

# SCA Training

**Goals:**

- Being able to use SCA efficiently
- Build solutions using all SCA capabilities

**Our advantages:**

- Training created by the Eclipse SCA project leader
- Many practical exercises (50%)

**Duration:** 2 days

**Public:** Architects, Developers

**Pre-requisite:** Basic knowledge of SOA, XML, Java and web services. Knowledge of Eclipse.

## 1 - SCA presentation

- SOA approach and the SCA specifications
- Basic SCA concepts
- Tuscany runtime
- SCA tooling proposed by the Eclipse SOA Tools Platform (STP) project
- SCA scope regarding JBI, Java EE, Spring, OSGi,..

*Exercises :*

- Setting up and first steps with Eclipse STP tooling
- Tuscany set up

Duration : 3,5 h

## 2 - Assembly, implementation and binding models

- SCA concepts in detail: component, service, reference, wire, binding, composite,....
- Assembly model:
  - Top-down and bottom-up approaches
  - Local, distant, bidirectional, conversational interfaces
  - Auto-wiring, recursive composition
  - Constraining type
  - Java Common Annotations
  - Packaging and deployment
- Binding model:
  - RMI

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- Web Service
  - Atom
  - Implementation model
    - Java, script, and EJB implementation
    - BPEL implementation

## *Exercises:*

- Top-down design using ConstrainingType
- Recursive composition and bidirectional interfaces use
- RMI, Web Service, Atom bindings use
- Spring, HTML and BPEL implementation use
- Packaging and deployment of the application

Duration: 7 h

## 3 - Advanced SCA

- SCA policy framework
  - intent: abstract definition of service quality
  - policy: implementation of the service quality
  - mapping from intent to the policies
  - policies set up for bindings
  - policies set up for implementations
- How to extend the SCA Eclipse tooling

## *Exercises :*

- Policies set up for:
  - Log
  - Safety
- Extension of the SCA Eclipse tools

Duration: 3,5 h