Splunk® at iRhythm Technologies, Inc.

Business Analytics Deliver Operational Intelligence for a High-Growth Clinical Software Services Company

"Splunk helped us establish the baseline for our company's operational model and helped us identify and understand anomalies to that baseline. And as the business has evolved and changed, Splunk has helped us understand how the baseline is changing."

Mark J. Day, Ph.D.
iRhythm's Executive VP of Research and Development

OVERVIEW

INDUSTRY
• Clinical Software / Medical Devices

SPLUNK USE CASES
• Operational Intelligence
• Business Process Management
• Business Analytics
• Product Life-cycle Monitoring

BUSINESS IMPACT
• Operational intelligence and long-term planning
• Business process monitoring through every stage of the business model
• Operational intelligence without investing in a data warehouse in a fraction of the time and cost of traditional solutions
• Secure data management for HIPAA compliance

DATA SOURCES
• Application & transaction logs from product, manufacturing and data analysis systems
• Audit logs
• Business operations data
• KPIs and Baseline Metrics from Relational Sources

The Business

Founded in 2006, iRhythm is a rapidly growing medical device and service company that has pioneered an innovative, low-cost and highly effective approach to cardiac diagnostic monitoring. The company was founded to provide patients an affordable alternative for monitoring heart rhythms, one that helps avoid the complexities, inefficiencies and lack of cost effectiveness of the current monitoring options. With its single-use adhesive Zio® Patch, an ECG rhythm monitor that can be used continuously for up-to-14 days, iRhythm has addressed key unmet clinical needs in the field of ambulatory cardiac monitoring. As an emerging, fast growth company, iRhythm is relentless about quality control and product development to support its value-driven, high-volume business model.

Challenges

As a data-intensive technology company built on a recurring service offering, iRhythm needed to focus on company efficiency, quality of service and data integrity to support its low-cost, high-competency model for cardiac data analysis. In order to keep pace with their rapid growth and limited resources, iRhythm required an efficient and effective way to monitor business processes, establish baseline performance across their entire operation and continue to track that performance as the business evolved.

Enter Splunk

Since 2008, Splunk has been an integral part of iRhythm's business operations, helping them to baseline and perform against an internal efficiency model. Splunk Enterprise was the ideal solution for iRhythm, because it could deploy quickly (less than two weeks), ingest almost any data and allow the company the flexibility to understand and address its evolving operational requirements.

Splunk Enterprise has played a key role in enabling iRhythm to capture operating, manufacturing and quality statistics, in addition to providing key aspects of HIPAA compliance. Using Splunk software to analyze the data generated across its infrastructure, the iRhythm team has gained key operational intelligence needed to improve and evolve business operations.

Transaction monitoring with Splunk software has played a critical role in understanding and enhancing iRhythm's service offering around the Zio® Patch. By loading audit and transaction logs from applications that interact with each device and its recorded data into Splunk Enterprise, iRhythm is able to track every stage of the service lifecycle – from device manufacturing, through shipment, registration, and post-use return to iRhythm, where the device data is extracted, analyzed and reported on through its operations center. iRhythm monitors each Zio® Patch's diagnostic output with Splunk software, making sure the devices ran as expected and reporting any performance issues. In addition, loading product diagnostic information into Splunk software allows iRhythm to analyze and better understand patients' use of the devices. Lastly, iRhythm relies on Splunk software to monitor and ensure privacy of patient records as required by HIPAA and other compliance mandates.

Breakthroughs

Initially, iRhythm deployed Splunk Enterprise as an important search engine, using it to find the "needle in a haystack" within dense audit logs. Today, iRhythm has implemented Splunk as their enterprise data warehouse, gaining operational intelligence, monitoring business processes and product performance, and providing executive dashboards to report on overall company efficiency. These high-level summary dashboards in Splunk Enterprise aggregate business process and productivity data to pinpoint any operations-related issues.

For a volume-oriented business such as iRhythm, monitoring cost-efficiency is crucial to success. Splunk has enabled iRhythm to create an efficiency model based on a variety of information delivered: everything from how operations capacity is adapting to demand for the monitoring service, to the business' capacity to meet said demand. In the beginning, iRhythm had many questions about the market response to its product, how patients would use it, and how its proprietary device and analysis algorithm would perform. With Splunk, iRhythm has been able to answer these questions and to take immediate and impactful steps to improve, adjust and refine its business model. The operational insights gained via Splunk software have been invaluable as iRhythm continues its mission to bring accessible, economical and productive ambulatory cardiac monitoring to patients across the country.

Splunk has thus played a key role in enabling iRhythm to validate its business processes and measure KPIs and product performance. iRhythm's operations and executive teams rely upon Splunk software to track efficiency levels, monitor output and productivity, and ensure that manufacturing and service operations are running in tandem and as smoothly as possible—a critical need in a business that features high volume, low-cost and highly effective diagnostic solutions.

Free Download

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