SIEMENS

Flyer

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PROFINET Bus Analyzer

Validation, analysis, and diagnostics of PROFINET networks

PROFINET opens new possibilities in the manufacturing and process industry for creating flexible and high-performance plant networks that meet increasing secure requirements. In order to ensure that these functionalities are installed reliably from the outset and can be monitored and optimized over the entire plant life cycle with little effort, Siemens offers powerful products for the validation, analysis, and continuous diagnosis of simple and high available PROFINET networks. The PROFINET Bus Analyzer (BANY) recognizes critical states in your network before a network segment can become overloaded or even fail.

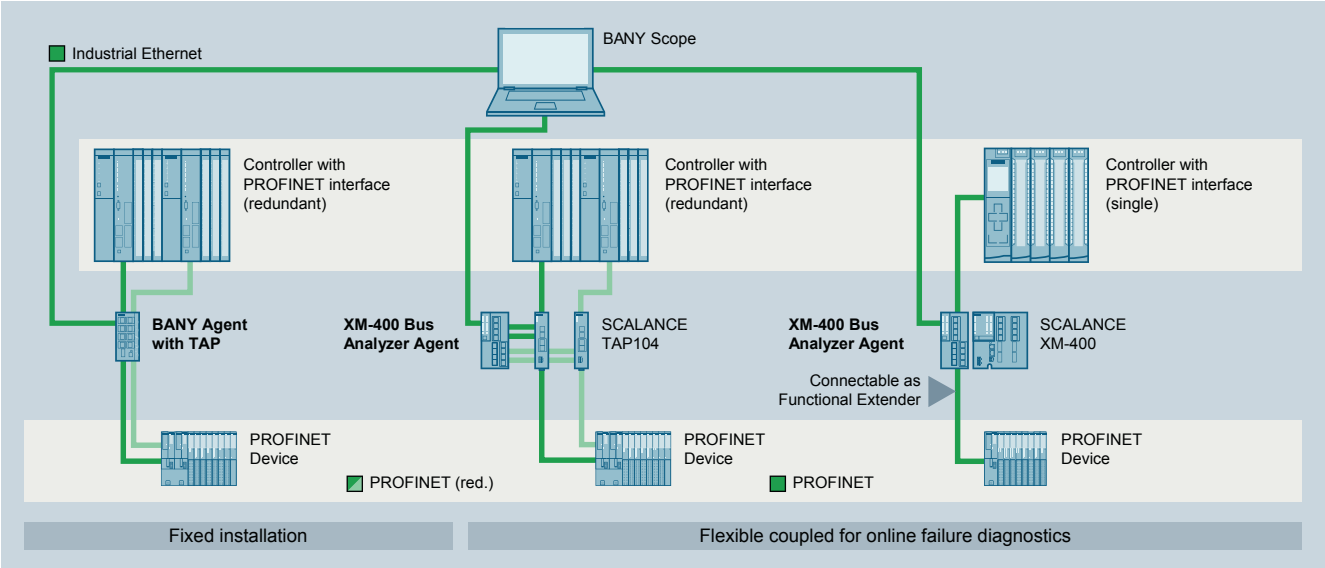
BANY Agent
The BANY Agent hardware can be firmly integrated into the network for continuous network monitoring. In case of errors, it can even be used after the incident via a SCALANCE TAP104 or as "Functional Extender" at SCALANCE XM-400 switches for diagnostic purposes in ongoing plant operation. It is not necessary to turn the affected network off or interrupt it. Errors are analyzed quickly, forgoing the need for time-consuming reproduction attempts.

BANY Agent permits the non-interacting extraction and analysis of the entire telegram traffic, online in real time. Two integrated TAPs (Test Access Points) permit the analysis of redundant PROFINET networks.

BANY Scope
The BANY Scope software permits access to several BANY Agents in the plant. This allows identifying and removing error sources in PROFINET networks quickly anywhere in the plant. The quality of the network can be determined quickly at all times using key indicators (network load, telegram errors, jitter, etc.).

In order to validate PROFINET networks, validation logs are created automatically according to the PROFINET planning and start-up guideline. The signal generator can be used to perform stress tests with different simulated network loads. This helps recognize and remedy potential weaknesses even before the productive phase. This ensures that the availability of your plant meets your high standards from the beginning.

The validation can be completed with the free PRONETA software which automatically scans and clearly documents the topology, configuration, and performance parameters of a PROFINET network. This enables you to perform a qualified installation and efficient inspection.



Highlights

- Telegram records on internal or external storage media (USB) with exact time stamps (10 ns resolution)
  - Comprehensive trigger functions to filter the recorded data
  - Interface to Wireshark and other export functions for detailed telegram analysis
- Real-time PROFINET analysis for the automated determination of all relevant bus parameters (telegram number, telegram errors, network load, cycle time, jitter, etc.) in tabular or graphical representation
- Signal generator to perform offline and online stress tests (measurement of telegram cycle time, analysis of PROFINET RT and IRT with different network loads)
- Device lists to display device names, IP addresses, MAC addresses, device status, events, interruptions, and failures
- Value tracking online in real time, without impeding the actual communication performance
- Control interface via script or TCP commands

Your benefits

- Permanent network monitoring for preventive maintenance and prevention of disruptions
- Online analysis of the network quality in real time
- Fast error analysis and performance improvements in plant operation
- Clear status and event indicators for all devices installed in the network
- Simulation of PROFINET communication for different load states
- Verification of projected cycle time using the measured telegram deviation (jitter)
- Validation of network including logs

Siemens AG
Process Industries and Drives
Automation and Engineering
76181 Karlsruhe
Germany

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