Splunk® at ideeli

Leading Flash-sale Retailer Gains Visibility into Critical Business Metrics and Site Performance

ideeli

> "Splunk enables us to connect our technical and business metrics and see the correlations between site performance and the customer experience. The real-time dashboards we've built with Splunk provide information that can't be obtained any other way."
>
> **Lead Systems Engineer**
> *ideeli*

OVERVIEW

INDUSTRY
• Membership-based Online Fashion Retailer / Flash Sales

SPLUNK USE CASES
• Application management – troubleshooting & monitoring, development and support
• Operational intelligence
• Capacity planning & marketing
• Business analytics
• Web analytics

BUSINESS IMPACT
• Increased productivity and site stability
• Site optimization and increased user satisfaction
• Visibility into critical business metrics
• Time/cost savings over manual processes
• Increase in operational efficiency
• Reduced time for troubleshooting / performance tuning

DATA SOURCES
• Application, web server and Windows logs
• Multi-line Ruby on Rails logs
• HAProxy load balancer logs
• MySQL query logs

The Business

If high fashion is fun to wear, why not make it exciting and affordable to buy? That's the concept that drove entrepreneur Paul Hurley to launch the ideeli flash-sale shopping site in 2007. By providing member shoppers with a limited-time chance to buy designer clothes and accessories at dramatic discounts, ideeli set the online retail world on fire.

Challenges

Ideeli's formula for success has resulted in sales growth of more than 40,000% since its launch, earning it the number one position on the 2011 Inc. 500 List of America's Fastest Growing Private Companies. With more than six million members and more than 1,000 brand partners, ideeli has pioneered a new way to shop. The ideeli web store receives millions of visits per week, a number which increases during special sales and holidays.

At 12:00 noon Eastern each day, ideeli opens its virtual doors and the shopping frenzy begins. Site volume jumps approximately 40 times off-peak when sales are under way. At the same time, the site experiences more than 3,000 page requests and over 700 add-to-cart requests per second during peaks. The site is a large-scale web application built on the Ruby on Rails platform and relies on Memcached to help deliver performance.

According to an ideeli lead systems engineer, "With so many servers, finding where real problems are occurring as opposed to a false positive caused by a server that just happened to freak out for a few seconds is a real challenge. Finding the proverbial needle in a haystack is the key."

Enter Splunk

Before Splunk, ideeli's systems engineering /operations team, the team responsible for deploying and operating their infrastructure, had a limited view across their application stack. When it came to identifying and resolving issues, they resorted to manual tools and processes, lacking an integrated view into their machine data (logs). "We started with the Splunk free trial and that was enough to allow us to look through our Ruby on Rails logs," the lead systems engineer recalls. "We then worked with Splunk technical support to tailor the product to monitor and analyze our unique environment."

Breakthroughs

Increased dev/ops efficiency, reduced risk

With Splunk Enterprise, all of ideeli's infrastructure data is indexed, time stamped and accessible from a central, access-controlled system. The ability to search, analyze and report on all their data from a single location has increased productivity and decreased resolution times. Commonly used searches, used to identify issues, patterns, and known bottlenecks now reside in one place and can be reused across the IT team.

The systems engineering / operations team performs a lot of ad hoc searches as a way of debugging its Ruby on Rails logs. According to the ideeli systems engineer, "Rails logs are multi-line and notoriously difficult to parse; however, the Splunk transaction command makes it easy to pull out numerous multi-line queries. It certainly saves us many hours, and is especially important when there's an issue

happening at that moment. For instance, Splunk allows us to be able to see a particular host that is throwing more errors than any other and narrow down the problem much faster." Centralized access has other benefits; individual developers don't need to log into production servers to find out what they need to know, which makes for a safer and more stable environment.

End-to-end visibility for improved customer experience

Previously, ideeli's system engineering / operations group had limited visibility into the critical log data generated by the many systems and devices driving its site. Since deploying Splunk, they have gained new visibility into and across all their systems, including load balancers, web and application tiers, and databases. This has allowed ideeli to fine-tune their environment to deliver the best possible customer experience.

Visibility into critical business metrics and services

The ideeli applications support team uses Splunk software to keep track of key business processes, including one critical process that is responsible for sending shipment requests to the ideeli warehouse. Should this particular process fail, customers won't receive their purchases, directly affecting customer satisfaction and ideeli's bottom line.

Ideeli uses Splunk to track MySQL database performance throughout the busy sales day and create performance graphs to help determine when code releases or other changes may have impacted business critical databases. According to the source at ideeli, "Splunk saves me hours that I might otherwise spend sifting through query logs. Since we're logging queries every second, I can see true pile-ups and really look at an instant in time to see the interactions among the queries that we're running." Monitoring these databases using Splunk helps the operations team protect company revenue.

Improved site performance and increased efficiency

Prior to Splunk, the operations team ran a nightly script to evaluate queuing on its HAProxy load balancer, but the information it provided was a day old. The only other option for real-time information on the load balancer environment was to look at the HAProxy status page, but it only provided a snapshot and not the whole picture. With Splunk Enterprise, ideeli now has access to real-time metrics holding insights into site queuing, connection times, number of connections and top URLs—the fine-grained information needed to keep the site performing at optimal levels.

The ideeli lead systems engineer noted, "Instead of spending days writing scripts, we can create a new Splunk search in less than an hour. The real-time load balancer dashboard was one of the first things we ever built using Splunk and it's still one of the most useful. It shows us everything that our load balancer is handling, pool-by-pool and URL-by-URL. Using Splunk, we can see the impact of configuration changes in real time and make corrections if needed. We couldn't do that before. Now, Splunk helps us keep a very close eye on a leading indicator of our website's performance."

Proactive monitoring

Splunk has enabled the team to dive straight into the source of common problems by looking at the context of the error rather than manually digging through multi-gigabyte log files. Ideeli is also generating alerts in Splunk—including error and stack trace—that proactively open a tracking ticket for the team to review.

Enhanced capacity planning

As an innovator in flash-sale retail, ideeli needs to accommodate dramatic shifts in site traffic. ideeli uses Splunk to monitor site performance data, in real time, to help manage its unusual and demanding load patterns. According to ideeli, "We have days that we know are going to be bigger than others—the information Splunk provides helps us decide how much capacity we're going to need."

Free Download

Download Splunk for free. You'll get a Splunk Enterprise license for 60 days and you can index up to 500 megabytes of data per day. After 60 days, or anytime before then, you can convert to a perpetual Free license or purchase an Enterprise license by contacting sales@splunk.com.