

zulily Flash Sale Site Boosts Productivity and Adds Value to Applications



Executive summary

At zulily.com—one of the world's fastest growing e-commerce sites—shopping for fashions, toys, home goods and more is not just a great way to save, but a source of entertainment and discovery. The firm follows a build-not-buy approach for many major systems, but found its homegrown applications lacked a single source for deep insight. Since deploying Splunk Enterprise, zulily has seen many benefits, including:

- A new understanding of operational and business performance metrics
- Improved customer experience with faster resolution of critical web site issues
- Enhanced productivity in warehouse, photo studio and other operations

Why Splunk

zulily custom builds its own major systems, including website management, warehouse/fulfillment management and website catalog management. While these homegrown applications meet the firm's core needs, they initially lacked much of the reporting and performance functionality found in commercial systems. The firm needed a solution that could provide a single source for deep insight into application performance, quicker root cause analysis, website forensics, monitoring and report prototyping.

zulily first deployed Splunk Enterprise in September 2010. The firm brought in Splunk software initially to help with site stability. By sending error logs from PHP applications, customer IDs, Nginx web logs, internal and external tools, and cookies into Splunk, zulily was able to create custom dashboards showing site traffic and cart page render times. Splunk-enabled dashboards, alerting, reporting and website forensics help zulily engineers predict and understand site outages, saving time and improving the customer experience.

Operational insight and productivity reporting

With its rapid product development, featuring multiple daily releases and features, zulily relies heavily on post-installation analysis. Splunk software has enabled zulily to gain full operational visibility and quickly drill down. A homegrown clickstream system provides the big picture,

Industry

- Retail

Splunk Use Cases

- Application delivery
- Business analytics
- IT operations
- Log management

Challenges

- Home-grown applications lacked reporting and performance insight
- Need for single source of deep insight
- Achieve faster root-cause analysis and website forensics
- Provide faster report and dashboard development

Business Impact

- Deliver operational visibility and help eliminate blind spots
- Provide event log correlation and consolidation
- Enhance productivity in warehouse, fulfillment and photo studio operations
- Provide fast root-cause analysis for website troubleshooting
- Add real-time metrics within key applications
- Enable rapid prototyping of reports and dashboards
- Feed key alerting and reporting systems enabling rapid response

Data Sources

- Logs from Nginx, error, event, VPN servers, firewalls
- VMware, OpenStack, EC2 cloud resources,
- SAP, ADP Payroll, Oracle Taleo,
- Akamai and Fastly caching

Splunk Products

- Splunk Enterprise

but zulily uses Splunk Enterprise to dig deep when difficulties arise. “When we get a really tough site problem, we use Splunk software to conduct an open search on errors or anomalies that a particular site visitor has experienced,” notes Don Allen, zulily senior director of technical operations. “It’s our go-to forensic tool.” The firm’s technical teams use Splunk software for forensic analysis. Allen says, “Having that free-form search capability allows us to get to the root faster than if we had to parse the log files manually. If someone walks up to my desk with a specific question, I could go to our data warehouse, but I usually just click on a Splunk dashboard.”

zulily operates two fulfillment centers and uses Splunk Enterprise to record and analyze critical productivity metrics and display the information in dashboards on the fulfillment floor to inspire a competitive atmosphere. Order pickers and packers are able to see real-time productivity information, and supervisors can view the top performers. Says Allen, “By tracking performance and providing tangible goals, we’re increasing productivity across the organization. Splunk is helping us meet our customers’ expectations of service excellence.”

Value added applications and rapid prototyping

The firm uses Splunk Enterprise to add value to custom-built applications by embedding reporting and dashboard capabilities that enhance their usefulness. For instance, in the zulily warehouse management system, managers are just a click away from up-to-minute Splunk-generated dashboards and reports showing inventory information and operational insights. This visibility helps zulily increase inventory and order fulfillment accuracy, reduce order pick times and grow order fulfillment capacity with the same staffing.

“Splunk Enterprise lets us keep our fingers on the pulse of our technical operations. It’s looking for errors and sending alerts when conditions dictate. Instead of forcing us to search every server, it facilitates event log consolidation, which allows us to get to the root of the problem faster.”

Don Allen, Senior Director of Technical Operations zulily

The internally-developed web catalog management system is used to manage planning, category setup, product setup/pricing, copy creation and photography. zulily runs about 50 in-house photo studios in order to provide thousands of new product images weekly. The technical operations team is testing the use of Splunk software to pull log data from studio work stations, and provide studio productivity information in dashboards to help the studio director identify bottlenecks and boost productivity.

In addition, almost every report or dashboards at zulily begins life as a prototype in Splunk Enterprise. “If we’re going to put a report in our data warehouse for general use, we almost always prototype it in Splunk first,” says Allen. “We save time and can determine if we’re capturing the right data and what the report should look like.”

Deep impact across the enterprise

Splunk Enterprise is intertwined with almost every aspect of zulily operations. From IT development and management to web site performance and warehouse efficiency, Splunk is delivering tangible benefits that increase operational visibility, enhance productivity and create a more enjoyable shopping experience for zulily customers.

[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.



Learn more: www.splunk.com/asksales

www.splunk.com