Remote Monitoring & Diagnostics

Offsite remote monitoring provides onsite results

Bently Nevada
a Baker Hughes business

Save time and money with RM&D

90% typical reduction in non-actionable alarms and events

$1M per day in savings attributed to proper condition monitoring from lost production, secondary processes, and equipment damage

5-10X potential cost of an unplanned reactive outage compared to the cost of planned maintenance

Overview

The workforce is shrinking, and employees are being tasked with additional duties that are not always within their area of expertise. Industrial organizations don't have the people or the experience to get the most out of their condition monitoring investment. It's time to partner with those who know it best.

With Remote Monitoring & Diagnostics (RM&D) services from Bently Nevada, you can leverage our expertise to reduce risk, increase productivity, and minimize unplanned downtime. Our diagnostic experts monitor and analyze machinery parameters such as vibration, temperatures, pressures, and flow rates as well as the health of the instrumentation, server, and the associated data communication using secure, remote access to find abnormal behaviors and characteristics to provide actionable recommendations.

Bently Nevada's team of more than 150 certified machinery diagnostic engineers are available to support your operations through any of our six global RM&D centers. Our offerings have been thoughtfully tailored to ensure you realize the maximum benefits with three package options, as well as Remote Monitoring-as-a-Service that complements our hosted System 1 solution, Bently Connect. Our RM&D services extend the expertise of your own team, helping you today while preparing you for tomorrow.

Benefits of Remote Monitoring & Diagnostics

RM&D services provide the peace of mind you need to run your operations efficiently and with minimal downtime. With a Bently Nevada RM&D services agreement, you will benefit from:

- Increased equipment reliability and availability through expanded machine visibility, leading to a decrease in maintenance costs and lost production revenues
- Early notification of adverse equipment behavior to better plan for outages, saving time and money

- Technical guidance needed to promote or defer the performance of scheduled maintenance
- Early warning detection from software alarms configured by system experts who have the time to focus on your condition monitoring system
- Improved availability of protection system through early detection of sensor failures, malfunctions, or setup issues
- Confidence in proper system execution at all levels (server hardware, Operating System, System 1 data acquisition, data storage)

Bently Nevada expertise by the numbers

500+ service and support professionals in over 50 countries

150+ certified machinery diagnostic engineers worldwide

6M+ monitoring points installed on more than 300,000 monitoring devices globally

Packages and services

Whether you need core expertise to augment your current personnel or a comprehensive service agreement to handle all aspects of condition monitoring, our offerings are designed to meet the needs of your operations. Three package options are available.

Maintain

Included
- Initial and periodic system health checks
- Initial software review, setup, and tuning
- Periodic software alarm tuning and reference data optimization
- "Essential" M&S including software updates and technical support

Recommended options
- Machinery Baseline health audit report
- Deployment of software version updates
- Operating System and Antivirus Cyber Patch deployment

Preventative

Included
- Initial and periodic system health checks
- Initial software review, setup, and tuning
- Periodic software alarm tuning and reference data optimization
- Periodic machinery health reports, software alarm review, updates, and tuning
- "Essential" M&S including CAP (Cyber Asset Protection) with deployment services

Recommended options
- Machinery Baseline health audit report
- Periodic onsite visits

Predictive
(preferred)

Included
- Initial and periodic system health checks
- Initial software review, setup, and tuning
- Continuous alarm and event management with exception-based health reports (during normal business hours)
- Continuously managed software health, updates, and tuning with "Essential" M&S

Recommended options
- Machinery Baseline health audit report
- Periodic onsite visits

*Ongoing: normal regional business hours; non-Holiday coverage; additional monitoring hours available upon request.

Software alarm tuning: review, change, implement, configure applicable software states, and software alarms.

Software reference data optimization: enhancement of system functionality based on historical machinery behavior and establishing reference data for future comparisons; assures the correct data is captured at the correct times and displayed in the correct formats.

Baseline health audit report: includes a full review of available vibration and process data for all ranges of operating conditions, with a report on any machinery, system, or instrument anomalies.

System health checks: a review and assessment of server health, System 1 health, and vibration protection/monitoring system health.

- Server health includes operating system hard drive usage, System 1 database hard drive usage, CPU usage, reviews of both application event log and system health log
- System 1 health includes data acquisition status, System 1 version status, database back-up status, and data store span, consumption, size, age, and health
- Vibration protection/monitoring system health includes hardware configuration status, software version status, firmware version status, and instrument health

Periodic machinery health report: summary of the review, investigation, and documentation of A&E occurrences on a periodic basis.

This is available for hosted, connected, and non-connected System 1 customers. The report is supplemented by a conference call to discuss findings and update the statuses of the cases.

Onsite visits: periodic site visits by a certified field engineer to review and assess the health of the Bently Nevada hardware and software.

Alarm and event management: implementation and management of software alarms within their condition monitoring software to proactively manage machinery assets. Alarm conditions are evaluated to detect and diagnose instrumentation and machinery problems before they reach a serious condition.

Delivering success with flexible options

	Key benefits	100% remote	RM&D and periodic site visits	Periodic onsite only	Embedded engineer
RM&D	Minimize downtime with anytime access to review data Continuous event-based monitoring for asset and system health	**Best for machinery health monitoring and software optimization**			
Periodic onsite support	Onsite field engineer—knows your personnel and machinery Onsite updates and patching safely and securely with no connectivity risk Informal onsite OJT available		**Best for maintaining overall system health (monitoring HW/FW and S1 server)**		
Full-time embedded support	Dedicated onsite field engineer acts as a customer team member In-depth knowledge of customer's system, assets, policies, and processes Maximize condition monitoring value realization and outcomes				**Best for value realization partnership**

Baker Hughes 〉

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