splunk> turn data into doing

CASE STUDY

Tokyo Stock Exchange Tames Hybrid Cloud Complexity With Splunk Synthetic Monitoring

Key Challenges

Tokyo Stock Exchange needed to ensure a consistent user experience and manage complexity while moving dozens of systems to a hybrid cloud environment.

Key Results

By automating IT operations with Splunk, Tokyo Stock Exchange now enjoys increased visibility into service availability, website performance and end-user experience in a multicloud environment, greatly reducing stress and costs.

JPX
TOKYO STOCK EXCHANGE

Industry: Financial Services

Solutions: IT, Platform, DevOps

User experience is critical to the success of any service.

Tokyo Stock Exchange, Inc. (TSE) strives for an exceptional user experience on every application it runs. Owned by the Japan Exchange Group (JPX) and licensed under the Financial Instruments and Exchange Act of Japan, TSE provides market facilities for trading securities and derivatives products, in addition to publishing stock prices and quotations.

When JPX had to migrate around 30 of TSE's internal and external information systems to a hybrid cloud environment, Splunk Synthetic Monitoring provided data-driven visibility into its complex multicloud environment, enhancing service availability, system performance and API operation. By swiftly detecting delays and other issues in all systems, TSE can now make immediate improvements to ensure a seamless user experience.

Turning Data Into Outcomes

- Full-stack visibility into service availability and usability
- Heightened efficiency in IT operations
- Boosted end-user experience and satisfaction

A clear picture of system health

When JPX had to migrate approximately 30 internal and external information systems to the cloud, TSE's hybrid cloud environment quickly became far more complex. Web monitoring and failure visualization grew more complicated, and existing manual log monitoring made it difficult to manage every system.

While TSE had already been relying on Splunk to manage its trading and core systems for years, Splunk Synthetic Monitoring unlocked new opportunities, enhancing frontend monitoring and automating operations to help TSE stay resilient in the cloud era. Akimitsu Okada — who helps lead TSE's IT development department — monitors compute details like CPU and memory usage while also tracking system performance for frontend users.

"As a SaaS-based solution, Splunk Synthetic Monitoring allowed us to start small and move fast with zero change to our current systems," says Okada. "By monitoring web services, application operation status, browser performance and user response time, Splunk lets us manage all systems in our cloud environment efficiently and cost-effectively."

With a complete picture of all information systems, TSE can now proactively detect failure points and quickly resolve uptime and performance issues. The Splunk platform also replaces manual log searches and analyses with an automated framework. This enables Okada and his team to monitor the detailed performance of every system in real time on a single pane of glass, helping TSE provide a smooth user experience.

> Splunk Synthetic Monitoring is exactly what we needed for seamless and cost-effective frontend monitoring. We look forward to strategically advancing the IT operation of the whole group with Splunk."
>
> **Akimitsu Okada,** General Head of Applications Group, Tokyo Stock Exchange, Inc.

Faster troubleshooting, happier end users

The Splunk platform provides the TSE team with actionable insights that improve the user experience, automatically collecting data from frontend applications and identifying public cloud issues that previously were difficult to find and fix. Splunk technology then identifies behaviors that may not be anomalous to the system but are still problematic from an end-user perspective.

TSE initially assigned four people to manage eight systems using Splunk Synthetic Monitoring. Soon enough, with everything running smoothly on its own, they only needed to stand by in case anything went wrong. The team is now able to detect incidents without consulting other parties or seeking outside resources for help. "By simply adding the URL of a cloud service, we can view website display performance immediately," says Okada. "We can spot a public cloud failure on the console, find out whether it affects any part of the infrastructure and quickly isolate the problem."

Even users without programming knowledge can easily use the graphical user interface to create different scenarios and configure settings for system monitoring. The ping monitoring is completely customizable, letting users choose preferred locations, set response time thresholds and establish performance measurement settings.

A more resilient future

To keep flourishing in the ever-evolving cyber world, TSE is planning to extend the use of Splunk Synthetic Monitoring "horizontally" to cover other types of systems and "vertically" to explore more in-depth functionality. "As an example, ping monitoring could be integrated with different scenarios to provide more detailed monitoring," explains Okada.

Now that Splunk Synthetic Monitoring has enhanced frontend monitoring, TSE is evaluating Splunk IT Service Intelligence and Splunk Observability Cloud to streamline backend monitoring too. As TSE makes strides toward JPX's vision of increased business agility, Splunk will continue to play a key role in success today and tomorrow.

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