ABB Ability™ Performance Optimization for QCS
Early detection of system performance irregularities

ABB Ability™ Performance Optimization for QCS service identifies, classifies and helps prioritize opportunities to improve product quality, measurement and control health, and control utilization in your plant. Performance Optimization for QCS service uses non-stop data collection and analysis to transform raw data into actionable information, quickly pinpointing issues so you can ensure optimal performance of equipment and process.

Features
- Automatic, non-invasive data gathering with ABB’s proprietary data collection tool
- Advanced, patent-pending technologies provide continuous analysis of Key Performance Indicators (KPIs)
- On-site or remote access for customer personnel and ABB support
- Twice-a-year performance analysis by ABB experts to identify issues and recommend performance, utilization and stability improvements
- Configurable email alerts are supplied when KPIs are outside site-specific thresholds

Benefits
- Improves production uptime by ensuring QCS stability through preventive maintenance identification
- Accelerates problem solving through real-time visualization and analysis of sensor stability, control utilization and process variability
- Saves time and money with automatic grouping and quick analysis of production quality data by grade
- Reduces response time and travel expenses by providing remote access to ABB experts for troubleshooting
- Establishes a solid foundation for continuous improvement, including higher availability, increased production and improved quality
More accurate troubleshooting with configurable KPIs

Performance Optimization for QCS service analyzes your specific key performance indicators to accelerate problem solving. KPIs include:

- **Control utilization**: Each shift report is analyzed to determine the percentage each control is used per shift. This is then measured against the optimum utilization for a specific control, reducing shift-to-shift variability.

- **Sensor stability**: Sensor standardized values are monitored and compared to peak operating conditions. Trends are then analyzed to determine if preventive maintenance should be scheduled to keep sensor performance high and avoid lost production.

- **Reel variability**: The Variation Partition Analysis (VPA) examines reel report information for each grade produced to monitor total variation, cross direction variation and machine direction variation against industry standards.

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**Overview**

ABB Ability™ Performance Optimization for QCS service collects system and process data automatically and generates actionable insights that lead to higher equipment availability and process improvements.

With this service, you get the advantage of continuous monitoring and data analysis to greatly reduce the time and effort needed to identify control utilization, sensor stability and reel variability data that is outside a defined threshold. Data is classified based on your specific KPIs to provide a list of problematic items that are then prioritized based on severity, process area, criticality and/or financial impact. This analysis leads to more informed, more responsive decision making by your team, resulting in better performance and utilization.

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**Improve your QCS performance**

Continuous monitoring and analysis of KPIs
View, analyze and receive alerts on performance issues
Performance Optimization for QCS Service components

Simplified view of data and analysis
The easy-to-use interface provides three separate views of the data:
- Raw data allows you and ABB service experts to view data associated with how often controls were utilized, sensor performance statistics and reel variations.
- KPI analysis presents a summary of KPIs, ranked by severity, that show which controls are out of compliance and to what degree, detailed problems of individual sensors, and reel cross direction or machine direction variation issues.
- KPI monitoring empowers you to specify your own set of rules for KPIs and displays each occurrence that falls outside a threshold.

Expert analysis helps predict potential failures
To ensure that your QCS is properly tuned, ABB provides periodic performance analyses. ABB experts evaluate the gathered data to look at the health and performance of your system, determine the statistical accuracy of the KPIs and find trends that predict potential failures. The resulting performance report recommends actions to improve control utilization, reel variability and sensor stability.

Critical notification when it matters most
To help prioritize issues that require immediate action, site-specific rules are applied to targeted KPIs. Any KPI that tracks outside of pre-determined parameters triggers an instant alert by email. This quickly identifies issues that can compromise performance so you can address them as soon as they are detected.
Secure connection for delivery of ABB services
On-site or remote access for customers and ABB experts

Application Server
ABB Application Server is a remote-enabled, service delivery platform that provides a custom, secure connection to ABB services and experts. Deployed at your location, ABB Application Server enables delivery of local and remote services and provides both customers and ABB service experts a real-time view of KPIs, as well as diagnostic and QCS data. Data collected is highly secure as it remains on-site and requires user authentication to view.

Advanced Digital Services are available for the following:

Assets
• Control systems
  - 800xA
  - Advant
  - Freelance
  - Harmony
• Low-Voltage drives
• Mine hoists
• Rotating machines

Processes
• Control loops
• Quality Control Systems (QCS)

Risk mitigation
• Cyber security for control systems
• Alarm Management for control systems

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