

CASE STUDY: SPARKASSE BIELEFELD

German Bank Taps Foundry to Bring Infrastructure into the Ethernet Age



WWW.SPARKASSE-BIELEFELD.DE

INDUSTRY

Finance/Banking

COMPANY DESCRIPTION

With a balance sheet of 5.7 billion Euros and business volume of 5.8 billion Euro in 2003, Sparkasse Bielefeld is the largest savings bank in the Ostwestfalen-Lippe region. The bank has 51 branch offices and 1,580 employees.

SUMMARY

As the Token Ring network architecture and hardware it depended on became obsolete, regional bank Sparkasse Bielefeld was faced with the challenge of moving a large network to Ethernet, while adhering to stringent industry mandates for security and redundancy. In an open bidding process, Foundry came out on top, and the upgrade was completed in record time, with no service interruptions.

OBJECTIVE

In a little more than 14 months, German savings bank Sparkasse Bielefeld successfully migrated its headquarter network, including 550 clients and 104 servers, from Token Ring to state-of-the-art Gigabit Ethernet, completing the project in April 2004. The migration became necessary when Bielefeld's previous hardware supplier discontinued production and further development of its Token Ring components. "Furthermore, [regional IT provider] Sparkassen Informatik announced its plans to stop supporting [Token Ring], and recommended migrating to Fast Ethernet," explains Johannes Sonneborn, director of the computing and network department at Sparkasse Bielefeld. "Following our initial migration plans in 2001, we started recabling our buildings in 2002 to prepare them for the migration to Gigabit Ethernet."

SOLUTION DESCRIPTION

The bank's IT specialists looked for a solution with an optimum balance between cost and efficiency. "Although savings banks usually use copper as their level-3 media, we conducted a detailed study and decided to install redundant multimode fibers right into the office," says Sparkasse Bielefeld's Frank Köhler. "In our situation, fiber cables cost no more than copper."

Sparkasse Bielefeld started its "Project Ethernet" in January 2003, before the new cable installation was complete. Köhler and Sonneborn teamed up with ComConsult, a consulting firm based in Aachen, Germany, and Sparkassen Informatik to review options for the new installation.

After extensive testing of hardware from Cisco Systems and Foundry Networks, which had recently been approved as a supplier by IT provider Sparkassen Informatik, Bielefeld issued a function-oriented, vendor-independent request for proposals. This request was the first time that Sparkasse Bielefeld had not specified Cisco network hardware exclusively, and it came as something of a surprise to Bielefeld's IT department: "From a technical point of view, there was basically no reason to question Cisco's role," says Köhler. "We conducted the vendor-independent RFP just to see if there would be interesting alternatives on the market."

In late 2003 Pan Dacom Networking AG won the contract with a plan based on components from Foundry Networks.

"We chose Foundry Networks because their devices demonstrated a high level of reliability and technical performance in our tests. In addition, Pan Dacom was able to provide a consistent, compelling support concept," Bielefeld's Sonneborn explains.

Foundry delivered the systems within seven months of approval. All 550 PCs in the Sparkasse headquarters, as well as the entire server farm, were migrated to Ethernet by April 2004. The changeover also included networking two physically separated server farms. In addition, the new core, distribution, and edge switches were installed and put online.

OBJECTIVES

- Replace outdated Token Ring architecture and hardware with Gigabit Ethernet
- Connect physically distant server farms and headquarters network
- Comply with regulatory mandates for security and system redundancy
- Avoid interruption of mission-critical services

SOLUTIONS

- Six Foundry FastIron 800 systems provide a fully meshed, Layer 3 backbone, redundantly connected by Gigabit trunks.
- Four FastIron 1500 and 320 Cisco miniswitches provide redundant fiber connection of terminals.

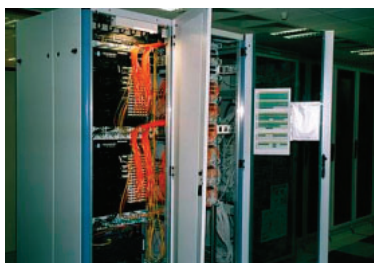
RESULTS

- Saved 30 percent on network upgrade due to Foundry price points
- Eliminated leased line costs
- Reached ROI in multiplexers within 15 months
- Completed upgrade with no interruption in service
- Experienced no significant downtime after upgrade

“The employees from Pan Dacom and Bielefeld have done an excellent logistics job,” says Foundry’s Jens Ellerman. “When all the new components were installed, the existing hardware and the entire application software were migrated from Token Ring to the new backbone in a step-by-step approach. This occurred during normal working hours, unnoticed by the employees of the bank.”

Sparkasse Bielefeld now deployed a fully meshed, Layer 3 backbone consisting of six FastIron® 800 and four FastIron 1500 systems, which are redundantly connected via Gigabit trunks. The systems mutually supervise each other using the standardized Virtual Redundant Router Protocol Enhanced. Open Shortest Path First is used for dynamic routing, load balancing of the different trunks, and rapid route switching if any failure should occur.

The core backbone consists of two FastIron 800 systems in two physically separated locations approximately 6 kilometers apart. A total of 104 servers are connected using four additional FastIron 800 systems. Redundant fiber connection of the terminals is accomplished using four FastIron 1500 and 320 Cisco miniswitches. The Foundry switches are



The computer center is based on a fully redundant architecture and located in two separate closets. Two FastIron 800 systems ensure high-performance server connectivity at each location.

equipped with 672 100BaseFX and 244 1000BaseX modules based on the Foundry’s third-generation JetCore® ASIC chipset. They provide value-added features including Quality of Service (QoS), expanded access control lists, hardware-based sFlow for wire-speed network supervision, and comprehensive bandwidth management functions. Some models can support

distances of up to 40 kilometers.

After the successful upgrade at headquarters, Bielefeld turned its attention to bringing Ethernet to the bank’s 51 branch offices, which were still running under Token Ring. The bank wanted to add 10-Gigabit Ethernet (10-GbE) adapters, and Foundry’s support for 10-GbE and the adapters’ price made it a feasible option.



Sparkasse Bielefeld’s fail-safe, Gigabit Ethernet network consists of six FastIron 800 and four FastIron 1500 systems configured with 672 100BaseFX and 244 1000BaseX ports.

THE RESULTS

Bielefeld achieved savings of more than 30 percent on the network upgrade by opening the project to competitive bidding. “Although our employees were used to Cisco products, they immediately accepted the Foundry systems which are easy to use and have a Cisco-like user interface,” says Köhler. The multiplexers paid for themselves in 15 months, because the cost of leased lines was eliminated.

Support issues that cropped up during installation were resolved very quickly. “It didn’t take more than a phone call” to have a faulty module replaced, Köhler remembers. “The same evening, Foundry Networks was here to fix the problem.” The network has been trouble-free since the installation was completed.



The FastIron family from Foundry Networks

“We have created a high-performance, state-of-the-art network that meets the ambitious, fail-safe requirements mandated by industry regulations,” says Sonneborn. “We are glad to have found an alternative to Cisco products, and to have found a reliable partner in Foundry Networks,” says.

“ FOUNDRY NETWORKS’ DEVICES DEMONSTRATED A HIGH LEVEL OF RELIABILITY AND TECHNICAL PERFORMANCE IN OUR TESTS. ”

— Johannes Sonneborn,
Director of Computing and Networks,
Sparkasse Bielefeld

FOUNDRY NETWORKS

©2005 Foundry Networks. All rights reserved. Foundry Networks is a registered trademark of Foundry. All other trademarks are the property of their respective owners.

Foundry Networks, Inc. (Nasdaq: FDRY) is a leading provider of high-performance enterprise and service provider switching, routing and Web traffic management solutions including Layer 2/3 LAN switches, Layer 3 Backbone switches, Layer 4-7 Web switches, wireless LAN and access points, access routers and Metro routers. Foundry’s 9,000 customers include the world’s premier ISPs, Metro service providers, and enterprises including e-commerce sites, universities, entertainment, health and wellness, government, financial, and manufacturing companies. For more information about the company and its products, call 1.888.TURBOLAN or visit www.foundrynetworks.com.

