Topic

Service Oriented Architecture

OASIS Reference Model

Version 1.0

Prepared By

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> **SOA Reference Model**
> --
> * Committee specification.
>   - Not standard.
> * Created to clarify & level terms.
> * SOA applies not just to web services.
> * Supports distributed component reuse.
> * Most appropriate for large-scale
>   architectures.

Summary

The OASIS Reference Model for Service Oriented Architecture 1.0 is a conceptual reference model for software-based service oriented architecture (SOA) development. It seeks to define terms, clarify issues and illuminate major functional components of SOA design. It does not specify particular protocols, standards and other implementation details.

Discussion

Service oriented architectures are framed in terms of *needs*, *capabilities* and *services*. *Service descriptions* provide a discovery mechanism through which capabilities can be learned by others.

SOA as a concept has less to do with the architectural goal of the system than the notion that its components are structured such that each has well-defined and reusable interfaces so that services can be re-purposed easily and support many different applications, rather than being single-purpose implementations.

Because components are reused and may even exist in different domains, a key feature of SOAs is richly descriptive information about each service. Such descriptions should specify enough information so that a developer in another domain has enough information to implement a software system that uses the service.

The Reference Architecture provides descriptions of major system functional components, such as the *service* itself, a *description*, *visibility*, the *execution context*, *interactions*, *real world effects* and *contract & policy* characteristics.

The Reference Architecture provides guidelines against which specific architectures can be measured to determine if they meet the criteria for service oriented architectures.

Strategy Considerations

SOAs are most appropriate for large scale or multi-domain architectures, although they can be built up from individual components complying with SOA principles. SOA as presented is most reasonably implemented as a web services architecture. Other implementations will require exhaustive development of supporting skeletal infrastructure.

For Further Information

1. OASIS Committee Specification 1, Reference Model for Service Oriented Architecture 1.0, C. MacKenzie, K. Laskey, F. McCable, P. Brown, R. Metz, August 2006