



# SERVICE COMPOSITION

## SOA Blueprint

A structured blog by Yogish Pai

Most leading software vendors have agreed to a new standard called the service composition architecture (SCA). The SCA standard defines services, service dependencies, service implementation, services composition, and the deployment and runtime aspects of developing composite applications. In addition, open-source projects are under way to develop the Java and C++ runtime for SCA, such as the Tuscany project under Apache.

The SCA standard defines the following:

- How to auto-generate code based on the metadata via the mechanisms of byte-code enhancement, dependency injection, and aspect-oriented programming (AOP)
- Mechanism to extend the annotations (controls framework)
- Annotations that come out of the box for Java “plain old Java objects” (POJOs), business process execution language (BPEL), Web services, and .NET or J2EE components
- Configuration parameters and deployment options for a service
- List of mechanisms to instrument and monitor a service.

Additional information about this proposed standard is available at <http://www.osoa.org>

Multiple tools enable architects to compose services. Architects need the following capabilities:

- Map each service to business activities. This is called service orchestration, and it is the lowest level of the business process.
- Compose services based on SCA. Architects define the service, implementation, properties, interfaces, and bindings based on SCA. The development team then leverages this service model for developing and modifying the service.
- Identify which business rules could be externalized and embedded in code for better performance. This is only appropriate for rules that are relatively static; rules must often change to meet the needs of the business. A rules engine should interpret the rules accurately based on the rule parameters.
- Define the business, management, and security policies associated with each of the services
- Identify and define measurement matrixes for enabling business groups to review their KPIs.

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