Wago

EXECUTIVE SUMMARY

Challenge
Design a future-proofed network infrastructure capable of meeting growing performance and scalability needs

Solution
- Brocade MLX Series
- Brocade FastIron SX Series
- Brocade TurboIron 24X Switch

Results
- Future-proofed the network infrastructure to support performance and bandwidth needs for many years to come
- Provided potential cost savings by reducing the need for large quantities of fiber optic cabling
- Simplified network management and enabled a high level of transparency in the network with sFlow monitoring

High-Performance Switches from Brocade Enable Enterprise-wide Standardization

WAGO Kontakttechnik GmbH & Co. KG, a 60-year-old company headquartered in Minden, Germany, is a global leader in the electrical interconnections and automation markets. The company first developed spring clamp terminal blocks, a technology that is now the worldwide standard for electrical connecting systems. With nearly 6000 employees throughout Europe, Asia, and North America, WAGO relies increasingly on its IT systems to manage production processes for its terminal blocks, connectors, and automation components. With demands on the IT system growing, WAGO wanted to ensure that its network could deliver the high performance required for producing quality products now and in the future.

WAGO's relationship with Brocade dates back seven years, when the company started using Brocade® LAN solutions. Back then, the electronics specialist followed a multivendor approach to networking. However, the network lacked high availability, scalability, and, most importantly, standardization. The Brocade solutions provided a superior price/performance value compared to competitive products, and were ahead of the curve in terms of standardization, helping to ensure interoperability with WAGO's existing systems.

Standardizing Enterprise-Wide on Brocade

Continuous growth has meant that WAGO's IT department has had to face the same scalability challenges repeatedly in recent years. "Around every two years or so, we've built a new building, either for administration or production," says David Kreft, Head of Service Desk and Systems Management Windows Development at WAGO. "As a result, we needed more and more ports, since we were beginning to experience capacity bottlenecks."

The creation of a new administration building at its headquarters in Minden provided the catalyst for upgrading the infrastructure. The IT team needed to connect a large number of Ethernet ports to the network and ensure that the newly expanded network could keep pace with current and future performance needs.

Working with partner Axians, WAGO created a five-year plan to ensure that the company was equipped for the future. WAGO knew right from the start that it wanted to continue working with Brocade. "Over the years, we always reverted to Brocade as the performance marker within our network. That's why we decided to standardize on Brocade solutions across the company," says Tobias Blaume, IT Systems Management Windows at WAGO.

As part of the project, legacy switches from Cisco and other vendors were replaced with Brocade switches. "Now, almost all of our global locations run on Brocade, and the last few switches from other manufacturers are being gradually replaced with Brocade products," says Blaume. "We're also using Brocade switches in our SAN environment."

Future-Proofing the Network

The latest project at WAGO involved replacing switches at the administration building in Minden. The core had 10 Gigabit Ethernet (GbE) connections; however, WAGO's IT specialists began to realize that the number of 10 GbE devices was growing, particularly in blade servers, in virtualization hosts, and in backup. The network would require an overhaul in order to handle the growing bandwidth demands.

In addition to increased bandwidth, WAGO required a solution that could support 10 GbE interfaces via Multi-Chassis Trunking (MCT). At the time, 20 GbE availability was already possible in most parts of the data center and in the core with LACP trunking. This could have easily been increased to 30 or 40 GbE in the trunk, but WAGO wanted a solution that would provide even greater scalability over the years. Brocade MCT technology would enable WAGO to build a resilient, highly scalable network infrastructure that could scale to support future performance requirements.

"A growing number of 10 GbE devices wouldn't hurt us at the moment," explains Blaume. "But we also want to ensure that our network is ready for the coming years."

New technologies, such as virtualization, require 10 GbE connections for every server, placing greater demand on the network and making flexibility and scalability critical to WAGO. "With Brocade, meeting our future scalability needs is now not only possible, but also affordable," says Kreft.

Designing a More Transparent Network

The network for the administration building in Minden was redesigned to connect existing and new buildings. With Brocade MLX® Series routers in the core and Brocade FastIron® SX 800 Series switches in the distribution layer, WAGO has the scalability to meet growing performance requirements for years to come.

Brocade TurboIron® 24X Switches will be installed in the distribution layer of any new buildings, allowing them to easily connect to the network and deliver the necessary levels of high performance to users.

With Brocade, WAGO can further standardize its network and potentially save on administrative costs. In the individual buildings, patches can now be loaded centrally onto the distribution layer, simplifying administration across the different buildings. At the same time, monitoring has become simpler, and any issues can be contained more quickly and effectively. The new WAGO network also offers potential savings by using a high-performance aggregation layer instead of large volumes of fiber optic cabling to connect the individual buildings.

Looking ahead, WAGO plans to standardize the rest of the network on Brocade. In addition, the company would like to leverage its new network to introduce Power over Ethernet (PoE) to all of its buildings and to support large-scale server virtualization initiatives.

For more information, visit www.brocade.com.

WHY BROCADE

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— David Kreft, Head of Service Desk and Systems Management Windows Development at WAGO

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