Business Analytics Deliver Operational Intelligence for iRhythm Technologies, Inc.

Executive summary

Founded in 2006, iRhythm Technologies, Inc. (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. As a data-intensive technology company built on a recurring service offering, iRhythm is relentless about quality control and product development. The company needed to focus on company efficiency, quality of service and data integrity to support its low-cost, high-competency model for cardiac data analysis. Since deploying Splunk Enterprise, iRhythm has seen benefits including:

- Key operational insights
- Improvements to business model
- Secure data management for HIPAA compliance

Why Splunk

iRhythm 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. In order to keep pace with its rapid growth and limited resources, iRhythm required an efficient and effective way to monitor business processes, establish baseline performance across the entire operation and continue to track that performance to support the company's value-driven, high-volume business model.

Since 2008, Splunk has been an integral part of iRhythm's business operations, helping the company 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. Initially, iRhythm deployed Splunk Enterprise to find the "needle in a haystack" within dense audit logs. Since then, iRhythm has implemented Splunk as its enterprise data warehouse, gaining Operational Intelligence across

Industry
- Technology
- Healthcare

Splunk Use Cases
- Business analytics
- Internet of Things (IoT)
- Application delivery

Challenges
- Data-intensive environment
- Rapid growth with limited resources
- Needed to focus on efficiency, quality of service and data integrity
- Wanted to establish baseline performance across operations
- Needed to monitor business processes and performance

Business Impact
- Improvements to efficiency thanks to business process monitoring through every stage of the business model
- Real-time operational insights lead to increased productivity
- Cost savings over investing in a data warehouse
- Secure data management for HIPAA compliance
- Able to measure KPIs and product performance

Data Sources
- Application and transaction logs from product, manufacturing and data analysis systems
- Audit logs
- Business operations data
- KPIs and baseline metrics from relational sources

Splunk Products
- Splunk Enterprise

its infrastructure, 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.

Enhancing key service offering

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.

Real-time operational insights improve business model

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

> **"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., Executive VP of Research and Development
iRhythm

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.

Validating business processes and tracking efficiency levels

Using Splunk software to analyze the data generated across its infrastructure, the iRhythm team has gained real-time insights needed to improve and evolve business operations. Splunk Enterprise has played a key role in enabling iRhythm to validate its business processes and measure KPIs and product performance, as well as providing key aspects of HIPAA compliance.

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.

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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