RMS Gains Operational Insight Into Cloud-Based SaaS Offering

Executive summary

Risk Management Solutions, Inc. (RMS) is the world's leading provider of software, services and expertise for the quantification and management of catastrophe risk. When RMS embarked on an ambitious development program to create RMS(one), a new cloud-based software as a service (SaaS) risk management solution, it needed a way to increase operational visibility into and increasingly complex global environment. Since deploying Splunk Enterprise, RMS has seen benefits including:

- Decreased operational costs through infrastructure optimization
- Improved overall customer experience
- Accelerated troubleshooting and root cause analysis

Why Splunk

For more than 20 years, RMS customers have relied on the firm's RiskLink modeling software and associated data to help make informed decisions about risk management and mitigation. In most cases, customers use RiskLink as an on-premises system. In 2010, RMS began a development program designed to provide customers with a new risk modeling system offering improved performance, lower costs, open architecture and a cloud-based SaaS delivery model. The resulting RMS(one) hybrid cloud infrastructure relies on hundreds of physical and virtual servers, including tens of thousands of cores, thousands of VMs and petabytes of storage, at multiple RMS datacenters worldwide.

The RMS(one) development team needed a way to increase operational visibility into this complex global environment and find a way to better understand and optimize the hybrid cloud planned for its new SaaS offering. "We had multiple analysis tools, but no single tool that allowed us to consolidate machine data and slice and dice in meaningful ways," says the RMS director of cloud operational intelligence and monitoring. "We needed a way to characterize customer usage, profile our environment and optimize resource allocation. Splunk was the only solution we found that is able to tie together all of these different pieces and allow us to perform analytics on all of our data."

Industry
- Technology (risk management and mitigation)

Splunk Use Cases
- Application delivery
- IT operations

Challenges
- Increase operational visibility into complex global environment
- Consolidate and analyze machine data
- Characterize customer usage
- Profile IT infrastructure and optimize resource allocation
- Support cloud-based SaaS product development

Business Impact
- Enable easier transition to cloud-based SaaS delivery model
- Improve overall customer experience
- Meet SLAs and financial goals through accurate rightsizing
- Decrease operational costs through infrastructure optimization
- Ensure smooth service delivery
- Accelerated troubleshooting across heterogeneous systems
- Reduce time-to-repair through easier root cause analysis

Data Sources
- RMS(one) application—database extracts and log files
- IIS log files, configuration files, firewall logs
- VMware physical and virtual hosts
- Windows, UNIX and Linux OS logs
- MongoDB, SQL, Redis, Rabbit MQ
- Planned: Chef, CMDB, APM, NetFlow, EMC storage, Cisco UCS

Splunk Products
- Splunk Enterprise
- Splunk App for VMware
- Splunk App for Windows and *nix

Operational analytics and insight deliver business value

RMS adopted VMware as a critical deployment component of RMS(one). Deploying the Splunk App for VMware has enabled the development team to scale up the collection of machine-generated data to manage its growing hybrid cloud.

The combination of Splunk Enterprise and the Splunk App for VMware helped the RMS(one) team monitor and analyze its extensive beta testing program at all levels of the physical and virtual stack. Unstructured data is consolidated and made available—democratized—to development, quality assurance, operations and product management teams.

This has also allowed RMS to characterize customer usage patterns by pulling together many different data sources into a comprehensive view. "That's been really key for us," says the director. "The Splunk platform gives us the ability to establish what normal behavior looks like, which is critical now because we are using so many new technologies."

Splunk is also helping RMS to rightsize its RMS(one) environment to achieve the optimal balance between high performance and cost-efficiency, giving customers the ability to run more risk simulations in less time. This increased performance means RMS customers have the power to drill down into portfolios in real time and investigate key drivers of risk and change.

Cloud management made easy(er)

Another critical challenge for the RMS(one) cloud team is the seasonal nature of risk modeling demand—risk modeling of insurance and reinsurance portfolios can increase by up to six-fold during the final quarter of the year. Splunk is helping RMS meet its capacity planning challenges by providing visibility across all levels of its IT topology.

> "Splunk software has proven itself invaluable by helping us quantify customer demand, rightsize our environment and troubleshoot any issues in real time. Not only are we able to adapt reports in the Splunk App for VMware for in-depth analytics, but we are also able to correlate data across diverse applications and operating systems for a unified view of our infrastructure and service."

Director of Cloud Operational Intelligence and Monitoring
Risk Management Solutions

To understand the physical and virtual elements of the RMS(one) infrastructure, RMS uses Splunk Enterprise and the Splunk App for VMware to conduct regular searches and pull topology data from the Splunk index. By categorizing the data within Splunk, RMS operations can drill down into specific areas for troubleshooting and granular analytics.

RMS also uses the virtual forwarders in the Splunk App for VMware to collect data from more than 900 ESXi hosts and tens of thousands of virtual machines and map it to customized dashboards in the app to monitor the overall health of the cloud infrastructure. Other Splunk dashboards provide information on role-based metrics, host level drill down and customer usage. The dashboards accelerate troubleshooting, root cause analysis and help prevent resource overutilization.

Risk reduction realized

Splunk Enterprise and the Splunk App for VMware are providing RMS with a comprehensive view of its global environment and helping customers reduce risk with faster simulations and cloud-based services.

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.

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