

HealthTrans Streamlines Claims Processing, Improves Customer Satisfaction with Splunk: An EMA ROI Study

Introduction

Periodically, ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts write Return on Investment (ROI) studies on enterprise management products which demonstrate above-average customer value. Splunk is distinctive in that multiple Splunk customers have provided impressive ROI stories.

This EMA study profiles HealthTrans, a pharmacy benefits provider that delivers prescription drug claims processing and other services for approximately 15.7 million members. It details the innovative ways that HealthTrans has leveraged Splunk to deliver business value and quantifies significant hard and soft ROI benefits of the Splunk product.

Product Description

“... Splunk is an engine for [analysis of] machine data. Use Splunk to collect, index and harness the fast moving machine data generated by all your applications, servers and devices – physical, virtual and in the cloud. Search and analyze all your real-time and historical data from one place using Splunk.

Splunking your machine data lets you troubleshoot problems and investigate security incidents in minutes, not hours or days. Monitor your end-to-end infrastructure to avoid service degradation or outages. Meet compliance mandates at a lower cost. Correlate and analyze complex events spanning multiple systems. With Splunk you can gain new levels of operational visibility and intelligence for IT and the Business...”¹

Founded in 2004, Splunk has nearly 3000 paying customers. The annual growth rate is in the high double-digits, and Splunk is now used by approximately 50 of the Fortune 100.

Interviewees

- UNIX Administrator
- System Operations Lead

Company

HealthTrans, the fourth-largest pharmacy benefits provider in the U.S. (by claims volume), is based in Greenwood Village, Colorado. HealthTrans delivers member claims processing services to customers of healthcare benefit plans.

Problem Scenario

Healthcare is a highly integrated, technologically diverse industry. It is also heavily regulated with constantly changing policies. For healthcare providers, claims processing is the backbone of the cost/revenue reconciliation process, and is core to the business. Claims processing systems must be highly reliable with virtually flawless performance and availability.

¹ <http://www.splunk.com/product>, downloaded August 5, 2011

For IT organizations in these environments, flexibility and adaptability are critical capabilities, as policies in place today may be changed tomorrow. The management tools supporting proprietary, business-differentiating applications must be flexible and adaptable as well.

HealthTrans is the fourth largest prescription benefits manager (by claims volume) in the U.S. The company processes over 100 million claims annually and serves approximately 15.7 million members. It has exhibited rapid growth, quadrupling both employees and sales in the past 4½ years.

In addition to being business critical, claims processing is a heavily automated, technology-intensive activity. In the case of HealthTrans, customers have Service Level Agreements (SLAs) in place that require HealthTrans to process claims within SLA-specified timelines.

Maintaining SLAs across 100+ million annual transactions is no easy feat. This is particularly true since the infrastructure supporting HealthTrans' claims processing environment is complex and diverse in terms of hardware, software, and OS heterogeneity. In addition to custom, proprietary Claims Processing software, the company supports multiple UNIX "flavors," Windows environments (including Windows Virtual Machines and SharePoint), Apache, custom applications, and a variety of Web and Java application servers. Monitoring this heterogeneous environment can be a problem, since few tools provide end-to-end visibility and monitoring across such a diverse technology portfolio.

Prior to Splunk, HealthTrans managed SLAs with a combination of commercial tools, manual processes, and homegrown tools built around UNIX shell scripts. Third-party tools included SolarWinds (network monitoring), Nagios (server monitoring), Ganglia (trending), and Big Brother (device monitoring). Scripts, which alerted on known production issues, were written in-house but were limited in providing the proactive capabilities HealthTrans required. As a result, the support function was heavily manual and new employees required a long learning curve to become familiar with the scripts and the custom processes supporting them.

Acquisition Story

Like many companies, HealthTrans continued to use their existing tools until they determined there was a need for greater efficiencies. When the IT team decided it was time to seek a more powerful and proactive solution, they found Splunk, available as a free download at: <http://www.splunk.com/download?r=header>.

Splunk demonstrated its value almost immediately. After the initial Splunk download, the support group modified their alerting scripts to address an issue. According to an Operations Engineer, "Splunk's real-time alerting notified us when existing alerting systems did not." Splunk was able to detect and isolate to the underlying root cause of the issue. In short, Splunk proved its value proposition while still in the Proof Of Concept (POC) phase.

Splunk proved its value proposition while still in the Proof Of Concept (POC) phase.

Outcomes

At a high level, Splunk's value proposition is directly related to its key differentiator; it is designed to "index anything and make it searchable." Infrastructure logs, customer call detail records, system metrics, real-time business information – virtually "any and all" time-series, text-based data – can be monitored, indexed, analyzed, and made searchable. In addition to providing sophisticated search capabilities, Splunk also has analysis capabilities as well. Splunk maintains rolling baselines of "normal" for any data source or combination of sources. It can monitor events or sequences of events that require notification, whether their relevance is in the business or IT domains.

HealthTrans is the fourth-largest prescription benefits manager (by claims volume) in the U.S. The company processes over 100 million claims annually and serves approximately 15.7 million members.

“We trace transactions across the entire infrastructure, record total duration, compare with expected service levels...and get instant alerts if there is a change in expected response times,” said a HealthTrans administrator.

After Splunk was moved into production, HealthTrans reported ROI from multiple sources (see Table 1). One is in the area of staffing. Because the Claims System no longer requires so much manual “care and feeding,” two Full Time Equivalents (FTEs) have been reallocated to other groups. Based on an industry-standard loaded rate of approximately \$100,000 annually for IT Administrators, these reallocations account for savings of \$200,000 annually.

Because the Claims System no longer requires so much manual “care and feeding,” two Full Time Equivalents (FTEs) have been reallocated to other groups.

Supporting the current system also requires far less time of existing personnel. Prior to Splunk, for example, application problems occurred ten to fifteen times per week and required 7-8 hours each to solve. Due to the fact that Splunk has helped the team to become more proactive, the number has dropped to approximately five issues per week, and troubleshooting time averages five minutes per issue. Using the same average FTE rate cited above, this increased efficiency accounts for more than \$198,000 annually.

Storage savings also delivered significant ROI, although quantifying this number is somewhat less straightforward. It is difficult to find accurate numbers on the per-Gigabyte (GB) costs of Storage Area Network (SAN) storage, mainly because so many different variables go into pricing. Documented estimates range from \$5 per GB (for low-end systems) to \$500 per GB annually based on the type of storage, mirroring, administration and licensing support, etc. For this study, we assumed loaded costs for production-grade Fiber Channel storage from a large vendor, with estimated annual cost of \$350 per GB. With Splunk, HealthTrans was able to move 800 GB of data off the SAN by indexing and storing data using Splunk. A conservative estimate for the ROI on this data migration is in the neighborhood of \$280,000.

HealthTrans reallocated an Oracle license for an estimated savings of \$30,000.¹

There were a variety of areas of soft ROI as well. The company achieved a 98% reduction in Mean Time to Repair (MTTR) and a 90% success rate in root cause identification (versus an industry standard of 70-80%). As new problems arise and are solved by Splunk, the success rate percentage continues to improve.

Splunk has also enabled HealthTrans to cultivate new levels of customer satisfaction by rolling out services that competitors can't match. For example, customers can access near real-time reports showing the number of claims processed and performance against SLAs. In addition, by tracking claims transactions, HealthTrans is able to notify customers if their (customers') systems or networks fail or have performance issues.

Hard and Soft ROI Tables

Hard ROI	Before	After	Savings
Staff re-allocation (2 headcount)		2 @ \$100K loaded annual rate ¹	\$200,000 (annually)
Troubleshooting time per transaction	8 hours, 10 per week= 80 hours per week Calculation: (80 (hrs used) * 52 * \$48) ¹ = \$199,680 per year	5 minutes, 5 per week= .5 hour per week Calculation: (.5 (hrs used) * 52 * \$48) ¹ = \$1,248 per year	\$198,000+ (annually)
SAN space saved by archiving to Splunk		800 GB @ \$350 per year loaded rate for high end SAN ¹	\$280,000 (annually)
Oracle 9 License reallocation		License reallocation cost savings vary according to Oracle licensing terms. A conservative EMA estimate is a range from \$30-50K. ²	\$30,000
Total Quantifiable Hard ROI			\$733,000 (annually)
Soft ROI	Before	After	
Mean Time to Repair (MTTR)		98% reduction	
Root cause identification		90% of incident root causes identified versus industry average of 70-80% ²	
Improved Customer Satisfaction		1. Customers get real-time visibility into HealthTrans performance against SLAs 2. HealthTrans tracks customer technology statistics and notifies if customer systems are down	

Table 1: Hard and Soft ROI

According to HealthTrans, they are now “Splunking everything.” In addition to providing real-time notification, Splunk’s reporting is also used by multiple areas of IT and the business.

Quotes and Observations

“If we lost Splunk today, that would be like losing an arm.”

“People see Splunk as the “all purpose tool.” In meetings, when people are discussing a new product or process, the first question is, “Can we get the data into Splunk?”

¹ Based on industry average

² Based on EMA Research

About EMA

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help its clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#) or [Facebook](#).

2335.111011