requirements**

- Examining Non-Functional Requirements (NFRs)
- Common Practices for Improving Qualities
- Prioritizing Quality-of-Service (QoS) Requirements
- Inspecting QoS Requirements for Trade-offs

## **Defining Common Problems and Solutions: Risk Factors and System Flexibility**

- Identifying Risk Factors
- Designing a Flexible Object Model

## **Defining Common Problems and Solutions: Network, Transaction and Capacity Planning**

- Describing Network Communication Guidelines
- Justifying the Use of Transactions
- Planning System Capacity

## **Java EE 6 Overview**

- Java EE 6 Goals
- Java EE Containers
- Classic Java EE 5 Architecture
- Impact of Java EE 6 on Architecture

## **Developing an Architecture for the Client Tier**

- Client Tier Development Roles
- Information Architecture Client Concerns
- Selecting User Interface Devices and Technologies
- Discovering Reusability in the Client Tier
- Deployment Strategies for the User Interface
- Security Concerns in the Client Tier
- Testing

## **Developing an Architecture for the Web Tier**

- Responsibilities of the Web Tier
- Separation of Concerns
- Comparing Web Tier Frameworks
- Providing Security in the Web Tier
- Scaling the Web Tier

## **Developing an Architecture for the Business Tier**

- Business Tier Technologies
- Architecting the Domain Model
- Development Best Practices

**Developing an Architecture for the Integration and Resource Tiers**

- Examining Enterprise Information System Integration
- Reviewing Java Integration Technologies
- Applying Integration Patterns
- Examining Service-Oriented Architecture (SOA)

**Evaluating the Software Architecture**

- Evaluating Software Architectures
- Evaluating Java EE Technologies
- Creating System Prototypes
- Selecting Servers and Frameworks