



Customer

Webify Solutions is a developer of on-demand, service-oriented business applications (SOBAs) for the insurance and healthcare markets

Challenge

Develop and test a Web-service based property quote SOBA for Fireman's Fund, one of the nation's largest property and casualty insurance providers, to allow independent agents in 27 states to quickly and accurately create property insurance quotes

Solution

Use Mindreef SOAPscope to diagnose, inspect, capture and test Web services and ACORD messages over a VPN link, while ensuring WS-I compliance for WSDLs

Benefits

- Automate 80 percent of Web services testing efforts
- Reduce initial cost of ownership
- Improve team ROI

Mindreef Contribution

- Test Web service response, inspect messages and return attachments
- Automate the Web services testing effort
- Ensure WSI compliance for WSDLs

Technical Data

- Platforms: Java running on Windows and Linux
- Software: AIX, DB2, WebSphere

Quality-Driven
SOA

Mindreef and Webify Solutions

Webify Solutions is a leading provider of on demand, service-oriented business applications that deliver business agility and measurable value for healthcare and insurance companies. Built on open Web services standards and industry semantics, these applications help companies dramatically cut costs, increase revenue, and improve agility by combining existing systems and outsourced service providers into cross-functional, multi-company business processes. Webify is currently engaged in a multi-year, enterprise-wide business transformation initiative for Fireman's Fund Insurance Company (FFIC) in collaboration with IBM, the world's largest information technology company. Fireman's Fund was established in 1863 and is among the nation's top writers of property and casualty insurance, writing more than \$4 billion in gross premiums and employing more than 8,000 people.

The Business Challenge

Independent insurance agents are experienced in navigating the marketplace to find their customers the best coverage at the right price. They're able to work with several insurance companies using an industry hub known as the IVANS Transformation Station – a fully managed network and interface that helps insurance carriers and agents help solve complex business issues. As one of the leading adopters of service-oriented architecture (SOA) within the property and casualty marketplace, Fireman's Fund seeks to increase business agility and migrate to new Web services-driven applications and systems. By integrating its back-end systems with its agent's front-end systems, it plans to offer a standardized and more manageable way to interact with thousands of agents located in 27 different states, and more effectively serve its customers' needs. The property quote application is one project of many within Fireman's Fund multi-year initiative with Webify and IBM to transform and consolidate the number of major applications by 70 percent while improving customer service.

As an IBM "On Demand Optimized Partner," Webify together with IBM will provide Fireman's Fund with a WebSphere optimized suite of products that simplify agency collaboration, enable process transformation, and improve SOA governance. When completed, the work could save the insurer \$200 million, more than double the project's actual cost.

The Technology Challenge

The two-phase project required that Webify first build a Web interface for the quote application. When an agent signs in via the Internet, the application verifies their permissions – such as the types of businesses and stages they can quote – using Web services. The second phase involved developing a back-end connection from Fireman’s Fund to the IVANS Transformation Station. IVANS can receive data in any format and send it out as a message formatted in ACORD-XML – a standard messaging format developed by the Association for Cooperative Operations Research and Development to execute transactions with agents, brokers and partners. Fireman’s Fund receives and routes ACORD messages to various Web services and mainframe structures that are needed to generate a quote. Historically, agents enter property information into a desktop system and fax a form to Fireman’s Fund for rating. The new application is designed to receive ACORD messages and mine internal systems for property-specific data – such as location, codes, earthquake boundaries, or hazard zones – and return pertinent information to agents for rating. The application uses as many as 10 different Web services to seamlessly generate a single quote. At the foundation of its SOA transformation initiative, Fireman’s Fund outsourced its IT hardware infrastructure to IBM and signed an agreement for IBM to provide on-site application development and maintenance into an on-demand infrastructure. This presented an additional challenge as developing and testing took place at Webify’s offices in Texas using a special VPN connection to the back-end infrastructure located in California.

“Mindreef helped us automate approximately 80 percent of our testing efforts, which was phenomenal for the size of this project.”

-- Jim Weeks, senior software quality assurance engineer, Webify Solutions

There were also times when one or more systems were offline when critical testing needed to take place.

The Solution

Mindreef SOAPscope® is Webify’s tool of choice to test and diagnose Web services and gain a deeper understanding of their behavior within applications and SOAs. “We use SOAPscope for everything that involves Web services,” said Jim Weeks, senior software quality assurance engineer at

Webify. “For this project, we were able to test the full property quote capabilities for 27 states and 18-or-so different possible configurations using SOAPscope. It enabled us to build automated tests and conduct in-depth testing and diagnostics of Web services messages. It also served as a user interface to automate the Web services testing effort and as a recorder and playback during tests.” SOAPscope was also used to ensure compliance with

WS-I standards, led by the Web Services Interoperability Organization to promote interoperability across platforms, operating systems, and programming languages. “We like to hang our hat on WS-I compliance,” said Alvin Richardson, software engineer at Webify. “SOAPscope is the tool we use to confirm that a given WSDL is WS-I compliant. In fact, when our collaborators give us a WSDL, we’re able to generate a SOAPscope report identifying any problems. That’s really cool because we can go into a meeting with the information needed to fix the problem immediately.”

The Result

“Mindreef helped us automate approximately 80 percent of our testing efforts, which was phenomenal for the size of this project,” Jim continued. “Many of the tests took upwards of twelve hours, so that was a tremendous amount of work getting done in the middle of the night. SOAPscope allowed us reduce the initial cost of ownership – and is an exceptional

value.” Alvin also commented on the product’s ability to improve team efficiency: “SOAPscope has been a very valuable tool and improves team ROI.” Through its work with Webify and IBM, Fireman’s Fund has saved time and money by using Web services and SOA to increase internal efficiency as well as the quality of transactions with agents. Webify plans to continue using SOAPscope for additional SOBA development initiatives with Fireman’s Fund and other clients in the insurance and healthcare industries.

Mindreef’s Role in the Project’s Success

Development

The ability to inspect messages and Web services requests, and diagnose potential problems or changes that might affect the application, is critical in the development process. “We configured SOAPscope to listen between every part of a message sent through the quick quote Web application or the back-end component,” noted Alvin. “We’d send messages to SOAPscope and have it listen to messages and monitor transactions and requests. We also used it to inspect the messages and better understand their behavior. SOAPscope was also used to test the VPN connection and Web services responses, making sure Fireman’s Fund received the expected service responses through the VPN link.” Another important feature in SOAPscope is the ability return attachments in a Web service response, allowing PDFs or HTML versions of customer-visible quotes to be sent.

Testing and QA

Webify was able to automate as much as 80 percent of its testing efforts using SOAPscope – saving time, money and team resources. “We configured SOAPscope to serve as a user interface with enumerations and drop down fields, providing a framework to transform messages via an XSLT into an ACORD message,” Alvin

continued. “We used this for a variety of different services – we could test WSDL so the message would get converted into the expected message that we would be receiving from a third party. We then used an automated tool to drive SOAPscope and test various configurations of quote inputs, which would simulate the ACORD and go through the system.” SOAPscope also served as a recorder and to play back ‘mock requests’ when systems were offline for maintenance. This allowed Webify to conduct full simulated tests in the middle of the night or on weekends to ensure a high degree of Web services quality and performance. “We could parse a particular input key from a Web Services message, map it to a previous response message, and return it,” Alvin continued. “Then, we could flip the switch and do all of our test rounds against a layer of mock requests instead of the real services. It was very compelling to use SOAPscope as both a recorder and a playback in that case; as an interface for testing and diagnostic purposes; and as a tool to go back in history and determine whether it was the code that changed or the back-end service that changed. All of those capabilities were used in full effect.”

Mindreef, Inc. is a leading provider of solutions for the successful development of Web services, enabling organizations to meet their goals for high-quality SOA adoption. Mindreef products enable business analysts, architects, application developers, testers, operations, and support staff to build, deploy, and maintain software for an SOA. Mindreef products are in use by more than three thousand customers worldwide. Mindreef is a private company, venture backed by Kodiak Partners. For more information, visit www.mindreef.com.