Wherever your location, you are always connected. We can monitor the complete range of your Oil & Gas and Industrial rotating equipment to identify a potential problem before it impacts your operations.

We are pleased to present our Remote Diagnostic Services (RDS), based on our OEM expert knowledge, combined with modern tools for detection and diagnostics to help optimize your asset management.

This service is an integral part of our Long Term Program (LTP) and can also be offered as a Stand-Alone multiyear support service.

With more than 670 units connected, both in power generation and in mechanical drive applications, we serve customers in various industries and application modes.

Service Consulting

Our Remote Diagnostic Services (RDS) can assist you with the skilled professional management of your plant’s assets to help you meet your investment goals.

Through the daily monitoring of various operating statistics, trending and data analysis, tailored to your specific machine, Siemens RDS is designed to optimize your rotating equipment and availability.

Proactive Notification

Daily Monitoring by an assigned Siemens RDC Engineer is the foundation of this service. We aim to minimize the risk of forced outages, by predicting potential unplanned shutdown events and allow planning into a scheduled outage supported by OEM’s personnel and materials to ensure engine down time is managed in the most effective and efficient manner.

The STA-RMS* platform utilizes the experience that Siemens as the OEM has accumulated from its operating fleet. This, coupled with the extensive knowledge of both our field and service engineering teams, gives us the unique capability to enhance the specific requirements of your Oil & Gas, Industrial or Power Generation application.

The benefits of Siemens Remote Diagnostic Services can include:

- Easy & quick installation
- Fast, secure online help and advanced troubleshooting directly from experts without the need for a site visit
- Outage optimization and reduction of overhaul costs through trend and root cause analysis
- Correlation and analysis of rotor dynamic data with respect to operational data
- Increased production through maximum train performance, availability and reliability
- An assigned Remote Diagnostic Engineer
- A global team of Siemens experts are working for you

(*Siemens Turbomachinery Applications - Remote Monitoring System)
Technical Overview

Remote Diagnostic Services are available for all Siemens Industrial Rotating Equipment and consist of four components:

- Data acquisition
- Data transmission / Securing the transmission route
- Data storage
- Detection and diagnostics

Data Acquisition

Data is automatically recorded within the control system of the equipment. Integrated solutions for Simatic S7, PCS 7, WinCC and many other 3rd party stand-alone systems via OPC or modbus interface are available.

In order to obtain optimum performance combined with optimum time resolution, the signals are filtered, pre-processed and prepared for data transmission.

Service Support When & Where you Need it

As an integral part of an LTP or as Service Support Agreement, whether it is for performance fine tuning or assistance with a specific equipment issue, the Siemens Remote Diagnostic Centre and the 24/7 Helpdesk can be available to assist you with virtually any kind of technical issue.

Help can be provided when you really need it, either by telephone or through secure online connection.

Product Specific Options

We can also provide a number of tailored services, including:

- Early Warning Notification through Daily Monitoring
- Trending of data and remote troubleshooting assistance
- Key performance indicators such as reliability and availability vs benchmarking
- Potential fault localization
- Online enhancement for continuing support and software updates

Siemens continues to invest in Research and Development to achieve smarter operation year after year.

New product developments from our R&D group are quickly deployed on the relevant connected Product family.
Data Transmission
Typically signal and event data from the control system of the last 24 hours are collected, compressed and sent back to Siemens once a day.

For protection and security, we have located our common Remote Service Platform (cRSP) server in a demilitarized zone (DMZ). On customer request, connections from the Siemens network by an authorized engineer to the customer system, and vice versa, are not 'put through directly.' They terminate in the cRSP server using a reverse proxy function.

Data Storage
All available values and messages are stored centrally within the Siemens intranet. This can give the customer the benefit of fleet comparison analysis and product improvements based on actual operational conditions. Data is stored anonymously for high confidence and security.

We can assist and provide you with the prerequisites (e.g. VPN router) to use Siemens common Remote Service Platform (cRSP).

Detection and Diagnostic
We provide rotordynamic and thermo dynamic tools such as vibration analysis and diagnostics including (where applicable) performance calculation for gas turbines, steam turbines and compressors.

Siemens Remote Diagnostic Services can provide this expert diagnostic, not only for single units, but for various combinations of our products and both core engine and auxiliaries can be monitored.

Flexible Solutions for Data Recovery
For cases where a fixed line cannot be established Siemens is also capable of receiving the data via email.

In case the customer has already a system in place that collects data from his various sites Siemens offers the possibility to connect centrally to the customer central server. 1

1 Additional operations required for these options are not included in the price calculation and have to be evaluated on a case by case basis.

![Fig 2: The landscape of current and future analytical tools](image)
Fig 3. Monthly Key Facts of Siemens VPN inhouse technology (cRSP)

- >1GB/Month Data Transfer (upload)
- Up to 2000 Parallel Sessions
- 14,000 Individual Users
- >5.4 million Connections per month
- 3,200 GB/Month Data Transfer (download)

134,000 Connected Systems

Fig 4. Yearly performance on our internal IT platform STA-RMS

- 500,000 Automated Tasks
- 10018 User Sessions
- 850,000 Files Processed
- 1603 Periodic Reports
- 1660 Investigation Reports
- 17 Virtual Machines

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