

Ongame Uses Splunk to Optimize 24x7 Online Gaming Services

Introduction

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

This EMA ROI case study profiles Ongame, a leading online gaming platform and one of the world's largest and most dynamic online poker networks.

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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. In Quarter 2 of 2011, Splunk was granted U.S. Patent No. 7,937,344 for organizing and understanding machine data through use of a “machine data web.”

Interviewee

Matti Klasson: System Environment Lead, Ongame

Company

“Ongame is the world's largest B2B poker provider. The global network includes more than 25 of the e-gaming industry's strongest brands and has up to 45,000 concurrent players at peak hours. Ongame also operates regional networks in France and Italy. ... Ongame Network Ltd is headquartered in Gibraltar and is a subsidiary of bwin.party (<http://www.bwinparty.com/>) digital entertainment plc, the world's largest listed online gaming company.”²

Ongame's geographical and multi-language footprint extends over multiple time zones, delivering 24 hour, 7 days a week gaming access.

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

² Downloaded August 16, 2011 from: <http://www.ongame.com/contact/>

Problem Scenario

Matti Klasson, System Environment Lead for Ogame, leads the IT team responsible for designing, installing and supporting test environments for Development, QA, and business partners. His position covers a broad spectrum of roles from system administrator to lead architect. Matti's team supports three production environments across three countries on two continents. The team is also responsible for more than 70 Java-based applications running on Red Hat Enterprise Linux (RHEL), MySQL, and JBoss.

Prior to bringing in Splunk, Ogame's primary enterprise management tools included Tripwire (for Security and Compliance) and Nagios (for infrastructure monitoring); however, as many of today's companies have discovered, infrastructure-focused tools are no longer sufficient when it comes to managing multi-tiered, distributed application environments. Ogame was no exception. Ogame's software environments are constantly changing as new features are pushed online, with Development releasing new software every three to six weeks.

EMA research shows that changes to IT environments are primary drivers of downtime in production environments, causing between 25% and 75% of production problems. The exact percentage depends primarily on the rate of change – how often new changes are introduced – and the level of discipline and control supporting a given company's change control processes. Due in part to its dynamic, frequently changing software environment, Ogame experienced unacceptable levels of downtime.

Downtime adversely impacts revenue, customer retention, and customer satisfaction. For companies such as Ogame that partner with direct service providers, downtime can significantly impact partners. This, in turn, disrupts partner revenue as well.

Since Ogame has Service Level Agreement (SLA) contracts in place with partners, downtime has a direct impact on operating costs in the form of SLA penalties. Downtime adversely impacts revenue, customer retention, and customer satisfaction. For companies such as Ogame that partner with direct service providers, downtime can significantly impact partners. This, in turn, disrupts partner revenue as well.

Ogame was also seeking to improve the quality, efficiency, and security of its software development. "We wanted to be more secure about software releases and be able to correct bugs before we pushed software to production environments."

Acquisition Story

Companies like Ogame, which delivers online services to both end users and partner providers, cannot afford downtime or performance problems. Matti's team was "under the gun" to improve the quality of Ogame's service delivery. In developing his business case for a new management tool, Matti estimated a new solution would "reduce outages by 20%."

That promise turned out to be easier to make than to keep. Matti and his team recognized that much of the information they needed could be mined from system metrics or application and database logs; however, their complex computing environment generated hundreds of thousands of log entries from hundreds of log types every day. While logs are a fundamental source of critical troubleshooting information, Ogame needed a way to centralize logs, events, and metrics from multiple geographies, locations, applications, and technologies.

Since these types of machine data often contain sensitive personal customer and business information, Ogame also needed to implement role-based authentication and security. Roles included Systems Administrators, Developers, QA, and Customer Service teams, and all had to be mapped through Lightweight Directory Access Protocol (LDAP). Each role required its own view.

Matti heard about Splunk by “word of mouth.” Some of his colleagues had used the product while working at other companies. Since Splunk is available as a free download (at: www.splunk.com/download?r=header), Matti downloaded the product and initiated a Proof Of Concept (POC).

Ongame started by indexing logs generated by its application environment and providing the results to developers. “We found stuff we had never seen before. It was so easy to find dependencies between systems and the process took only minutes. When the POC phase was complete, we closed Splunk down – and the developers protested. It was almost like an addiction – once you use the product, you can’t do without it.”

Outcomes

Today, Ongame is “Splunking” approximately 50 Gigabytes (GB) of metrics per day. Ten GB is generated from test data while 40 GB is production-related data from data centers located around the world.

With the Splunk purchase, the overarching objective was to reduce downtime, which was impacting partners and end users alike. In support of this high-level objective, there were several functional objectives. Ongame needed to:

- Reduce the amount of time spent managing production applications.
- Better understand the system and the execution “fabric,” with a clear model of how the platforms and technologies supporting the applications related to one another.
- Be more secure in the knowledge that software releases would not harm production environments. To support this goal, they wanted to become more proactive in correcting software bugs before pushing new applications to production.

Ongame decreased downtime by more than 30% (easily surpassing their initial target).

All of these objectives were achieved. Ongame decreased downtime by more than 30% (easily surpassing their initial target). In terms of better visibility, Matti states, “It was so easy to visualize all the log files in one place and find dependencies between systems easily and in minutes.” Ongame was also able to reallocate 75% of a full-time administrator’s time to projects versus support. In addition, it now centralizes log management in a way that provides value to business as well as IT stakeholders.

An unanticipated benefit was capacity planning. Ongame has data centers around the world and must understand capacity at each location to optimize services from both a cost and Quality of Service (QoS) perspective. Splunk helps Ongame understand load, performance characteristics, and trends, to deliver a strategic foundation for better hardware and software investment decisions.

One key differentiator in the decision to purchase and deploy Splunk was the fact that access to Splunk data can be controlled by grouping users into roles. Ongame set up developer roles to “separate developers from data across several data centers, including both test and production data.” Ongame is now building Splunk-based applications for other roles as well. Matti’s team started with troubleshooting, then added roles and functions for business intelligence and data mining.

Splunk is now being used by multiple stakeholders in a variety of technology and business departments. Business stakeholders use Splunk to uncover player usage patterns. Insights drawn from aggregated “machine data” is leveraged to drive product and marketing decisions. The marketing team uses this information for targeted advertising campaigns and promotional activities based on documented usage at certain times of the week, month, or year.

Matti calculates his company’s total investment in Splunk at just over \$125,000. This figure includes hardware, software, training, and professional services. With a total quantified annual savings of \$1,902,000, Ongame realized a 16x Return on Investment in the first year of using Splunk.

Hard and Soft ROI Summary

Hard ROI	Before	After	Savings
Decrease in downtime	Annualized downtime (minutes): 5400 Cost per minute: \$1218 Annualized cost: \$6,577,200	Annualized downtime (minutes): 3900 Cost per minute: \$1218 Annualized cost: \$4,750,200	\$1,827,000 Annualized
FTE Staff Savings	\$100,000 Standard loaded rate for FTE IT Administrator	\$25,000 based on 75% time reduction of 1 FTE	\$75,000 annually
Total Quantifiable Hard ROI			\$1,902,000 annually (representing 16x ROI in year 1)
Soft ROI	Before	After	Benefits
Improved DevOps Collaboration	Developers did not communicate well across teams or understand application/infrastructure dependencies	Developer and Operations teams relate better and work together more effectively	Improvements in service performance, bugs fixed that previously resulted in downtime
Business and Marketing insights	Lack of insight into gaming user habits and preferences	Business uses machine data to understand user behavior which drives better marketing	Revenue, customer acquisition and retention impacts
Improved Capacity Planning	Ongame had data centers around the world, no good way to quantify and address capacity issues	Capacity Planning team uses Splunk to monitor capacity requirements and identify optimal platform builds.	Improved ability to operate within negotiated SLAs and customer performance requirements

Table 1: Hard and Soft ROI

Quotes and Observations

“After the Proof of Concept we initially closed Splunk down. Developers were screaming that they could no longer live without Splunk and the information it provided to them.”

“I spread the word about Splunk a lot. This is one of the few products in a long time that I have been so excited about. It’s awesome, and I haven’t seen this type of product adoption before.”

“Splunk is like Google for IT. You enter what you are looking for in a single search field, and Splunk finds it. It’s just one big index. You start the indexing and search instantly. It delivers value in minutes.”

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](#).

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