

SOA (Service Oriented Architecture)

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[Prerequisites](#)

[Course Summary](#)

This is an **intermediate to advanced** level SOA training course, designed for architects and analysts who need to identify, design, and lead the implementation of SOA projects. We will explore and apply the terminology, the specification, the processes and technologies specific to SOA.

Course Summary and Lessons

The five-day in-depth SOA training course geared for software architects and designers who need to understand what SOA is, the impact of SOA, what it means in terms of today's systems and architectures, and how to apply the concepts in designing distributed architectures.

Session SOA Overview

- ☐ Service Defined
- ☐ SOA Defined
- ☐ Organizational Framework
- ☐ Technical Framework
- ☐ Orchestration
- ☐ Reusability
- ☐ Services vs SOA
- ☐ SOA in the Past
- ☐ What is new in SOA
- ☐ Business Impact/ROI
- ☐ Myths/Reality
- ☐ Adoption issues

Session SOA: The Business Proposition

- ☐ Web Services Standards
- ☐ ESBs
- ☐ Leveraging business processes
- ☐ Challenge to adoption
- ☐ The SOAD Process
- ☐ Roles and Skills

Session SOA: An Architectural Perspective

- ☐ SOA Design Principles
- ☐ RPC vs. REST
- ☐ Web services, SOAP, and WSDL
- ☐ Architectural Issues
- ☐ SOA Maturity Model

Session SOA: A Development Perspective

- ☐ The SOAD Process
- ☐ Architecture
- ☐ OO/UML
- ☐ Services, operations and data
- ☐ Policies
- ☐ W3C standards
- ☐ Web services standards
- ☐ Testing

Session Service-Oriented Architecture

- ☐ Principles
- ☐ Business Process-Driven Development
- ☐ Roles
- ☐ Messaging
- ☐ Transactions
- ☐ Security
- ☐ Business modeling
- ☐ Design Issues
- ☐ EAI
- ☐ ESB
- ☐ Web Services
- ☐ RPS vs REST
- ☐ Web services, SOAP and WSDL
- ☐ Integrating Legacy application
- ☐ External Integration
- ☐ Governance
- ☐ Strategies

Case Study Workshop

- ☐ Discovery and Identification
- ☐ Recognizing Potential for Reusability

- ☐ Motivation for Service based approach
- ☐ Problems with Ad Hac approach
- ☐ Advantages of Managed Approach
- ☐ Harvesting Reusable Services
- ☐ Refactoring and Agility in Face of Change
- ☐ Issues yet to be adequately resolved

Session: Defining Business Processes Using BPEL

- ☐ BPEL Overview
- ☐ Top-down Process Design
- ☐ Bottom up Process Design
- ☐ Using WSDL
- ☐ Process Elements and properties
- ☐ Select Expression Language
- ☐ Partner Links
- ☐ Variables
- ☐ Fault Handler
- ☐ Compensation Handlers
- ☐ BPEL Process as a Service

Service-oriented Analysis and Design

- ☐ OOAD vs SOAD
- ☐ Analysis
- ☐ Design
- ☐ Implementation
- ☐ Process

Session: SOA Analysis

- ☐ Use cases
- ☐ Identifying services
- ☐ Operations and data formats
- ☐ Error conditions
- ☐ Service reusability
- ☐ Identifying processes
- ☐ Best practices

Session: SOA Design

- ☐ Business process modeling
- ☐ XML and XML Schema
- ☐ Asynchronous Services
 - o Callbacks
 - o Messaging

- o Non-blocking calls
- ☐ Best practices

Session: SOA Best Practices

- ☐ Planning
- ☐ Standardizing
- ☐ Designing
- ☐ Managing
- ☐ Implementing

Session: SOA Patterns

- ☐ Direct Connections
- ☐ Broker Interactions
- ☐ Serial Process Flows
- ☐ Serial and Parallel Processes

Session: SOA Anti-Patterns

- ☐ SOA Adoption antipatterns
- ☐ Service identification & design antipatterns
- ☐ Service relation antipatterns

Session: SOA Governance

- ☐ Governance Overview
- ☐ Importance
- ☐ Responsibilities
- ☐ Implementation

Session: Enterprise Service Bus

- ☐ Overview
- ☐ Roles in SOA
- ☐ Security Issues
- ☐ ESB Issues

Session: SCA and SDO

- ☐ Overview
- ☐ Service Components
- ☐ Service Data Objects

Session: Web Services Overview

- ☐ W3C standards
- ☐ WSDL
- ☐ UDDI
- ☐ Tools

☐ Implementation technologies

Session: Introduction to WSDL

- ☐ Overview
- ☐ Documents
- ☐ Ports
- ☐ Bindings
- ☐ UDDI
- ☐ Syntax

Session: Messaging in SOA

- ☐ Overview
- ☐ Reliability
- ☐ Delivery
- ☐ Addressing
- ☐ Security
- ☐ Notification

