AlertSite
by **SMARTBEAR**

Raymond James Invests in SmartBear Technology to Monitor Critical Financial-Transaction Applications

AlertSite for Web and API Monitoring Proactively Tests End-User Experiences Behind the Firewall and Across the Global Internet

As a holding company for financial service subsidiaries, Raymond James Financial (NYSE-RJF) partners with more than 6,200 affiliated advisors who serve more than 2.4 million individual and corporate investment accounts throughout the United States, Canada and overseas. Offering a wide range of investment and wealth-planning services, the firm's total client assets are approximately $413 billion.

Business Challenges

Raymond James Financial conducts business with its affiliated financial advisors through their Web-based technology platform, Advisor Access. The platform, which allows advisors to transact financial business on behalf of investor clients, resides behind the corporate firewall. Advisors access the platform via a local area network (LAN) or externally through a virtual private network (VPN).

"We execute all the financial transactions submitted by our affiliated advisors through Advisor Access, so they are mission critical for the health of the business," emphasized Jeff Palmiero, an Application Performance Management Architect with Raymond James Financial. "If the platform experiences problems, our brokers can't conduct business, and we risk our ability to maintain long-term relationships."

When Palmiero started working for Raymond James, he recognized the importance of monitoring the application programming interfaces (APIs) with which advisors interact. The application testing team already leveraged an effective tool for testing the application presentation tier but needed an additional tool for testing the service tier that interacts with the presentation tier.

Specific capabilities Palmiero sought included testing graphical user interface (GUI) services 24x7 and 'warming up' servers after performing maintenance. "If financial advisors access a server right after a maintenance session, they could experience delays as the applications on the server need to warm up at first," Palmiero ex-

Business Challenges

- Ensuring execution of partners' financial transactions
- Maintaining partner relationships
- Testing Web Services application performance behind the corporate firewall
- Streamlining application testing processes

SmartBear AlertSite for API Monitoring Solution

- Monitors speed and availability of services APIs, Web Services and RESTful Services
- Enables developers, testers, and IT to collaborate
- Ensures API quality and scalability

Measurable Results

- Identifies application issues immediately
- Tracks GUI and Web Services performance
- Warms up applications after maintenance sessions
- Prevents false application performance alerts
- Interacts with advanced authentication to enable testing of all user scenarios

plained. "We wanted to leverage a tool to synthetically access the applications right after a maintenance session so the first real users would have immediate access."

Palmiero also hoped to find a solution that would allow the definition of maintenance windows so system admins would not receive down-application alerts during blackout maintenance windows. The team also required a testing tool that could negotiate various authentication schemes when communicating with Web Services applications.

"With AlertSite for API Monitoring tracking application performance 24x7, we have the ability to resolve issues well before they impact our business partners and customers."

Jeff Palmiero, Application Performance Management Architect, Raymond James Financial

AlertSite Solution

Raymond James considered several solutions for testing the performance of its advisor-facing applications. "We eliminated many of them early in the process because they did not offer an appliance for monitoring Web Services applications like ours that operate behind our firewall," Palmiero said.

The technology provider that did offer this critical capability was SmartBear, with its AlertSite for API Monitoring solution. The technology monitors APIs and ensures critical application functionality performs as expected by integrating two SmartBear tools— SoapUI for pre-deployment testing and AlertSite In-Site, a private monitoring appliance to measure post-deployment Web performance inside the firewall.

"AlertSite for API Monitoring ensures the quality of our APIs, and we particularly benefit from the ability to share test scripts across each tool," Palmiero said. "This streamlines our testing processes, and when we start monitoring application performance, we can leverage the same scripts used to test the applications prior to going live."

Raymond James application developers and the QA team leverage AlertSite for API Monitoring by building SoapUI scripts as they conduct application and integration testing. They also use SoapUI to run Web Services SOAP and RESTful transaction requests, and the artifacts they create can then be promoted with minimal work into synthetic transactions. "This gives us a base foundation for running tests 24x7 through AlertSite InSite once the applications behind the firewall go live," Palmiero said. "The synergy between SoapUI and the AlertSite InSite appliance is a huge technical benefit."

Measureable Results

AlertSite for API Monitoring provides Raymond James with a single view into the performance of all financial-advisor applications running behind the firewall as well as an external application that individual investors access via the Internet. "Ninety percent of what we monitor involves applications accessed by advisors on our internal LAN," Palmiero said. "But we also interact with customers of our advisors via a public website, so it helps to have a solution to monitor both types from a single console."

With the applications running on the internal LAN protected by a variety of authentication schemes, transactions recorded in the SoapUI component of AlertSite for API Monitoring can negotiate those schemes and present the necessary credentials to execute the tests. AlertSite's network of more than 80 global monitoring locations also enables Internet-facing applications to be measured from a majority of ISPs in the same way customers interact with the applications.

"When monitoring application services with AlertSite for API Monitoring, we also record transactions that exercise our load balancer as well as the individual nodes of our server farm," Palmiero added. "If there is a performance issue, the system immediately alerts application admins as to which nodes experience the issue."

Another benefit Palmiero underscores is that all parties involved in analyzing tests receive an accurate reflection of the response time of GUIs and Web Services. This feature is particularly helpful because users often only consider the time it takes to load the part of a Web page they can see above the fold. Users may not consider the time it takes to load the entire page. Knowing the time to load the entire page is critical because long load times drain server resources.

"The ultimate benefit AlertSite for API Monitoring delivers is giving us the ability to create synthetic end-user sessions that interact with our applications in exactly the same way as our financial advisors and their customers," Palmiero concluded. "We can conduct tests before applications go live to ensure they are ready to transact business and then monitor them continuously in case any future conditions impact their performance. With AlertSite for API Monitoring tracking application performance 24x7, we are able to resolve issues well before they impact our business partners and customers."