

# Remote diagnostic services Drives systems

# Remote diagnostics

In an ideal world, the best way to ensure maximum production uptime is for all the system experts to be on site around the clock. This, clearly, is not practical and so to help maintain production ABB has developed a series of remote diagnostic services that ensure drives systems experts, whether from ABB or the customer, are never far away.

## Immediate global assistance

ABB's remote diagnostic services (RDS) combine security, remote connectivity, advanced monitoring and analysis tools, together with global technical support, no matter the application. Whether a gearless mill drive, high pressure grinding rolls or ring-geared mill drives, RDS provide unparalleled protection and back-up maintenance.

RDS are available as part of a service agreement, during the planning of which, ABB identifies those remote services most likely to benefit a customer's plant or process and maintenance strategy.

## Secure remote access platform

The RDS utilize a remote access platform (RAP) that ensures remote connection security and compliance with existing computing and security environments. Security is designed into every layer of the RAP, eliminating the need for virtual private networks or changes to IT security procedures.

RAP allows highly secure, real-time central monitoring and control of devices located at customer sites. It also provides audit and security features, including audit logs to track user and application access.

RAP consists of:

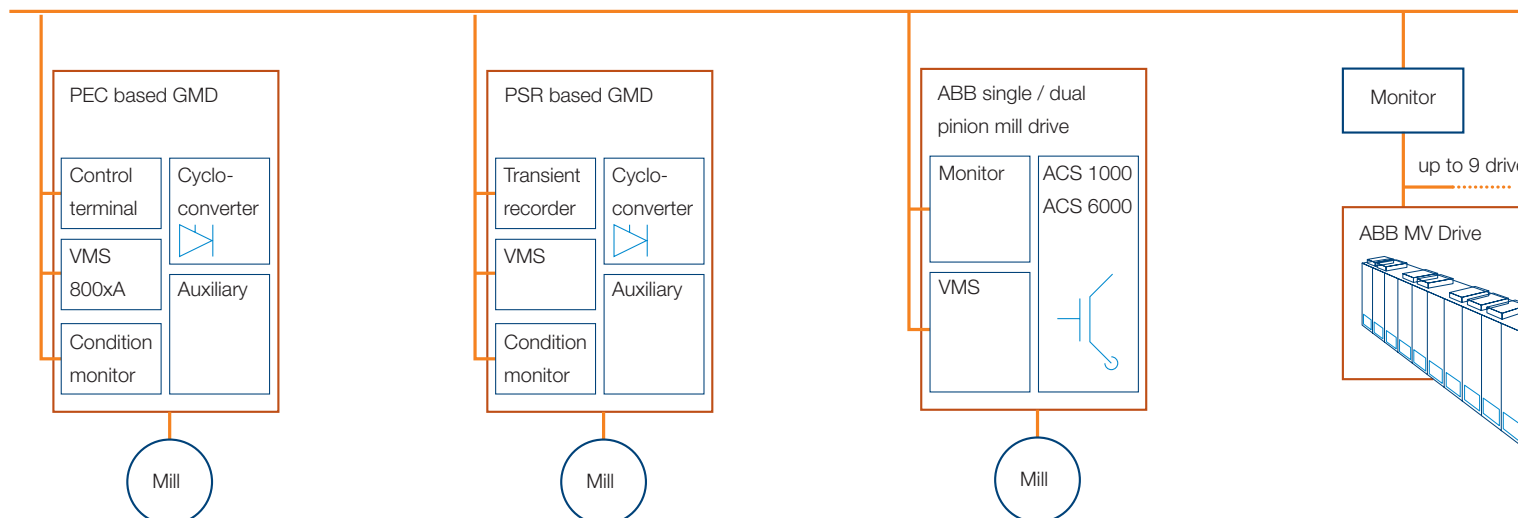
- A virtual support engineer (VSE) - located at the customer facility, which monitors supported devices and systems
- A service center – that functions as the core of the system, acting as a knowledge repository, control center and communication hub
- A communication server that provides secure, encrypted and authenticated communications over the internet between the service center and VSEs installed at end-customer sites

## RDS provide rapid response

RDS aim to provide a rapid response to any issue arising within an ABB drives system. If used as part of a maintenance program it can help reduce the overall maintenance costs.

RDS benefits include:

- Maximizing plant availability by minimizing unintentional interruptions and optimizing planned maintenance
- Optimizing the overall equipment effectiveness (OEE) over an extended lifetime of ABB drives systems
- Provide immediate access to ABB's engineering expertise
- Provide remote access to customer's engineers when off-site



# Enhancing maintenance levels

## RDS can benefit each stage of a scheduled maintenance program.

### Corrective maintenance

Corrective maintenance is required to bring back to working order, equipment that has failed or is worn out.

As corrective maintenance is often unscheduled, the use of ABB Support-Line together with RDS troubleshooting techniques, allow ABB's engineers to immediately access the drives systems in order to identify the cause of failure and correct it with minimum delay.

### Preventive maintenance

Preventive maintenance is carried out routinely and is designed to prevent the need for more costly repairs in order to retain the system at a specified level of performance.

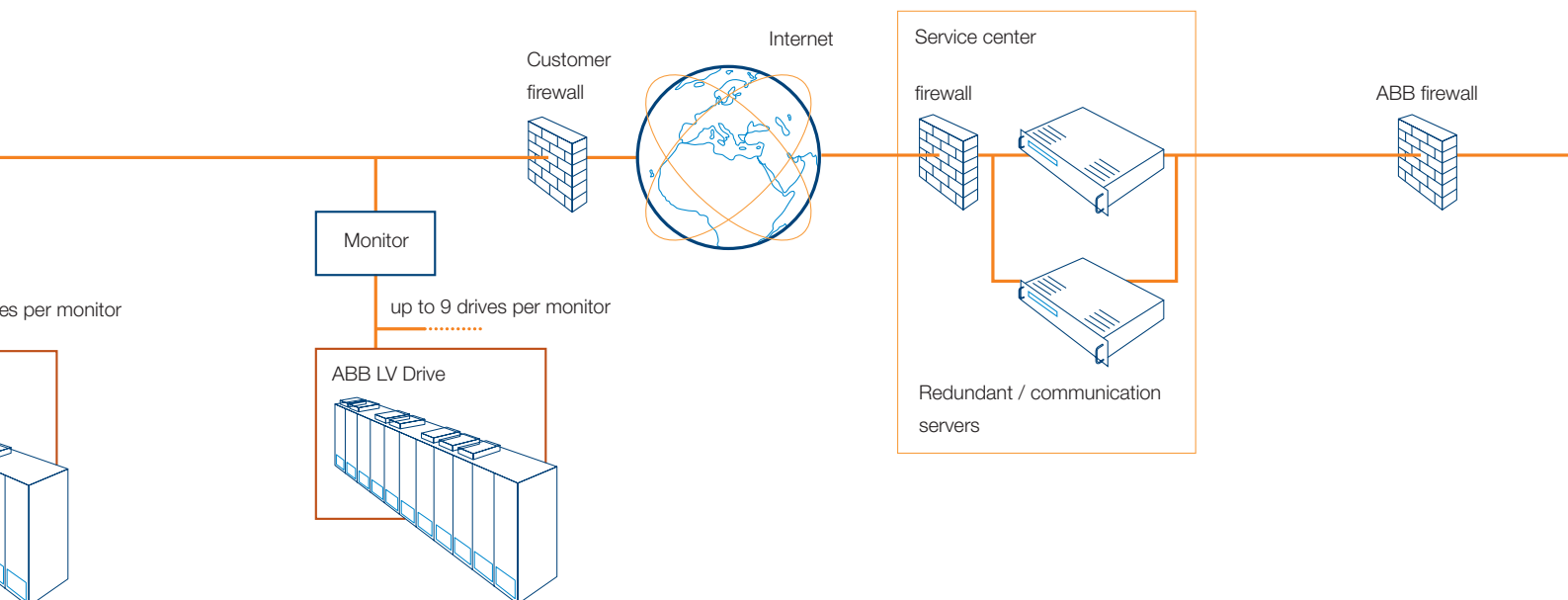
RDS periodic maintenance reports provide scheduled analysis and audits of system recordings and logs. Carried out by ABB engineers, these health checks minimize planned downtime and reduce a company's overall maintenance costs. The required data are automatically retrieved by the RDS system for remote analysis, thereby ensuring that the customer receives the information while it is relevant and at reduced cost.

### Predictive maintenance

Predictive maintenance techniques help determine the condition of in-service equipment in order to predict when maintenance should be performed.

RDS condition monitoring system performs online, real-time analysis and modeling of a system to predict future failure modes. This approach offers cost savings over routine-based maintenance, because tasks are performed only when warranted. This reduces unscheduled downtime as failures are fixed before they occur.

RDS improve the availability of equipment at a fraction of the associated production losses.



# Remote services

**RDS, in combination with SupportLine – ABB's telephone access to its technical support engineers – enable ABB's experts to immediately interact with a customer's drives system to perform corrective maintenance in emergencies. RDS periodic maintenance reports are asset health checks, performed by ABB engineers at regularly planned intervals, which provide valuable inputs as part of a preventive maintenance routine. RDS condition monitoring provides predictive maintenance by continuously analyzing a system for the early detection of potential failures.**

## ABB SupportLine

ABB SupportLine helps customers maintain, at a high level, the ongoing production and performance of their equipment.

### Benefits

- Access to experts via e-mail or fax 24 hrs/day, 365 days/year by phone
- Fast, easy and prioritized access to ABB's extensive worldwide support network
- Assigned support engineer assumes complete responsibility for problem resolution
- Documented problem escalation process ensures rapid involvement and contribution of worldwide experts and product developers if needed
- Monitored case status ensures expedient resolution

## RDS troubleshooting

RDS troubleshooting provides support from ABB experts through a secure remote access connection:

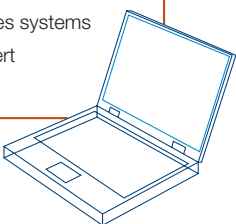
- Troubleshooting: on-demand connection for a specific problem solving
- Standard solution across ABB's entire installed base
- Remote access and support by ABB engineers worldwide
- Remote access to the system for customers' support engineers

### Benefits

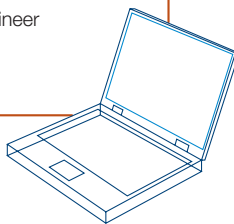
- Quick response and fast resolution SupportLine calls
- Real-time access and support
- Reduced overall maintenance costs
- Immediate assistance via a SupportLine call by directly looking into the customer's system

ABB Intranet

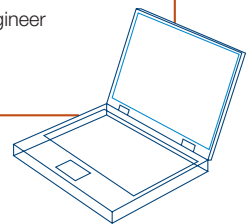
ABB CH  
Drives systems  
expert



Local ABB  
engineer



Customer  
engineer



## RDS periodic maintenance reports

Scheduled asset audits and evaluation against established benchmarks are performed. A detailed general condition check report is provided, which includes a summary of findings and recommended preventive and corrective maintenance.

- Periodic maintenance: scheduled remote asset audits for periodic inspection with a report and recommendations
- Quarterly health check and system audit by ABB experts
- Fingerprint development
- Recommendations for preventive maintenance actions
- Tracking of maintenance related key performance indicators (KPIs)

## Benefits

- Fast and automated information retrieval
- Reduced overall maintenance costs
- Optimized asset performance
- Information for more efficient operation
- GMD system condition reporting – periodic maintenance report

## RDS condition monitoring

- Online condition monitoring in real-time
- Advanced system and decision making models continuously report on the health of the system
- Easy to use graphical user interface and remote access
- Monitoring of entire drive system

## Benefits

- Single page summary of the health of the GMD system
- Fault prediction and recommendations for required maintenance actions
- Advanced trending and visualization capabilities
- Real-time reporting of operation efficiency
- Optimized asset performance

## Remote connection security

RDS use a secure socket layer (SSL)-encrypted communications tunnel between the customer's system on site and the ABB expert's RDS workplace. The design of RDS is quite distinct from other solutions in terms of functionality and security. Unlike point-to-point based solutions, RDS do not open a "back door" to the customer's IT environment but instead is integrated into the plant operator's existing IT security design. Compared with standard, virtual private network (VPN) no external networks are connected to each other at the IP level (Open Systems Interconnection (OSI) level 3). Rather, the connection is established between applications.

## Benefits

- No ports need to be opened in the customer firewall
- Communication is encrypted and highly secure
- Communication will not tie-up/ slowdown the customers network
- No performance penalty on the system being monitored

# Contact us

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