

# Remote services and condition monitoring for large drives





### Technology-based services for a greater competitive edge

Minimum downtime and the optimum use of staff and resources are key to sustainable success in industry. Siemens provides the basis for greater productivity, flexibility, and efficiency with technology-based services throughout the lifecycle of an industrial plant – reliably, globally, and around the clock. In-depth technology and product knowledge as well as industry expertise within Siemens' global network of experts ensure a considerable competitive edge.

#### The challenge: Secure remote services

Complex drive systems must have a high level of availability, and when needed require quick, expert support. To an increasing degree this can be accomplished by using modern, powerful communication media via remote access. Here the increasing requirements for IT security, traceability, and flexibility in remote access must be taken into account.

## The solution: A platform for optimum remote services

Siemens Industry Services has implemented all of these requirements in the Remote Service Platform (cRSP), and in doing is setting new standards in the remote services industry. The basis of this platform is innovative remove services technology equipped with maximum protective measures.





## These remote services are supported by:

- Scheduled read-out of the log file or, upon request
- Condition monitoring
- High-availability data storage
- Analysis of the recorded data
- Local service support by experts
- Video collaboration
- Software updates

## Condition monitoring – increases drive system availability

Drive systems play a key role in evaluating the reliability and availability of a production facility. The use of condition monitoring makes it possible to monitor central drive components that are susceptible to wear. Irregularities in operation are thus detected at an early stage and planned maintenance and repair measures can be initiated.

#### The benefit:

#### Planning condition-based maintenance

- Minimization of unplanned plant downtimes and reduction of subsequent damage
- Machine and plant availability is increased
- Prerequisites are created for conditionbased service and maintenance
- Maintenance and service activities can be optimized and planned
- Utilization of components up to their wear limit
- Optimization of the spare part inventory
- Graduated, flexible hardware and software concept, which is scalable and can be individually adapted to the respective drive system





#### **Condition monitoring for motors**

- Vibration monitoring to detect changes in the operating state and for early detection of damage
- Winding temperatures
- Bearing temperatures
- Speed

## Condition monitoring for frequency converters

- Actual values from parameters (current, voltage, power)
- Fault profile
- Cabinet, water and heat sink temperatures
- Project management and execution
- Monitoring of communication links
- Conductivity value, flow for liquid cooling

## Customer benefits and advantages of the Remote Service platform:

- Cutting-edge technology for secure data connections and the greatest level of availability
- Best-practice platform in the industry for remote servicess
- Support desk available 24/7
- Transparency through the monitoring and reporting of all connections
- Minimization of unplanned downtimes and preventing subsequent damage
- Increase in product availability
- Optimization of maintenance and servicing work
- Shortened replacement intervals for spare parts through early-stage fault analysis using remote diagnosis
- Possibility of using components up to their wear limit

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#### Note:

Appropriate protective measures (industrial security, e.g., network segmentation) should be taken to ensure secure operation of the plant. Further information on the subject of industrial security can be found on the Internet at www.siemens.com/industrialsecurity

For further information and support, please contact your local Siemens partner: siemens.com/services/partner

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