

J2EE Application Architecture Design and Best Practices

Duration

1 day

Instructor

Douglas Muir

Class Limit

Sam Rostam

Prerequisite

None

Price

On-site:

Please contact SPC
for pricing (contact
information on page 2)

Public Training:

\$495 (1 day)

*Discount available for
early registration

Materials Provided

- Student manual containing the course slides
- Student handouts with class exercises and class studies

This course begins with a discussion of the state of enterprise computing and outlines how the major J2EE technologies address these needs. A review of the J2EE architecture and a discussion of how to design a robust application with the J2EE Blueprints is then combined with a demonstration of a real-world solution built using the J2EE specification. The remainder of the course describes a set of best practices in applying J2EE technologies at several tiers such as the Client tier, the Web tier, the EJB tier and the EIS tier.

In addition, participants will learn how to address flexibility, performance, security and manageability issues with a series of general guidelines. Based on the material found in the J2EE Blueprints "Designing Enterprise Applications" and additional examples drawn from the real-world experiences at Sun Microsystems' Java Enterprise Services, this course provides a fast-track and immediately applicable learning experience for system architects and senior Java developers.

In this one day seminar participants will learn to:

- Describe J2EE technology and basic architectural principles
- Describe Layers, Tiers and capabilities of various elements of an architecture
- Describe scalability, capacity, flexibility, reliability, manageability and security
- Describe Service-based and pluggable component architecture
- Describe Best Practices and related J2EE design patterns for the Client tier, the Web tier, the EJB tier and the EIS tier.
- Create an end-to-end design for a real-life enterprise application
- Demonstrate use of guidelines and proven best practices

Intended Audience

This seminar is intended for Java developers and systems architects with a good understanding of object-oriented programming concepts and some knowledge of UML.



TRAINING

J2EE Application Architecture Design

Instructor

Sam is Sun certified as a Java Enterprise Instructor and Scalable Internet Architect and Trainer for Forte. He has taught courses at Fortune 1000 companies across North America. Most recently as a Senior Consultant at Sun Microsystems Palo Alto CA, he focused on Internet, eBusiness & Enterprise Systems Architecture in Java and Forte. Engagements included projects at Motorola , TransCanada Pipeline, Bank of America, HP, US West, Airborne Express, US Air force, GM and Applied Materials.

Sam holds certifications on adult learning and effective teaching techniques as well as Sun/iPlanet certifications on eBusiness infrastructure and systems integration using Java, LDAP and Portal. He holds an MSc from SFU and studied in a PhD program at UBC.

With over 12 years experience as a trainer, an educator, software engineer and an enterprise systems consultant, Sam brings a unique perspective for effective learning. His teaching experience includes BCIT, SFU, TechBC and UBC.

For more information on this or other SPC Springboard courses, please visit www.spcspringboard.com or e-mail SPC at info@spc.ca

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Outline

- Enterprise Applications Overview: Models of Client/ Server Architecture
- Creating Architecture using J2EE Technology : Layers and Tiers with J2EE Technology, Flexibility, Scalability and Manageability
- Architectural Design Goal : Service-based Capabilities, Roles & Responsibilities
- MVC Pattern
- Web Tier Best Practices: Servlet & JSP Components, Web Design Options, Model 1 & Model 2 Architectures
- EJB Tier Best Practices: Stateful & Stateless Session Beans, CMP & BMP with Entity Beans , Data Access Objects, Session Bean Facades
- EIS Integration : JDBC and Access Objects, Connection Guidelines, XML Integration
- Container Services : Security features & guidelines, Declarative & Programmatic Authorization, Transaction guidelines in Web Tier, Transaction guidelines in EJB Tier, Distributed Transactions
- Common J2EE Design Patterns : Structural Patterns, Behavioral Patterns, Creational Patterns
- Applying Patterns & J2EE Blueprints : Designing an ATM Network, Demo & Discussion of a J2EE reference implementation



TRAINING