



SOA Adoption and Architecture Fundamentals

This course takes the student far beyond the limited view of SOA as simply a collection of web services. Students learn how to assess an organization's SOA capabilities in eight separate business and technical domains, and how to analyze the gap between those capabilities and their SOA vision. From that maturity assessment, they learn steps to develop a multi-year SOA road map for an organization and a framework for SOA project selection. A deep-dive exploration of SOA Reference Architecture from the conceptual, logical, product mapping, and physical perspectives is presented before the course transitions its focus to the service engineering life cycle.

As the course introduces the service engineering life cycle, it stresses the importance of analysis, architecture, delivery and management. Lessons present criteria and techniques for service identification and discovery, and guidelines for consistent access to enterprise information. Requirements management is discussed, and the decomposition of functional requirements, business processes, applications and data requirements is presented. The identification, discovery, justification and validation of services is covered, and is followed by an exploration of service delivery. Additional course topics include a discussion of the principles of service-oriented integration, and the reasons and guidelines for establishing a SOA governance framework.

Learn to:

- Assess an organization's SOA maturity
- Identify and prioritize service candidates
- Define a high level conceptual and logical architecture
- Create an SOA road map for an organization

Audience

- Architect
- Implementer

Objectives

- Explain IT Strategies from Oracle (ITSO) and Oracle Reference Architecture (ORA)

- Perform a SOA maturity assessment
- Apply appropriate criteria to service and project selection
- Contribute to development of a SOA road map
- Explain Oracle's definition of a service, and the inter-relationship of the facets of a service
- Understand the importance, components and various views of a SOA reference architecture
- Perform functional requirements decomposition and use the results of that decomposition to expand a business function model
- Identify and justify a service
- Create and evaluate a service contract
- Map SOA governance to the ITSO Unified Governance reference model
- Recommend incremental steps in the development of a SOA Governance road map
- Identify important integration and service architectural principles and explain how they apply to service-oriented integration

Topics

- IT Strategies from Oracle (ITSO) and Oracle Reference Architecture (ORA) Overview
 - Introducing ITSO and ORA
 - Describing Oracle Reference Architecture
 - Describing Enterprise Technology Strategies
 - Describing Enterprise Solution Designs
- Oracle's Approach to Service-Oriented Architecture (SOA)
 - Defining Service-Oriented Architecture
 - Discussing Fundamentals of SOA Adoption
 - Introducing SOA Methodology Approach: Road Map Creation
 - Introducing SOA Methodology Approach: Strategy and Planning
 - Introducing SOA Execution
- Creating an SOA Road Map
 - Introducing SOA Road Map Creation
 - Exploring the SOA Maturity Model
 - Describing the SOA Road Map Creation Process
- Service Terms and Concepts
 - Defining a Service
 - Exploring a Service Model
 - Explaining the Importance of Service Versioning
- SOA Reference Architecture
 - Explaining the Importance of a Reference Architecture
 - Describing the Conceptual View
 - Describing the Logical View
 - Describing the Product Mapping View
 - Describing the Deployment View
 - Describing Web Service Security
- Software Engineering in a SOA Environment - Requirements Management
 - Introducing Oracle Service Engineering Framework
 - Explaining the Business Function Model, its Benefits and Construction
 - Explaining Functional Requirements Decomposition
 - Explaining Business Process Decomposition
 - Explaining Application Decomposition
 - Using Results of Decompositions to Expand a Business Function Model
 - Explaining Data Requirements Decomposition
 - Describing What Kinds of SOA Assets are Derived from these Activities
- Service Identification and Discovery
 - Naming the 4 Actions Related to Service Identification
 - Performing Functional Activity Analysis to Update a Business Function Model

- Describing the Characteristics of Shared Project, and Partially Shared Requirements
- Performing Business Entity Analysis
- Explaining How a Service Candidate is Justified
- Explaining How a Prescription for Reuse is Validated
- Service Delivery
 - Explaining and Performing Boundary Analysis of a Service by Scope
 - Explaining and Performing Boundary Analysis of a Service by Architectural Classification
 - Describing a Service Contract by Characteristic and by Content
 - Explaining the Importance of Service Interface Design
 - Describing the SOA Assets Generated as a Result of these Activities
- Service-Oriented Integration
 - Explaining How Service-Oriented Integration Differs from Traditional Integration Approaches
 - Describing Principles that Should be Met by Any Architecture that Supports a Service-Oriented Approach to Integration
 - Describing the Development, Process, and Deployment Views of Service-Oriented Integration
 - Using Service-Oriented Integration Patterns and Message Exchange Patterns to Identify Best Approaches for Integration Scenarios
- SOA Governance
 - Naming the Governance Disciplines and Describing Their Relationships
 - Naming and Describing the Constituent Parts of the ITSO Unified Governance Reference Model
 - Explaining the Reasons for, and Benefits of, SOA Governance
 - Mapping SOA Governance to the ITSO Unified Governance Reference Model
 - Applying SOA to the ITSO Unified Governance Continuous Improvement Loop
 - Describing the Challenges of, SOA Organization Governance and the Importance of People to Addressing those Challenges