

Splunk® at PagSeguro

Operational Visibility Enhances the Customer Experience



“We are getting a wealth of real-time information from our flexible Splunk dashboards.”

*Software Engineer
PagSeguro*

OVERVIEW

INDUSTRY

- E-commerce / Online Payments

SPLUNK USE CASES

- Application Management - real-time transaction monitoring
- Operational Intelligence
- Security and PCI Compliance
- Business Analytics
- Capacity Planning & Marketing

BUSINESS IMPACT

- Improved service availability
- Increased customer satisfaction
- Centralized, real-time visibility
- Faster validation of changes in production environment
- Better compliance to PCI security standards

DATA SOURCES

- Linux Java applications (Syslog Log4j Appenders via UDP)
- JMS on JBoss
- Application and transaction logs
- Apache logs
- 3rd party logs from processing partners

WHY SPLUNK

- Agile Reporting, Analytics & Visualization
- Fast Time to Value
- Open, Extensible Platform
- Powerful Search / Reporting Language

The Business

PagSeguro is a Brazilian-based online payment business allowing payments and money transfers to be made over the Web. The service was launched in July 2007 and is operated by Universo Online, the biggest Latin American internet services provider. Currently, PagSeguro is the leader in online payment solutions in the Brazilian market. PagSeguro also provides a variety of services for both buyers and sellers and allows users to shop securely online.

Challenges

As a rapidly growing online business, PagSeguro requires a flexible real-time monitoring solution that can support performance and stability. Before Splunk, the tools PagSeguro was using couldn't be scaled and the monitoring/support teams had limited visibility into their production environment. To proactively troubleshoot instability in their infrastructure and prevent impact to site operations, PagSeguro looked for a way to quickly identify the causes of incidents. In addition, in order to comply with PCI Security Council standards and address security / compliance auditing requirements, it was necessary to centralize infrastructure log management to a single location.

Enter Splunk

After initially using Splunk software primarily for log event aggregation, PagSeguro expanded the use case to support a new payment gateway. The architecture of the new gateway was designed to be fully Splunk-compliant, with all 60 physical Linux machines collecting data using Splunk Universal Forwarders. Operation teams also integrated all events from PagSeguro's in-house datacenter monitoring system with Splunk, creating high level dashboards of the production environment that led to reduced incident resolution time and minimized outages.

With all their operational data in one place, PagSeguro was able to increase operational efficiency and gain immediate insight into mission-critical processes. Transaction tracking, once a difficult and complex process requiring monitoring over multiple components, was made simple with Splunk support. When the dashboards revealed that a legacy component was leading to slower site performance, PagSeguro ended up changing its credit card gateway partner, resulting in improved service availability and increased customer satisfaction.

PagSeguro has increased its security posture through the continuous monitoring and reporting for PCI compliance provided by Splunk Enterprise. In addition to the operations and development teams, Splunk is being used by the data analysis business team at PagSeguro. The data analysis team has built Splunk dashboards to highlight key business metrics such as transaction volume and average processing time, as well as to measure the performance of other party systems and SLA compliance of its financial partners. The company has also begun to use Splunk to determine the effectiveness / ROI of its marketing / advertising campaigns.