SOA TESTING: HOW CAN YOUR ORGANIZATION MAINTAIN QUALITY IN A COMPLEX AND CONSTANTLY CHANGING ENVIRONMENT?

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WHAT IS SOA TESTING?
Contrary to what one might have expected, SOA Testing involves far more than just applying traditional QA techniques and unit test approaches to SOA. Enterprise SOA applications are complex, modular, decentralized and dynamic. Conventional testing methods are mostly ineffective; no longer can you “draw a box around it” or leave testing to be a “last step before production” project activity.

On a very simplistic level, an SOA implements business processes as a collection of one or more services; individual services can be added or tuned to quickly create new business capabilities. This means that to meet the demands of service reusability, for example, service quality and trust need to be established and re-verified throughout the service lifecycle. SOA Testing needs an end-to-end quality management strategy to ensure business requirements are met. This strategy should also address testing for performance and security across multiple integration layers, a variety of delivery platforms and at both the business process and service level.

WHY SOA TESTING?
Some of the most common reasons why SOA Testing is important to the success of an SOA initiative are that it:

• Establishes trust and predictability.
• Helps manage exceptions and ensures service levels are met.
• Improves reuse and agility as services are more reliable.
• Helps reduce costs and improve quality.

CHALLENGES OF SOA TESTING
SOA introduces a number of challenges to the world of testing, many of them complex and difficult to control. These range from loosely coupled services and lack of a service user interface, to a “work-in-progress” environment, external business units and distributed development. Testing needs to ensure continuous quality across all services, endpoints and interfaces.

Automated SOA Testing tools make it possible to keep up with the dynamic nature of an SOA.

HOW DOES SOA TESTING RELATE TO SOA GOVERNANCE?
Fundamental to SOA Governance are the key elements of trust and credibility. SOA Testing verifies that SOA assets meet the functional and operational business requirements, and provides an actionable means of enforcing policy within the testing process. To maintain a continuous quality focus across all SOA lifecycle stages, SOA Testing tools need to be integrated with SOA Governance tools.

BRINGING SOA TESTING AND SOA GOVERNANCE INTO ONE WORLD
The integration between SOA Testing toolsets and Software AG’s CentraSite helps ensure quality and compliance throughout the service lifecycle—a key SOA Governance requirement. This automated approach allows you to:

• Detect defects earlier and reduce costs.
• Manage SOA Testing scripts across the service lifecycle.
• Trigger lifecycle stages based on testing results.
• Activate test procedures based on lifecycle state changes.
• Store test results as part of the SOA asset metadata (see Diagram 1).

FIGURE 1: Test Results
The UI extension of the detailed service view via the additional “SOA Test Status” tab, contains the test result summary.

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