iconATG
+1 866 ICON US1
info@iconATG.com

Service Oriented Architecture for Architects

Defining a Service Oriented Architecture (SOA) is the current challenge of many enterprise IT organizations. The emergent popularity of Web Services, and its ease of implementation, has muddied the waters, as many have adopted an incremental approach to SOA via Web Services, without first thinking through the larger architectural issues. This course sets the context for describing an SOA from an architectural perspective, coming to grips with the reality of this emerging technology, and providing a detailed understanding of the elements that comprise SOA, as well as techniques and practices for creating organization wide software integration solutions using SOA concepts.

Objectives:

- Understand the basic concepts of SOA
- Learn the different paths to implementing SOA
- Understand the roles and processes important to creating Service Oriented Architectures
- Learn how to communicate your architecture
- Understand an SOA Reference Architecture

Topics covered:

- What is SOA
- SOA Strategies
- The elements of a Service Oriented Architecture
- Describing a Service Oriented Architecture
- Service Oriented Integration
- Migrating from traditional architectures to SOA
- Designing and documenting a service oriented architecture for an organization
- Process and Activities for SOA
- Next Steps

Audience:

This course is designed principally for the technical and enterprise architects. However, designers, and other project team members who are interested in understanding SOA concepts will greatly benefit from this course. It is also beneficial to technical leads and software quality assurance personnel who oversee development of systems and require an understanding of the process and the artifacts being produced.

iconATG
+1 866 ICON US1
info@iconATG.com

Prerequisites:

Prior architectural experience and high-level design experience

Duration:

2 days

Outline:

1. What is service oriented architecture?
   - Defining software architecture?
   - The evolution of the service concept
   - Defining SOA
   - SOA advantages and risks
   - Maintaining a User focus

2. SOA Adoption Strategies
   - Integration
   - Enablement
   - Composition
   - Collaboration
   - Innovation

3. The Elements of SOA
   - Services
   - Service Repository
   - Finding services
   - Enterprise Service Bus
   - Service networks
   - Service Types
     - Application front-ends
     - Basic services
     - Intermediary services
     - Process centric services
     - Public enterprise services
   - Application layers: Traditional vs. SOA
     - Evolution of layering

4. Describing a Service Oriented Architecture
   - A Multi-faceted view of Architecture
     - A logical view of SOA
     - A contract view of SOA
     - A process view of SOA
     - A deployment view of SOA
   - Documenting an SOA Architecture

5. Service Oriented Integration
   - Enterprise Integration
   - Conventional integration approaches
   - Interfaces: Tight versus Loose coupling
   - Protocol based integration
   - The language of integration
     - XML and SOAP
     - Message Oriented Middleware
   - Five elements of Service Oriented Integration (STORM)
     - Services
     - Transformation
     - Orchestration
     - Routing
     - Messaging

6. SOA activities and process
   - SOA process roles
     - Management
     - Analyst
     - Architect
     - Designer
     - Developer
     - Tester
   - Business Process Management
   - Enterprise-scope architectural activities
   - Project-scope architectural activities
   - Iterative development within a Service Oriented Architecture
     - Project management considerations
   - Change Management

7. SOA Reference Architecture
   - Expanding the Multi-faceted view
     - Logical View
       - Using ESB diagrams to describe the system
       - Interaction diagrams
     - Process View
       - Activity diagrams
       - IDEF0
     - Contract View
       - SRC Cards
       - Contract definitions
       - Constraints
       - Quality specifications
     - Deployment View
       - Nodes and Platforms
       - Clusters and Federated services
   - SOA Architecture Patterns
     - Native Services
     - Service Proxy
     - Document-centric Services
     - Orchestration Services
   - Architectural components
     - Platform options
       - J2EE
       - Web Services
       - .Net
     - Interfaces and Contracts
     - Repository components
     - Adaptors
       - Legacy
       - Database
     - Message Oriented Middleware (MOM) options
       - Message queuing
       - CORBA
       - J2EE options
       - Web Services
     - Underlying Service Networks
       - Directory
       - Security
       - Caching
       - Gateways
       - Routing
       - Transformation
     - Other Architectural options
       - BPEL
       - Frameworks

8. Wrap up - How do you get from here to there?
   - Understanding the Service Oriented Maturity Model
   - Implementing the Business Process Model
   - Creating a Service Oriented Roadmap

iconATG
+1 866 ICON US1
info@iconATG.com

www.Training.IconATG.com

Why IconATG?

Consulting & Mentoring
Training

St. Louis
Washington DC

2005 Training Stats:

2,618 students
197 courses delivered
121 companies

- Thirteen years of experience mentoring, consulting, and developing training programs for large IT organizations
- Full software lifecycle curriculum of cost-effective, tailored courses
- Seasoned instructors qualified through hands-on experience
- Experienced mentors and consultants with demonstrated project success
- Proven experience tailoring and extending the Unified Process and Agile/Scrum Processes

IconATG is a thought-leader in information technology training, mentoring and consulting. Our training staff has successfully developed cost-effective, customized IT training programs and we have taught thousands of students through our formal courseware and hands-on workshops. We offer introductory to advanced courses in focused disciplines of the full software lifecycle including the Unified Process (RUP), Agile, UML, requirements and use cases, usability, project management and architecture (SOA/MDA). Our instructors' real-world expertise is incorporated in each of our classes, giving your team the practical skills to be more productive when developing today's most demanding applications.

Our mentors and consultants have worked with project teams to apply new technologies and processes in their organizations to ensure project success. Full lifecycle experience allows IconATG consultants to deliver expert knowledge in specific disciplines while providing an understanding of the workflow throughout the lifecycle. Mentors and consultants actively work with the project team helping them develop skills and address problems through facilitation, demonstration, co-development, review, observation and advice. Mentoring solidifies knowledge gained through training by applying the concepts learned in class. Icon's extensive project experience has shown that teams better understand new processes and techniques by applying them with a seasoned mentor. IconATG is that critical resource; we can help ensure your success.