

Big Company Virtualization Benefits for Medium-Sized Enterprise



Sparda-Bank Hamburg moves towards private cloud with pre-integrated Cisco Unified Data Center Architecture

EXECUTIVE SUMMARY

Customer Name: Sparda-Bank Hamburg

Industry: Financial Services

Location: Northern Germany

Number of Employees: 500

Challenge

- Meet changing market conditions with lower-cost resource-optimized data center, while creating scalable private cloud to serve internal customers

Solution

- Pre-integrated virtual data center using Cisco Unified Computing System servers, VMware virtualization software, and EMC storage

Results

- Reduced new server deployment times from weeks to hours, along with 99.9 percent application availability and improved business continuity
- Decommissioning of 60 physical servers and other savings are expected to provide 18-month return on investment
- 30 percent improvement in IT team productivity

Challenge

With a €3.1 billion balance sheet and more than 300,000 customers, Sparda-Bank Hamburg is the largest cooperative bank in the Hamburg, Schleswig-Holstein, and Northern Lower Saxony area. Founded in 1903, it employs 500 people and specializes in services for private customers through 25 branches, nine direct banking shops, and 11 self-service ATMs.

It's hard to think of another industry sector needing higher performance and security in its IT environment than financial services. Helping ensure customers' confidence in the bank is crucial and, today, IT is at the heart of that relationship. Systems must reflect and support business processes, and up-to-date data must be available at any time anywhere. Conducted over the Internet, or in person at the counter, transactions must appear on accounts in an instant. Foreign currency must track exchange rates with barely a millisecond's delay. In contact centers, information must unfailingly be immediately at agents' fingertips.

Acutely aware of that burden, the Sparda-Bank Hamburg IT team has to support continuous 24-hour service delivery. And nowhere is that responsibility more keenly felt than in the data center. Not only must the infrastructure be failure proof, but also processing power and storage capacity must keep pace with spiraling demand.

"Financial services market changes also change IT requirements, which must be easy to manage and optimize our use of resources," says Frank Rickert, IT manager at Sparda-Bank Hamburg. "To increase the performance and resilience of our business, and simultaneously reduce costs, we decided to look at a private cloud model for internal services based on a virtualized data center."

The new data center would need not only to be stable and secure, but also ready for current and future challenges. Another important goal was reduced energy consumption. So the bank sought a powerful and scalable platform with integrated management and the lowest possible carbon footprint.

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Frank Rickert
IT Manager
Sparda-Bank Hamburg

Solution

Following an extensive evaluation process, Sparda-Bank Hamburg chose the Cisco® Unified Data Center Architecture with Cisco Unified Computing System™ (UCS®) servers. “One convincing factor was Cisco UCS Manager,” says Rickert, “while another was the superior scalability of the Cisco architecture.” Sparda-Bank Hamburg made that choice in cooperation with Cisco partner company, and the bank’s long-term IT consultant, TRAFFIX Network Partner GmbH.

The deployment of Cisco Unified Data Center architecture was recommended by TRAFFIX, because it offers a balance of performance and flexibility. It can scale up to 160 blade servers and offers a centralized Cisco UCS Manager console for the administration of all servers and adjustments from BIOS settings and firmware releases to the most detailed network configurations. “This unique functionality allows customers to centrally manage the complete data center from a single console, resulting in significant savings on administration and extensions,” says Stefan Heyer, manager of the Infrastructure Business Unit at TRAFFIX.

The data center solution, called TX-Block and delivered by TRAFFIX, uses the network as an integrating platform for computing, virtualization, switching, and storage. It presents harmonized products from Cisco, VMware, and EMC. The connectivity platform employs Cisco MDS 9124 Multilayer Fabric Switches and Cisco UCS 6120XP Fabric Interconnects. These are complemented by a Cisco UCS 5108 Series Chassis equipped with two Cisco UCS IOM 2104XP Fabric Extenders and eight Cisco UCS B200 M2 Blade Servers using dual Intel Xeon E5649 2.53GHz processors with 128GB RAM.

The computing environment is teamed with VMware vSphere 5 virtualization software and an EMC VNX 5300 Unified Storage Array. The Cisco B200 Blade Servers and the EMC Storage Array are connected by the Cisco UCS 6120XP Fabric Interconnects using fiber channel over Ethernet (FCoE), which significantly reduces the physical complexity of the network infrastructure.

The whole package is designed to work straight out of the box. “We extensively tested this private cloud solution from Cisco, VMware, and EMC for interoperability in advance,” says Axel Ring, manager of the Storage Business Unit at TRAFFIX, who supervised the implementation from the start. “The TX-Block fitted perfectly into the Sparda-Bank IT environment, mitigating any possible technological risk.”

Results

At present, the TX-Block data center offers internal services only. The bank has deployed a virtual desktop infrastructure (VDI) using VMware and Citrix XenDesktop software running on the UCS platform. This has transformed the desktop into an on-demand thin-client service, securely delivering Windows and other applications from the central servers. The UCS platform also hosts the bank’s intranet, which runs on IBM WebSphere software, along with an online portal where branch staff can find training applications and product and service information. Finally, an in-house facilities application is hosted for building management and finance.

The Sparda-Bank Hamburg virtualized IT environment enabled by the TX-Block deployment has created a system that can be managed by a small IT department responsible not only for IT direction, but also for the many daily tasks such as supporting desktops or creating new employee user accounts. “We estimate a productivity improvement of 30 percent for the IT team as a whole,” says Rickert, “with our people now able to focus on more strategic matters and new areas like energy efficiency.”



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IT Manager
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Cisco Unified Data Center architecture uses the concept of service profiles, which enable new Cisco UCS servers to be brought on line identically configured to those that are being replaced or supplemented. That carries both service provision and business continuity benefits. Rickert says: “We are able to provide new virtual servers within hours rather than weeks, and tests have shown that recovery time is a maximum of four hours, which is a fourfold improvement. Furthermore, application availability is running at 99.9 percent, significantly better than the old physical data center.”

The three-month project is expected to show a positive return on investment for Sparda-Bank Hamburg within 18 months. TX-Block has reduced 60 physical servers down to four UCS servers. Four additional blade servers support a new banking portal, along with new application testing and development projects. In total, there are currently 120 virtual machines in use.

In addition, FCoE reduces the physical complexity of the network infrastructure significantly, helping Sparda-Bank Hamburg to reduce cabling expenditure. The Cisco UCS Chassis with eight Cisco UCS Blade Servers needs a total of only 12 fiber cables compared with 112 copper cables for the same number of rack servers.

Improved air circulation combined with lower power consumption of the UCS servers and the EMC storage system mark an important step towards green IT complemented by reduced cost. Although detailed calculations have not been completed, it is estimated that the equivalent of one air conditioning unit will be saved.

“Our TX-Block data center now meets exactly the requirements of a medium-sized enterprise with some 500 employees and a small IT department,” says Frank Rickert, “making us more efficient and more sustainable.”

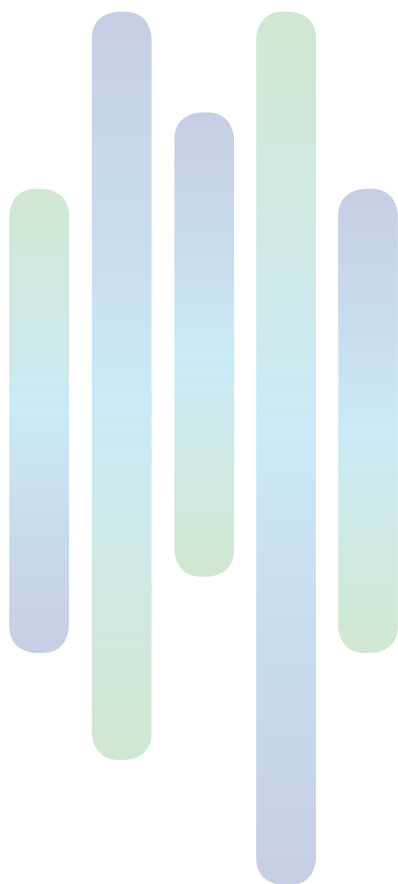
Next Steps

In modernizing its data center environment Sparda-Bank Hamburg has implemented a platform fit for the future. The IT infrastructure has been upgraded to meet growing requirements for performance and resource optimization. The virtualized data center is the first step towards a private cloud and a more flexible IT environment, which at the same time increases capacity and is easier to manage. “We have rapidly moved forward with data center modernization,” says Frank Rickert. “To become even more efficient, we are planning a second data center to fully realize our private cloud vision.”

For More Information

To learn more about Cisco Unified Computing go to www.cisco.com/go/unifiedcomputing.





Product List

Data Center Solutions

- Cisco Unified Computing System (UCS)
 - Cisco UCS 5108 Server Chassis
 - Cisco UCS B200 M2 Blade Servers with dual Intel Xeon E5649 2.53GHz processors and 128GB RAM
 - Cisco UCS IOM 2104XP Fabric Extender

Routing and Switching

- Cisco MDS 9124 Multilayer Fabric Switch

Fabric Interconnects

- Cisco UCS 6120XP Fabric Interconnect

Network Management

- Cisco Unified Computing System Manager

Storage

- EMC VNX 5300 Virtual Storage Array
- EMC Data Domain DD670 Backup Platform

Applications

- Microsoft Windows
- Citrix XenDesktop
- VMware vSphere 5.0
- IBM WebSphere
- In-house building management application



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