



Improving Medical Device Serviceability with IoT Analytics

Glassbeam helps leading healthcare provider reduce equipment service costs, understand product usage, and improve the efficiency of its support organization through machine data analytics

The Challenge

Our customer is a leading healthcare provider with dozens of hospitals and medical centers spanning 500 locations, hundreds of outpatient facilities and physician clinics, and more than 350 physician practices offering advanced medical treatments to customers in the Eastern US.

The equipment in our customer's hospital systems require significant periodic maintenance, and when they do go down, the cost to the hospital is substantial. They typically run 50 to 100 scans per day and charge \$4000 per scan. Loss would equate to \$200K to \$400K per day.

Our customer's ultimate goal was to choose a complete solution that included remote access to avoid service costs, leverage consumption and usage analytics, and utilize machine data analytics to achieve true predictive maintenance on these machines, avoiding significant downtime costs.

The Glassbeam Solution

Our customer chose Glassbeam as a solution that their support and executive teams can utilize to monitor systems operations and use machine data analytics to gain critical, measurable insight into the operating environment, and analyze its data to produce decision recommendations and insight into operational efficiency of these instruments.

Remote Access

The solution provided their Service Engineers with remote visibility and access to equipment in the field. This allows them to diagnose problems remotely and optimize service schedules.

Machine Data Parsing and Transformation

The solution utilized Glassbeam's unique data parsing and transformation engine, converting raw machine log data into meaningful insights.

Glassbeam LogVault

This application allows access to all raw files that have been received by Glassbeam. The files are indexed by a variety of identifiers such as product name, serial number, date and time stamps, etc.

Glassbeam Analytics / Rules & Alerts

Our customer's solution included rule-based triggers for alerting stakeholders when an event exceeds a predefined threshold.

Glassbeam Explorer

This application allows users to do full text and parametric search on event & other logs, configuration files, text files etc. Capabilities also include digging deep into one file or a bundle of files or several observations of the same file with ease, helping to isolate events across multiple files and events.

Custom Applications

A custom application is a specific set of report designs and stakeholder views based on the needs identified during the discovery process. These custom applications are bundled together into dashboards, and viewable by stakeholders via as a web application. These included the following:

- Equipment performance analysis dashboard
- Installed base view of all systems sorted by country and site locations
- Part replacement summary across the installed base

The Impact

Service Cost Savings

The solution provided the company's Service Engineers with fleet-wide remote visibility and access to equipment in the field. This allows them to diagnose problems remotely, plan, prioritize, and optimize service schedules. The result is a reduction in cost of maintaining and supporting machines within hospitals, allowing them to avoid direct service costs to equipment manufacturers (\$20K per device per year) a savings which can increase overtime as equipment ages.

Installed Base Insights

With the Glassbeam solution, the company was able to utilize usage and consumption analytics to optimize inventory, and workflow management and help to reduce overall inventory duplication, as well as improve training and ultimately, improve patient outcomes by identifying possible scheduling delays related to equipment service.

Improved Service Efficiency through Remote Access and Analytics

Using the Glassbeam solution, the company's Service Engineers are provided with single customizable dashboards, alerts, and alarms on the health of the devices (remotely and on demand). This provides improved response times, as well as optimization and reduction of preventative maintenance through alerts and ultimately, predictive maintenance. Increases first time service accuracy and tracking to aide in intermittent failure resolution.



About Glassbeam

Glassbeam is the premier machine data analytics company bringing structure and meaning to complex data generated from any connected machine in the IoT industry. Glassbeam's next generation cloud-based platform is designed to transform and analyze multi-structured data, delivering powerful solutions on customer support and product intelligence for companies including IBM, EMC, Springpath, Gridscape, Aruba Networks, and Dimension Data.



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