Ensuring Quality of SOA Applications

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Agenda

- SOA background
- SOA & QA
- Automated testing - the next generation
  - Service simulation
  - Validation of business requirements
Business Perspective

Business Process

[Diagram showing a business process flow]
IT Perspective “Integration”
Service Oriented Architecture (SOA)

A pattern of design, development, deployment, and management of enterprise-scale integration and composite applications:

- Applications are organized into business units of work - services
- Service interface definitions are first-class development artifacts
- Services are associated with explicit SLA definition
- Services and their metadata are cataloged in a repository

Forrester Research Inc
Closer Look at a Service

- Characterized by
  - Loose coupling
  - Modular and self contained
  - Composable

- Managed
  - SLA
  - Lifecycle
Acknowledge Complexity
Software QA

Traditional roles

- Practice projects’ control
  - Improve visibility
  - Predict and identify obstacles
  - Align efforts with needs

- Reduce risk of failure

SOA impact

- New projects challenges
  - Business unit cooperation
  - Continues change

- Increase amount of risk
  - Probability of failure
  - Cost of failure
SOA Testing

The process of exercising software to verify that it satisfies specified requirements and to detect errors

SOA Testing Complexity
- BP spans across several applications
- Asynchronous
- Long-lived processes
Customers’ View

“I need to integrate three existing applications, but:

• App #1 – Not ready
• App #2 - $0.25 for each transaction
• App #3 – Owned by other business unit

“I could not offshore development of the financial system because it accesses our mainframe.”

“How do you develop against a service provided by remote controlled combat vehicle?”
Service Simulation
New Validation Challenges

- Non GUI
- Asynchronous
- Long-lived process
- “It’s the business, stupid.”
Business Process
End to End BP Validation

Business Rule Validation Engine
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