



From Reactive Maintenance to Proactive Action

Enabling proactive maintenance through early issue detection with [Rocket® Vertica®](#)

COMPANY OVERVIEW

A global healthcare technology company delivering innovative solutions across medical imaging, diagnostics, monitoring, and digital health. The organization operates at a large scale worldwide and manages highly sensitive data across regulated environments.

CHALLENGE

Moving from reactive to predictive maintenance

The organization manages a large installed base of advanced equipment that generates significant volumes of operational data. A single piece of equipment can generate millions of events and hundreds of thousands of sensor readings each day. Given the complexity and highly regulated nature of these environments, product development cycles are often long. While vast amounts of data were historically captured, systems were not originally designed with predictive maintenance in mind. As a result, valuable data remained underutilized.

CHALLENGE

Improving reliability required bringing together diverse datasets to enable more proactive and insight-driven maintenance.

Ensuring consistent performance and availability is essential, as unplanned disruptions can impact operations and increase costs.

To improve reliability, the organization aimed to evolve from a reactive maintenance model to a more proactive, data-driven approach. This required consolidating data from multiple sources and enabling more effective analysis of both historical and real-time information, while maintaining continuity of service across complex operating environments.

SOLUTION

Advancing predictive maintenance with Rocket® Vertica®

The organization implemented a predictive maintenance platform powered by AI and machine learning. Data from hundreds of sources including system logs, real time telemetry and historical performance data was consolidated into a centralized, petabyte scale analytics platform with Rocket® Vertica® at its core. This foundation enables high-speed processing of large, complex datasets and supports predictive models that identify patterns, detect anomalies early, and anticipate failures, helping shift from reactive maintenance to a proactive, data driven approach while minimizing downtime.

To reduce operational disruption, multiple failure scenarios were modeled for critical components, enabling maintenance to be planned proactively and executed during optimal windows. Automated alerts are generated and reviewed by centralized monitoring teams, ensuring timely and informed intervention.

The platform scaled globally to support diverse operating environments, with the flexibility to meet regional data governance and data residency requirements in regulated markets.

As a result, operations teams gain earlier visibility into potential issues, enabling preventive action, improved planning, and more efficient maintenance execution across distributed environments.

SOLUTION

Rocket® Vertica® powers petabyte-scale analytics, unifying data, and enabling AI-driven predictive maintenance to reduce downtime.

RESULTS

Delivering measurable operational improvements

The predictive maintenance platform powered by Rocket® Vertica® continuously monitors large volumes of system data from critical equipment. Through this ongoing analysis, the organization achieved a significant reduction in equipment downtime, resulting in more consistent reliability, fewer operational disruptions, and improved service outcomes.

The solution supports remote diagnosis and resolution for approximately half of all maintenance cases, minimizing the need for in-person intervention. When an on-site visit is necessary, most issues are resolved on the first attempt, giving the organization a strong first-time fix rate. Potential disruptions are increasingly detected and addressed proactively, often before they cause any service impact. This preventive model reduces operational interruptions, lowers maintenance costs, and delivers faster, more reliable outcomes.



A significant drop in downtime

Reduced unplanned asset downtime and helped keep critical equipment running more consistently.



Strong first-time fix resolution

Many maintenance issues are now resolved on the initial visit.



Operational continuity

Helped ensure more consistent performance and minimized disruption to end users.

Rocket®
Vertica®

Key features

- High-performance analytics platform designed for large-scale data environments.
- In-database machine learning and AI to enable predictive insights.
- Flexible data integration for centralizing complex and varied data sources.

At a glance

- Supports large-scale data analysis with speed and efficiency.
- Enables continuous monitoring and comprehensive data visibility.
- Helps teams identify patterns and act before issues become disruptive.



Modernization. **Without Disruption.™**

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