Service-oriented architecture («SOA»)

Get the necessary knowledge, tools and orientation to realistically assess the possibilities of the SOA approach for your company and to successfully implement it.

Duration: 2 days
Price: 1'950.–
Course documents: Digicomp course materials. In addition, the book "SOA in Practice: The Art of Distributed System Design" by Nicolai Josuttis will be handed out.

Content

Service-oriented architecture (SOA) as a very comprehensive approach poses a great challenge for architects. Different stakeholders inside and outside a company sometimes have a strongly diverging understanding of SOA. As an architect, you have to distinguish SOA from similar approaches such as Enterprise Application Integration (EAI) and differentiate it from techniques and technologies such as middleware in order to achieve a viable architecture. Numerous, often still changing or new appearing standards, techniques and technologies around SOA have to be continuously evaluated and classified by the architect in the enterprise context.

Furthermore, an architect should not view SOA as a purely technological matter. This would result in little economic and strategic added value for a company, i.e., the flexibilization of corporate IT and business processes or the mapping of business processes to the associated corporate IT that ensures the company's success. Instead, an architect should take a close look at the company-specific and organizational aspects of SOA beyond the IT-specific aspects of SOA.

1. Motivation and definition
2. Concepts
   - Service, Service Orchestration
   - Contract
   - Repository
3. Scenarios
   - SOA vs. EAI, cloud computing, object orientation, etc.
   - Business process
4. Procedures and techniques for introducing and implementing SOA in the enterprise
5. SOA from the enterprise perspective
   - Goals, benefits, impacts and challenges of SOA for enterprises
   - SOA as a strategy
   - SOA scenarios
   - Integration and transformation of enterprise IT
   - Analysis of services
   - Business Process Management (BPM)
   - Business Activity Monitoring (BAM)
   - SOA implementation and operation (procedures, SOA governance, etc.)
   - Project organization (process, roles, skills, testing, versioning)
6. SOA from an IT perspective
   - Design of services
   - Service architecture (service categories, data model, service providers and consumers)
   - SOA reference architectures
   - Quality requirements (security, reliability, etc.)
   - Transactions
   - SOA infrastructure (registry/repository, enterprise service bus (ESB), process engine, etc.)
   - Web services (SOAP, WSDL, UDDI, etc.)
   - Overview of SOA platforms (Apache, IBM, JBoss, Microsoft, Oracle, etc.)

    ○ Patterns and best practices
7. Case study as a practical exercise
8. Example for the implementation of a service architecture based on Eclipse, Java SE/EE and JBoss

Key Learnings

- Knowing the IT and business aspects of SOA
- Knowing concepts, principles and techniques of SOA
- Knowing technologies for the implementation of SOA
- Knowing the procedures for implementing SOA in the enterprise
- Planning, designing and implementing SOA in practice

Target audience

This course is designed for IT architects, IT developers, analysts and project managers who want to get a solid introduction to SOA.

Further courses

- Model-Driven Software Development (MDSD/MDD/MDA) («MDA»)
- System Integration («SYI»)
- Digital Enterprise Architecture («DIGIEA»)
- Domain-Driven Design («DDD»)
- Web Services – Basics and Architectures («XWS»)
- IoT, Microservices and Machine Learning – Modern Architecture-Relevant Methods and Technologies («MODTEC»)

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-software-engineering/it-architecture/enterprise-software-architecture/course-service-oriented-architecture