Trade Me Optimizes User Experience With Multi-Channel Analytics

Executive Summary

Trade Me is New Zealand's leading online marketplace and classified advertising site, providing millions of registered members with a secure and efficient transactional platform. The firm needed a way to gain real-time insight into syslog data, reduce the need for custom scripts and correlate unstructured machine data with structured data in its production databases. Since deploying Splunk Enterprise and a range of Splunk® apps, Trade Me has seen benefits including:

- Multi-channel analytics and a deeper understanding of customer behavior
- Improved user engagement and customer loyalty
- Ability to balance site development efforts based on user preferences

Why Splunk

The Trade Me website serves more than 1.5 billion pages monthly, including up to 10,000 images per second. Prior to the Splunk deployment, the timely identification of image caching malfunctions was nearly impossible. The firm also needed a way to assess the impact of up to 70 site changes/updates per week. All of this proved too time-consuming using homegrown tools and custom scripts. Trade Me needed real-time insight into vast amounts of clickstream and log data, and the ability to correlate and add context to this data using information from production databases.

The team initially deployed Splunk software as part of a syslog replacement project. "We had two syslog servers and a lot of very cumbersome and complex rules we had created to alert people when bad things happened," says Trade Me's head of infrastructure. "Eventually, it got so complicated and error-prone that we had to make a change. Splunk Enterprise gave us the ability to quickly ingest all of our syslog data and show us activity in a nice GUI, allowing us to easily search and alert in real time."

Understand and improve the customer experience

Trade Me is now using Splunk Enterprise to improve the customer experience by identifying the source of image serving problems within the stack. Before Splunk, it was extremely difficult and time-consuming

trade me
Where Kiwis Buy and Sell

Industry
- Retail
- Online services

Splunk Use Cases
- Business analytics
- IT operations
- Application delivery

Challenges
- Faster identification of image caching malfunctions
- Easier analysis of site change impacts
- Need for real-time insight into clickstream and log data
- Correlate syslog and other data with production databases
- Provide real-time alerting

Business Impact
- Real-time insights into site performance, leading to faster problem resolution and continuous site improvement
- Improved user engagement and customer loyalty
- Single pane-of-glass view of data for online platform optimization
- Enrich machine data with structured data for actionable insights
- Deliver business intelligence for non-technical users

Data Sources
- Web logs from 50 million page views
- API mobile logs
- Server logs from data centers and other IT infrastructure
- Application logs for iPhone, iPad, Android, Windows 8, etc.
- Listing, customer data lookup from MS SQL Server databases via Splunk
- Unstructured data from Splunk DB Connect

Splunk Products
- Splunk Enterprise
- Splunk DB Connect
- Splunk App for VMware

to address this issue, leading to a suboptimal user experience during changes to the site.

According to the head of infrastructure, "We threw all of our image access logs, web logs and anything else related to the photo serving system into Splunk Enterprise. We created several dashboards that give us a real-time view into problems and allow us to quickly drill down before they have an impact on our members." Trade Me is now able to create meaningful dashboards for system monitoring and alerting in a matter of hours, rather than weeks or months.

Connect business users with actionable insight

Trade Me uses the Splunk DB Connect application to associate and integrate unstructured data from web logs, syslogs and access logs with structured data from the firm's Microsoft SQL Server databases, providing the firm with meaningful context and business insight. This new capability gives Trade Me business users the actionable insights they need to increase revenue and user engagement.

For example, it took less than an hour to create a Splunk dashboard for the Trade Me jobs team that blended log information with database lookups to offer key metrics in real time including numbers for listings, job applicants and visits. Says the head of infrastructure, "Splunk provides us with a single pane-of-glass view into our machine and production data, giving us context for site events and site performance. It has been amazing to be able to push out new site features, for instance, and be able to watch the impact in real time, rather than hours or days later."

"Splunk is an easy sell to the business because we are getting so much value out of it. At an operational level it's helping us prevent problems. For the business, we're now delivering business intelligence that provides clear advantages."

— Head of Infrastructure, Trade Me

Anywhere, anytime access builds business

Mobile access accounts for nearly 50 percent of Trade Me site sessions. The firm's business analysts and IT teams use the Splunk platform to evaluate the overall impact of mobile devices on customer behavior and revenues. API logs and other log information is indexed in Splunk Enterprise and linked via Splunk DB Connect to provide the infrastructure team and select business users with a unified view of member activity across platforms and devices. For instance, the team is able to see when a member searches car listings on a desktop, moves a listing to a "watch list" using an iPhone, and bids on and wins the car using an Android tablet. This database linkage enables Trade Me to determine which mobile apps are used the most, when they are used and which site features attract the most attention. This information helps improve user experience across multiple channels and increase user loyalty.

Download Splunk for free or get started with the free cloud trial. Whether cloud, on-premises, or for large or small teams, Splunk has a deployment model that will fit your needs.