

Splunk® at Message Bus

Message Bus Develops, Delivers & Optimizes their Cloud-based Service Using Splunk



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Steve Mays
Message Bus Co-Founder

OVERVIEW

INDUSTRY

- SaaS Delivered Messaging Services

SPLUNK USE CASES

- Real-time event correlation across multiple clouds
- Customer billing & usage analytics
- Application development & testing
- Verification of services delivery
- Root cause analysis and remediation
- Fraud detection
- Enterprise ticketing

BUSINESS IMPACT

- Faster time-to-market of applications and services
- Enhanced availability of services
- Infrastructure visibility across multiple clouds
- Enterprise-wide business analytics
- Responsive customer service by non-technical staff
- Eliminated the need for database administrators

DATA SOURCES

- Cloud-native applications
- Remote virtual machines and servers

APPLICATIONS

- Splunk for JMX
- Splunk for IMAP
- Splunk for Unix and Linux

The Business

Even with the rise of social media, email remains the predominant channel for business communications. Enterprise email services are costly—entailing the purchase and maintenance of hardware, software and storage and the retention of skilled staff—and they offer little assurances that messaging is actually delivered or safe from fraudsters. Message Bus was founded in 2010 to provide a cost-effective, outsourced alternative for business-class email messaging. The rapidly-growing, Marin-based firm furnishes email and mobile messaging services that are scalable, secure, priced by usage and provide delivery verification. The company’s entire IT and service delivery infrastructure is cloud-based; all it has on its premises are the IT technologies one might commonly find in a Starbucks to provide Internet access.

Challenges

With a SaaS delivery model, Message Bus required data from, and visibility across its cloud-based business. To ensure the availability and performance of its services, Message Bus needed deep and continuous monitoring of its applications distributed across multiple clouds. Analytics was another key requirement; Message Bus desired the ability to audit customer usage for billing and product development and also track email delivery status. In addition, in order to protect its customers against fraud and attacks, Message Bus needed to monitor all message traffic to detect the anomalous behavior patterns of account hijackers. Lastly, Message Bus was looking for a way to rapidly develop, test and implement its applications to drive revenue generation.

Enter Splunk

From their prior work with other companies, the Message Bus co-founders knew of the Splunk ability to collect and index machine-generated data and present it as actionable information. As a result, the Splunk platform has been part of the Message Bus product foundation since the firm’s inception.

“Delivering innovative, cloud-native messaging services is very data intensive,” explains Steve Mays, a co-founder of Message Bus. “We require optics into every facet of our business, from building and deploying solutions to monitoring their performance in multiple clouds and billing our customers. For these reasons, Splunk is an essential part of our technology infrastructure that we leverage across nearly all business processes.”

Development

Developers at Message Bus rely on Splunk to help build the applications that drive the company’s business. They use the platform to collect and index log events that they then query to help debug systems and ensure their functionality. This insight into multiple infrastructure components allows them to quickly test and troubleshoot applications and rapidly deploy new code. By making small tweaks at the developer level, Message Bus now outputs log events containing keys and values to help Splunk support analytics use cases.

“Splunk lets us track events specifically for our analytics,” says Ted Knudsen, a co-founder of Message Bus. “We get more information, and thus more value, from machine-generated data, which allows us to find issues during testing. With this intelligence, we can put solutions into production faster because we’re confident they’re mature and bug free.”

Operations

As new systems come online, the operations team ensures they function effectively to meet customer demand. Thanks to Splunk instances running in each cloud, the team aggregates

metrics from clusters of virtual machines to monitor service delivery and workloads. Using Splunk dashboards, the operations team can view and graph the data in real time and track trendlines, determining, for example, when a particular system is about to be over-utilized and when to take remedial action.

The ops team facilitates its oversight with several applications running on top of Splunk Enterprise. Splunk for Unix and Linux lets the staff monitor and troubleshoot the operating systems of its remote virtual machines. Splunk for IMAP monitors email from IMAP accounts and graphs them by size or time. More importantly, because Message Bus applications are built on Java, the operations team utilizes Splunk for JMX to monitor its distributed Java application environment for insight into these critical systems.

“Superior messaging necessitates collecting, analyzing and using data to make better sending decisions,” says Mays. “Splunk is our single source for operational intelligence in our cloud environments. We can access and display any category of logged events for deep optics into our messaging. Moreover, Splunk permits us to cohere and display data without needing a database administrator on staff, which accelerates decision-making and contains costs.”

Business processes

Because Splunk allows for natural language queries, even non-technical staff access and visualize actionable information. Account managers, for example, use Splunk to ensure all email is authorized and properly delivered. They track every customer’s email events (an especially vital function because the firm bills its customers by their email volume) and audit Splunk data to generate reports and pricing options such as volume discounts.

Splunk alerts notify account managers when an email provider like AOL or Gmail is bouncing email or if a customer’s account is experiencing anomalous traffic. They also can identify attempts to hijack a customer’s email domain and spoof a customer’s brand, thus preventing fraud and protecting reputations and the integrity of messages. Additionally, Splunk helps account managers deliver prompt and efficient service by diagnosing customers’ issues without burdening developers and programmers.

“Splunk helps to both enable our solutions and verify their effectiveness,” says Knudsen. “Because it empowers non-technical people to do deep dives into our processes and services, most of our staff utilize Splunk for one reason or another.”

Breakthroughs

Empowered by the Splunk platform, Message Bus serves a rapidly growing roster of customers. By capturing, indexing data from remote servers, systems and applications, the firm has the analytics and intelligence needed to support an agile development environment and a high level of service. Splunk software helps Message Bus speed the time to market of revenue-generating solutions, confirms the lifecycle of every message and analyzes how customers use its services to anticipate their future needs.

As Message Bus grows and refines its innovative business model, it looks to further leverage Splunk. Its development team designs applications leveraging Splunk best practices to allow any staff to create reports and dashboards from their machine-generated data. As Message Bus expands its service delivery to include new cloud providers, it will take advantage of Splunk’s ability to deploy fast and scale easily. The company also has plans to replace its ticketing system with Splunk to improve productivity. The incumbent solution issues tickets indiscriminately across multiple internal teams. Once in place, Splunk dashboards will send system and product alerts to the appropriate team, ensuring telemetry data is always accessible and actionable.

“We run almost our entire business on Splunk,” Mays concludes. “Without the platform, we’d be flying in the dark, unable to assure our customers that our messaging services are any better than what they already have. Message Bus is a data-driven company, which is why Splunk is a core element of our success.”

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.