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Grid Diagnostic Suite – SIPROTEC Dashboard

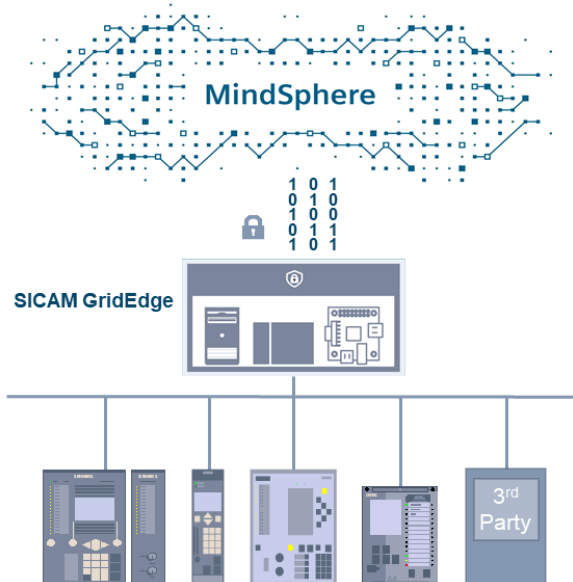
Protection relay data at a glance

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Transparency increases efficiency

Protection relays sit at the very heart of our power grid infrastructure. They operate silently inside substations and listen to the 50 Hz or 60 Hz AC-heartbeat of the power lines. Once they come into action, every millisecond counts in initiating switching operations to avert disaster and alert the grid operator about a specific fault situation. This is where the SIPROTEC Dashboard comes into play.

As part of our Grid Diagnostic Suite, SIPROTEC Dashboard benefits from a new communication architecture. Without additional configuration, protection devices communicate via the station bus to the new **SICAM GridEdge**, and from there to the MindSphere cloud. This way we have the best of two worlds: Maximum data transparency on the edge-level and a grid-wide data overview in the cloud, all while complying with state-of-the-art cyber security standards by de-coupling field devices from the cloud.



Empowerment of maintenance crews

The SIPROTEC Dashboard empowers operational crews in their troubleshooting of faults in the power grid. Instead of waiting for information from the control center, they can now directly access key data from a given protection relay that initiated a trip. This includes a view of its geographical location on a map.

One potential problem when troubleshooting the behavior of protection relays is related to firmware versions. Are all devices on the same version? Is the latest version deployed everywhere? With our new firmware cross-check functionality, firmware versions can be analyzed at a glance within a specific substation or even across the entire grid.

SIPROTEC Dashboard

A MindSphere application which collects data from protection relays across the entire grid and offers a variety of visualizations to simplify workflows and enable faster response times.

Customer benefits

- Simplifies workflows for faster response times
- Increases grid availability and service quality
- Reduces investment and operating costs
- Easy integration and seamless data availability
- Full support for SIPROTEC 4/5 and Reyrolle relays
- Meets highest Cyber-Security standards



SIPROTEC Dashboard - Main features

Multiple views

- Map view, substation view, device and measurement data views
- Drill-down option for each event

Protection settings monitoring

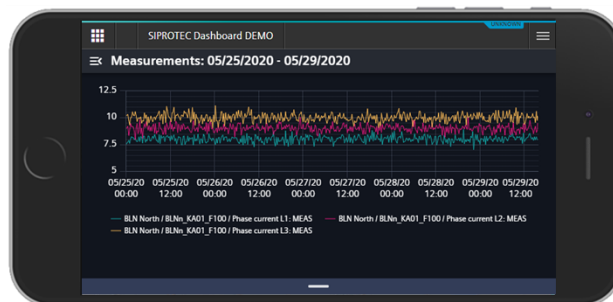
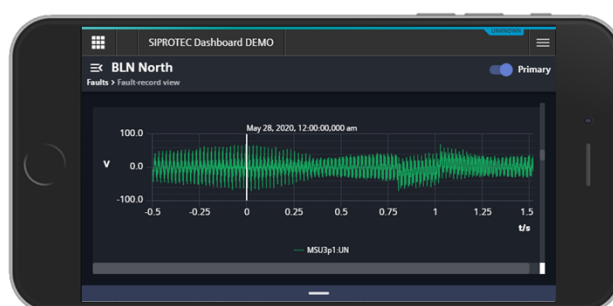
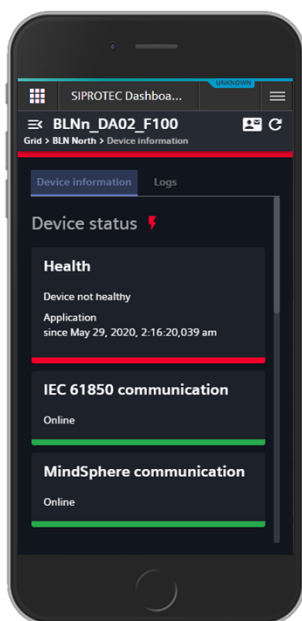
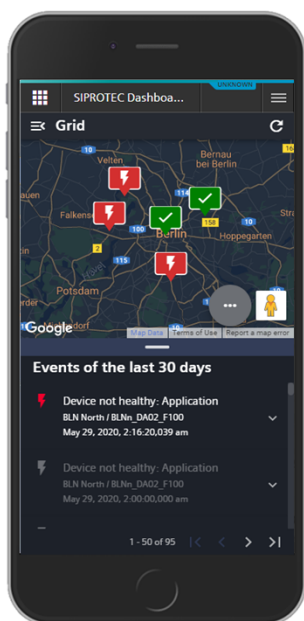
- Monitoring of SIPROTEC 5 settings
- Visualization of changed settings incl. history of setting changes

Device management

- Firmware cross-check on substation and grid levels
- Settings monitoring on substation and grid levels
- Secure de-coupling of relays from the cloud

Fault analysis

- Automated fault record and fault log retrieval
- Fault record visualization
- Automated SIPROTEC 5 log retrieval for available log files, e.g. ground-fault, operational, setting-history



Examples of views on a smartphone



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