SOA Certified Professional Program

Course Catalog

SOASchool.com™
SOA CERTIFIED Professional
The SOA Certified Professional program is dedicated to excellence in the fields of service-orientation, service-oriented computing and SOA.

Through a series of seasoned, vendor-neutral course modules, IT professionals can gain project ready proficiency in one or more areas of expertise.

Through a series of formal exams, IT professionals further have the opportunity to prove their proficiency by obtaining one or more certifications.

This program was developed in cooperation with top-selling SOA author Thomas Erl and major SOA organizations and academic institutions and is overseen by the SOA Education Committee.

The program is comprised of a series of one-day courses (described individually in this catalog).

There are three options for taking courses:

- **On-Site Training** - A certified instructor can travel to your location to deliver a workshop.
- **Public Workshops** - Workshops open for public registration are held on a regular basis.
- **Self-Study** - Self-study kits allow you to study the materials remotely and at your own pace.

Each course has a corresponding exam. Exams are available world-wide via the Prometric testing network.

Completion of the exams is optional and is intended for those interested in achieving one or more of the following certifications:

- Certified SOA Consultant
- Certified SOA Analyst
- Certified SOA Architect
- Certified SOA Security Specialist
Module 1
Fundamental SOA & Service-Oriented Computing

This course provides a well-rounded, end-to-end overview of service-oriented computing, service-orientation and SOA. Attendees benefit from this fundamental coverage by gaining an understanding of common terms, concepts and important industry developments.

The following primary topics are covered:

- **Strategic Goals of Service-Oriented Computing**
- **Fundamental Service-Oriented Computing Terms**
- **Concepts relating to Services, Service-Oriented Architecture and Service Compositions**
- **Introduction to the Service-Orientation Design Paradigm and related Principles and Concepts**
- **SOA Project Delivery Approaches and Planning**
- **Introduction to the Service Delivery Lifecycle, including Service-Oriented Analysis, Service-Oriented Design and Service Modeling**
- **Adoption Impacts and Requirements**
- **Enterprise Service Bus and Web Services**
- **An Overview of Next Generation SOA, including Web 2.0, REST, Cloud Computing, Service Grids and Service Virtualization**

**Exam S90.01**

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
This course focuses on modern Web industry standards and technologies that are establishing the foremost means of building services today.

The following primary topics are covered:

- Basic XML and XML Schema Concepts
- Overview of Standards Organizations
- Contrasting Component-Based Architecture with Web Services
- Service Roles and Service Agents
- Basic WSDL and SOAP Concepts plus UDDI, Discovery and Service Registries
- Basic REST Service Concepts and Patterns
- Web Service Anatomy (physical architecture)
- Message Exchange Patterns (MEPs) and Service Activities
- Context Management and Coordination
- Atomic Service Transactions and Compensations
- Orchestration and WS-BPEL
- Advanced Messaging, Reliable Messaging and Policies
- Enterprise Service Bus (ESB) Topics

Exam S90.02

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 3
SOA Design & Architecture

This course delves into the service-oriented architectural model and the service-orientation design paradigm and establishes the unique characteristics and dynamics that constitute service-oriented solution logic.

The following primary topics are covered:

- History of Service-Oriented and SOA Theory
- Service-Oriented vs. "Silo" based Design
- Distinguishing Characteristics of the SOA Model
- Understanding Services and Service Capabilities
- Complex Service Composition Design, Composition Runtime Roles and Responsibilities
- The Service-Oriented Design Paradigm
- "Contract First" Design, Standardized Service Contracts, and Uniform Contracts
- Service Loose Coupling and Coupling Types, Service Abstraction and Information Hiding
- Service Reusability and Agnostic Design, Service Autonomy and Runtime Control
- Service Statelessness and State Deferral, Service Discoverability and Interpretability
- Introduction to SOA Design Patterns

Exam S90.03

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 4
SOA Project Delivery & Methodology

This course establishes service delivery lifecycle stages with an emphasis on service-oriented analysis and service modeling. Organizational roles and service profile specifications are also covered along with common SOA project delivery approaches.

The following primary topics are covered:

- Planning SOA Projects and SOA Delivery Strategies
- Service-Oriented Analysis and Service Modeling Processes
- Conceptual Services and Service Candidates
- Service-Oriented Design Processes for Different Types of Services
- Post-Design Project Phases (Service Development, Service Testing, Service Deployment & Maintenance, Service Discovery)
- SOA Project Roles (including Service Analyst, Service Architect, Service Custodian, Schema Custodian, Policy Custodian, Service Registry Custodian, Governance Specialist, Security Specialist, and others)
- Authoring and Maintaining Service Profiles

Exam S90.04

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 5
SOA Technology Lab

In this lab-style course attendees are required to work hands-on with contemporary service technologies. Participants study the primary elements of industry-standard Web languages and protocols in order to learn the internal structure of service contracts and messages.

The following primary topics are covered:

- Fundamental XML Syntax and Application
- XML Schema Structure
- Fundamental XML Schema Language Elements
- WSDL Definition Structure and How WSDL Relates to XML Schema and W S-Policy
- Namespaces and XML Schema and WSDL Definitions
- Fundamental WSDL Language Elements
- SOAP Message Structure and How SOAP Relates to WSDL and XML Schema
- Fundamental SOAP Language Elements
- W S-BPEL Process Definition Structure and How W S-BPEL Relates to WSDL
- HTTP Methods and Uniform Contracts
- REST Conventions and Resources

Exam S90.05

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 6
Advanced SOA Analysis & Modeling

This course covers a range of service analysis and modeling topics with an emphasis on business service context, service models, functional scope definition, balanced granularity and establishing effective service layers as part of an overall conceptual blueprint.

The following primary topics are covered:

- Planning Service-Oriented Analysis Projects
- Working with Service Candidates and Profiles
- Business Analysis Definition Techniques
- Service-Orientation and Separation of Concerns
- Fundamental Service Definition Patterns
- Understanding Service Encapsulation with Agnostic and Non-Agnostic Service Contexts
- Stepping Through a Service Modeling Process
- Logical Service Abstraction Layers and Service Model Classifications
- Common Granularity Types and Scopes
- Business Process Encapsulation and Defining Business Entities for Service Encapsulation
- Guidelines for Service Blueprint Definition and Governance

Exam S90.06

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp

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Module 7
SOA Analysis & Modeling Lab

As a continuation of course modules 4 and 6, this hands-on workshop allows attendees to apply the concepts, processes, techniques, patterns and principles previously covered in order to complete a set of analysis and modeling exercises.

Both individual and group exercises are provided, requiring participants to solve a number of inter-related problems, with the ultimate goal of creating their own service-oriented solution blueprints.

The instructor works closely with participants to ensure that all exercises are carried out completely and accurately. Attendees can voluntarily have exercises reviewed and graded as part of the class completion.

Exam S90.07

S90.07 is a two-hour lab exam that requires the testing candidate to complete a series of analysis and modeling problems to demonstrate project-ready proficiency.

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 8
Advanced SOA Design & Architecture

This course provides an in-depth exploration of service-orientation, service-oriented architecture and SOA design patterns, including those that relate to the Enterprise Service Bus (ESB) and Orchestration platforms.

The following primary topics are covered:

- Defining a Service-Oriented Architectural Model and SOA Architecture Types
- Fundamental and Advanced SOA Design Patterns
- Designing SOA with Service Agents and Supporting Multiple Protocols
- Legacy Encapsulation and ESB Design
- Asynchronous and Event-Driven Messaging, Message Routing and Reliable Messaging
- Global and Domain-Level Policy Enforcement and Positioning of Business Rules
- Orchestration Architecture Design, State Deferral and Service Grids
- Service Data Replication, Cross-Service Transactions and Compensating Transactions
- Data Transformation and Protocol Bridging
- Introduction to REST-Inspired Patterns

Exam S90.08

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 9
SOA Design & Architecture Lab

As a continuation of course modules 3 and 8, this hands-on workshop allows attendees to apply the technologies, concepts, techniques, patterns and principles previously covered in order to complete a set of design exercises.

Both individual and group exercises are provided, requiring participants to solve a number of interrelated problems, with the ultimate goal of creating their own design specifications.

The instructor works closely with participants to ensure that all exercises are carried out completely and accurately. Attendees can voluntarily have any exercises reviewed and graded as part of the class completion.

Exam S90.09

S90.09 is a two-hour lab exam that requires the testing candidate to complete a series of design and architecture problems to demonstrate project-ready proficiency.

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 18
Fundamental SOA Security

This course provides essential techniques, patterns, and industry technologies that pertain to establishing security controls and security architectures for services and service-oriented solutions.

The following primary topics are covered:

- Common SOA Security Practices and Service Security Controls
- Security and the Service-Oriented Architectural Model
- SOA Security Considerations for Service and Composition Architectures
- Service Interaction Security Patterns
- Security Implications of Service-Orientation
- Authentication, Authorization, Confidentiality and Integrity Mechanisms Relevant to Service-Oriented Solutions
- PKI, Digital Certificates, Certificate Authorities
- Single-Sign On Technologies
- Web Services and XML Industry Standards Relevant to Service-Oriented Solutions
- Common and Emerging Threats and Attacks

Exam S90.18

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 19
Advanced SOA Security

This course covers a series of technical and complex security topics pertaining to contemporary service-oriented solution design, infrastructure, middleware, and modern service technologies.

The following primary topics are covered:

- Security Extensions and Controls for Enterprise Service Bus (ESB) Implementations
- Security Patterns for Internal Service Architecture
- Security Risks and Considerations for Cloud-based Services and Service Compositions
- Authentication Sessions and Secure Conversations
- Security Token Structures and Issuance
- Using W S-Trust and W S-SecureConversation with SAML
- REST Security Controls and Designs
- Using HTTP Security Mechanisms
- Federation and Trust Brokering
- Security Policy Design and Governance
- Understanding and Preparing for SOA Security Threats

Exam S90.19
To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soa.cp
Module 20
SOA Security Lab

As a continuation of course modules 18 and 19, this hands-on workshop allows attendees to apply the security concepts, techniques, patterns and technologies previously covered in order to complete a set of exercises.

Both individual and group exercises are provided, requiring participants to solve a number of inter-related security problems, with the ultimate goal of establishing security architectures.

The instructor works closely with participants to ensure that all exercises are carried out completely and accurately. Attendees can voluntarily have any exercises reviewed and graded as part of the class completion.

Exam S90.20

S90.20 is a two-hour lab exam that focuses on the practical application of the concepts, patterns, industry technologies, and practices pertaining to SOA security and for solving complex service security problems.

To prepare for the exam, attend an instructor-led workshop or purchase an SOASchool.com™ Self-Study Kit.

For exam information, visit: www.prometric.com/soacp
Module 24
Fundamental Cloud Computing & SOA

This course provides essential techniques, patterns, and industry technologies that pertain to Cloud Computing and service-oriented solutions that utilize Cloud-based services.

The following primary topics are covered:

- Benefits, Challenges and Risks of Cloud Computing and Cloud-based Services
- Emerging Cloud Computing Industry Standards, Specifications and Community Projects
- Connection Points Between the Service-Oriented Architectural Model and Cloud Computing Technology Architecture and Infrastructure
- Applying Service-Oriented Principals to Cloud-based Services and Service Compositions that incorporate Cloud-based Services
- Cloud Computing-related Patterns and How They are Applied with Service-Oriented Solutions
- Public Cloud, Private Cloud, Hybrid Cloud and Community Cloud Deployment Models
- Use Cases for Cloud-based Services and Solutions Implemented via Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) Delivery Models
- Business Value and ROI of Cloud Computing Platforms and Cloud-based Services
- Common Cloud Computing Adoption Impacts and Requirements
- Emerging Cloud Computing-related Technologies and Innovations
Module 25
Advanced Cloud Computing & SOA

This course covers a series of technical and complex Cloud Computing topics pertaining to contemporary service-oriented solution design, infrastructure, multi-tenancy, and virtualization technology.

The following primary topics are covered:

- Modern Cloud Technologies, including Autonomic Computing, Service Grids, Geographically Distributed Systems (and several others)
- Cloud Service Technology Mediums, including Cloud-based REST Services and Cloud-based SOAP Web Services
- Security for Cloud-based Services and Service Compositions, including Infrastructure, Platform, and Service-level Security
- Common Risks, Threats and Vulnerabilities of Current Cloud-based Services, Cloud-hosted Solutions and Private Cloud-based Compositions
- Cloud Platform and Cloud Service Governance Considerations and Challenges
- Service Level Agreements (SLAs) for Cloud-based Services and Service Compositions
- Cost Models and Charge-back Models for Cloud-based Services
- Enterprise Infrastructure Considerations for Scaling and Improving Reliability of Cloud-based Services
- Relationships between Service Models and Cloud Delivery Models
- Complex Use Cases for Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) Delivery Models
Module 26
Cloud Computing & SOA Lab

As a continuation of course modules 24 and 25, this hands-on workshop allows attendees to apply the Cloud Computing concepts, techniques, patterns and technologies previously covered in order to complete a set of exercises.

Both individual and group exercises are provided, requiring participants to solve a number of inter-related problems, with the ultimate goal of establishing service-oriented cloud computing architectures based on Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) delivery models.

The instructor works closely with participants to ensure that all exercises are carried out completely and accurately. Attendees can voluntarily have any exercises reviewed and graded as part of the class completion.
The following certifications are in development:

- Certified SOA Java Developer
- Certified SOA .NET Developer
- Certified SOA Governance Specialist
- Certified SOA Quality Assurance Specialist
- Certified Cloud Computing Specialist

The following courses are in development:

- Module 10 – Web-Based Service Technology
- Module 11 – Service Development with Java
- Module 12 – Service Development Lab with Java
- Module 13 – Service Development with .NET & Azure
- Module 14 – Service Development Lab with .NET & Azure
- Module 15 – Fundamental SOA Governance
- Module 16 – Advanced SOA Governance
- Module 17 – SOA Governance Lab
- Module 21 – Fundamental SOA Quality Assurance
- Module 22 – Advanced SOA Quality Assurance
- Module 23 – SOA Quality Assurance Lab

Questions? Contact info@soasystems.com
To be automatically notified of new courses, exams and events, send a blank e-mail to: notify@soasystems.com