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Ingenuity for life



SINEMA Server V13 SP2

Making Your Network Transparent

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Increasing Relevance of Industrial Network Monitoring

Studies prove:

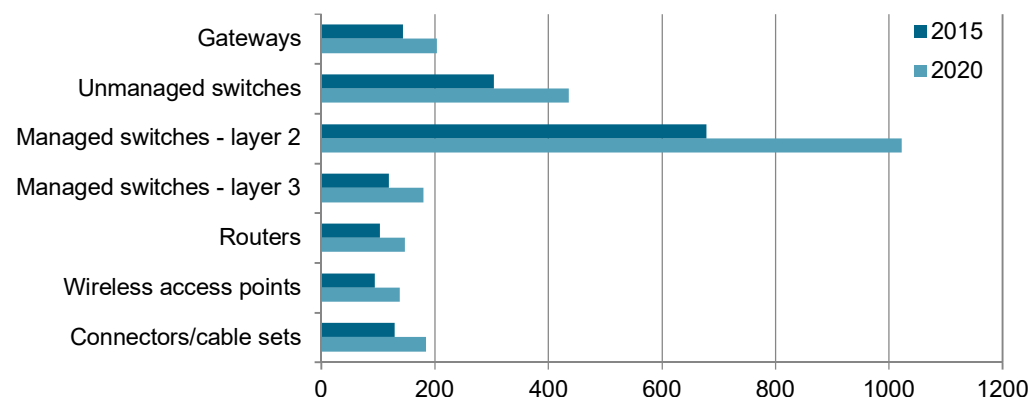
- World market for Industrial Ethernet networks grows continually
- Number of PROFINET nodes rising
- Increasing number of managed devices
- Growing amount of devices with a small size (fewer port count of each device)

This leads to:

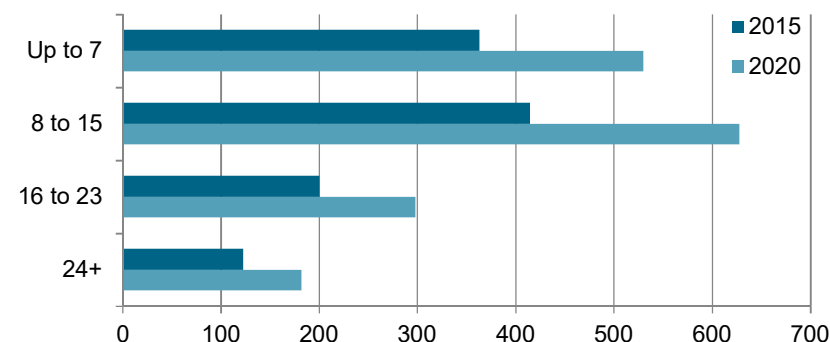
- Size of networks will continue to increase
- Complexity within the network will continue to grow

➤ **This results in an increasing demand for network management solutions**

Products by revenue



Port count by revenue of all switches



Source: IHS Technology, *Industrial Ethernet Infrastructure Components Report – 2015 and 2016*

Portfolio Positioning

Part of Siemens' integrated network management system

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HMI

- HMI SCADA systems
- DCS systems
- MES systems



Network management system

- **SINEMA Server**
- RUGGEDCOM NMS



Infrastructure

- SCALANCE X/W/M/S
- Products with SNMP capability
- RUGGEDCOM



End devices

- Field devices
- PROFINET infrastructure



Top-Highlights SINEMA Server

Maximum transparency for your industrial network

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Graphical representation

- Topological recognition and representation of the network
- Integration into HMI / SCADA systems possible



Validation of network parameters

- Repeatedly check and document the essential characteristics of the network



Automatic Documentation

- Permanent inventory and documentation of all network users



Management

- Device configuration via CLI
- Firmware management
- Monitoring and management centrally and around the clock



Monitoring and diagnostics

- SNMP, PROFINET and SIMATIC mechanisms are being used
- Evaluation and presentation of diagnostic conditions

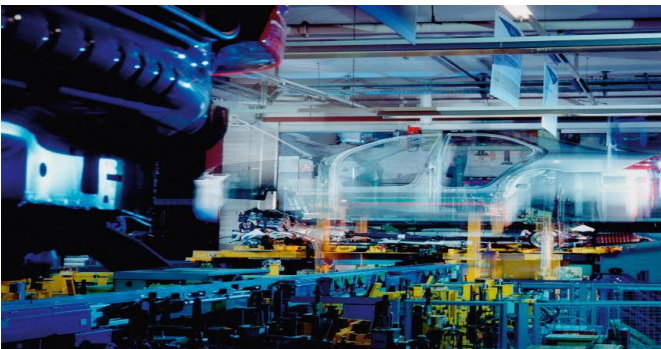


Typical application fields

SINEMA Server is particularly versatile

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Target sectors and applications



Networks in factory automation

- **Automotive industry**
Networks with changing topologies and PROFINET
- **Machine industry**
Easy validation of network parameters for documentation purposes



Networks in the process industry

- **Food and beverage industry**
Integration of the SINEMA Server interface into WinCC- & PCS7 systems
- **Pharma and chemical industry**
Redundant networks and monitoring of S7-300/400



Networks in other industries

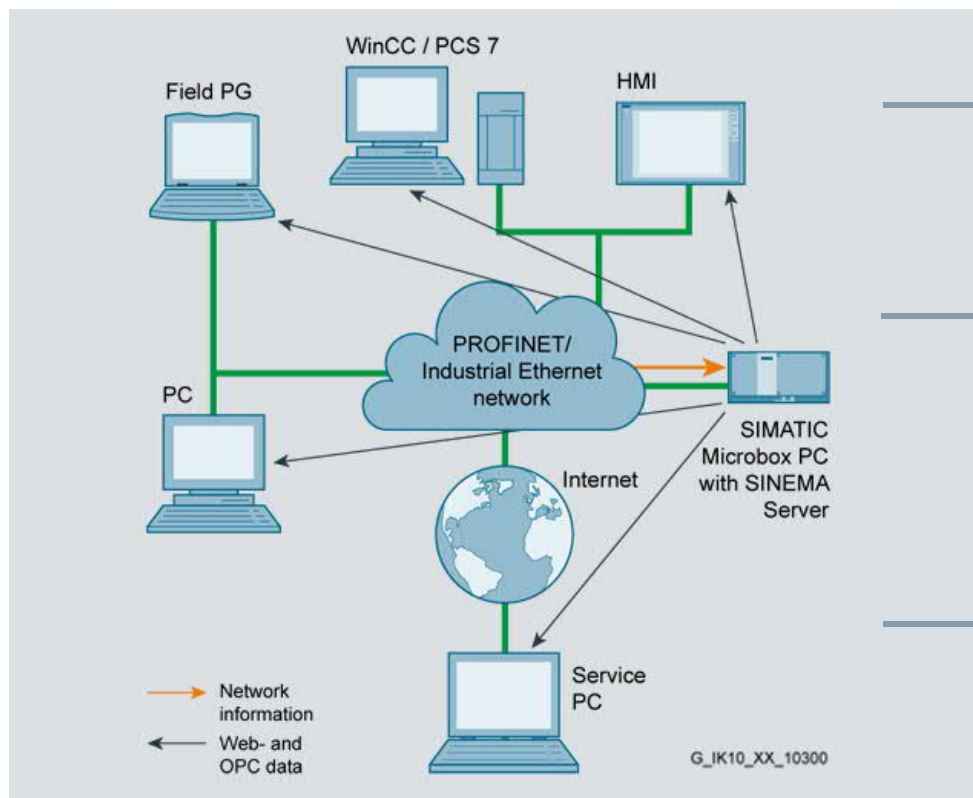
- **Power plants**
Monitoring of SCALANCE and RUGGEDCOM components
- **Tunnels and mining**
Monitoring of extended network structures

SINEMA Server improves the network efficiency

Easy integration and monitoring of networks

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System- / Value added aspects



Comprehensive network management

- A large number of nodes can be centrally managed via SINEMA Server

Transparent diagnostics

- Maximum transparency in industrial networks through automatic topology and comprehensive diagnostic functions







Openness and flexibility

- Integration of products from different manufacturers
- Easy access to diagnostic data due to web-based architecture
- Diagnostic data made available via OPC-UA server
- Wide range of adjustment options for network monitoring

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Customer benefits

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Characteristic / function		Customer benefits	
 Inventory	Inventory and documentation of all network nodes	▶	Up-to-date documentation at central location and at all times
 Topology	Topological presentation of the network	▶	Structured representation makes it easier to determine the current network status
 Diagnostic	Evaluation and display of diagnostic status information	▶	Minimizing plant downtimes
 Reporting	Creation and display of statistical information for definable periods	▶	Fast and easy check of the network status over longer time periods
 Validation	Validation of network parameters	▶	Fast detection of changes to device configurations
 Management	Configuration of devices by CLI and firmware management	▶	Update and configuration of network components from central location

Network monitoring for power plants

SINEMA Server as part of a sustainable energy concept

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SINEMA Server improves the availability of the system by automatically monitoring the network

Customer:

**Combined heat and power plant
Aubrugg** (Switzerland)

Industry:

Power generation

Advantages for the customer:

- Easy and automatic inventory of more than 100 switches (including topology generation)
- Fault avoidance due to automatic network monitoring improves the availability of the system and thus the security to supply

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Changelog V13 SP1 -> V13 SP2

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Network search



- Device profiles updated

Monitoring



- Monitoring of POF power budget values depending on cable length
- **Global activation of the port statistics**
- Custom OIDs can be monitored with "not equal"
- Improved handling of device status within overall status groups
- Monitoring of custom OIDs in binary format

Topology



- **Remember connections (use case: tool changer)**

Device configuration



- HSPs of supported devices updated
- Adding of new firmware files improved
- **CLI scripts with dynamic tags for IP, MAC and device names (\$i, \$m, \$n)**
- Error check of executed CLI scripts based on error expressions
- **FW download for SCALANCE M and SCALANCE S615**

PROFINET



- **Automatic detection of tool changers (DCP-Hello)**
- **PROFINET standard diagnostics on module / submodule level**
- **PROFINET channel diagnostics on channel level**
- Import of PROFINET GSD files as source for diagnostic texts

Validation



- Check of duplicate IP, MAC, PROFINET names
- **Export of topology during validation process**
- FW comparison (whitelist) based on 1-4 digits (e.g. V.5.0.1011)

System



- **ESXi 6.0**
- Scheduled database cleanup
- Detailed server status information in the SINEMA Server Monitor

Server overview



- Server trend accessible via URL

Further information

SINEMA Server improves the scalability, performance and transparency of your network

➤ See for yourself!

More information about SINEMA Server on our website

SINEMA Server Online

**Datasheets and other technical information
can be found here**

Industry Service & Support



Thank you for your attention!

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