Service Oriented Architecture (SOA) Testing

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Abstract

Service-Oriented Architecture (SOA) is an architectural style. Applications built using an SOA style deliver functionality as services that can be used or reused when building applications or integrating within the enterprise or trading partners.

- A service is an implementation of well-defined business functionality.
- Application functions are modularized and presented as services.
- Services are loosely coupled
- Service interface is independent of the implementation.
- Services have platform independent, self-describing interfaces (XML)
- Messages are formally defined
- Services can be discovered
- Services have quality of service characteristics defined in policies
- Services can be provided on any platform

With today’s enterprises focusing on Service Oriented Architecture (SOA), which is more than just a new name for web services and the reality is that SOA implementations are a composite mix of web components, mid-tier components and exposed legacy and backend systems. Unlike traditional testing approaches, SOA testing approach should encompass all the aspects of business processes and also its integration framework. SOA Testing Strategy should not only focus on just the functionality or the front-end clients but also on the integration layers. SOA initiative has thrown complexities in the integration framework that requires complete testing of business workflows across every heterogeneous technology layer of the SOA at both system and component level. This poses a challenge on testing methodologies, which are currently used for an end-to-end testing scenario.

The paper offers:

- An overview of Service Oriented Architecture (SOA) framework
- SOA implications for Businesses (ROI) and Key Drivers for SOA
- SOA and Web Services
- SOA and OOPS and impact on Software Development Life Cycle (SDLC)
- SOA Governance and Center of Excellence (CoE)
- Test strategies for Service Oriented Architecture (SOA) testing
- Challenges of testing the SOA and addressing those unique challenges of testing SOA integration
- A structured approach to SOA automated testing and its best practices
- Q&A Session