



Solution Overview

New horizons: With its high-performance data center, ECKD can offer voice over IP and other collaborative products as a managed service in the future.

Background

ECKD GmbH has been providing customers from the church, welfare, and charity sectors with tailored IT services for 25 years.

Challenge

Increasing pressure to innovate and a dramatic growth in customer requirements prompted the need to build a new data center.

Solution

Cisco Data Center 3.0 Vision made the new, highly energy-efficient ECKD data center a reality. The key elements are the Cisco Unified Computing System and completely virtual Cisco Nexus switches. ECKD has also improved cooperation among its staff with the Cisco Unified Communications Manager. At the same time, this software serves as the basis for future business models; customers can use it as a tailored service from ECKD for multimedia voice, web, and video communication. Two ASA 5500 Cisco Adaptive Security Appliances guarantee the security of the universal Cisco platform.

Benefits

- High energy efficiency with maximum data center performance
- Efficient management and high flexibility
- Entirely virtual with optimal use of resources
- More and qualitatively improved IT service for customers
- Additional source of income through collaboration

IT Provider for Churches Builds New Green Data Center

ECKD Uses Data Center 3.0 Model and Nexus Switches to Create Highly Efficient Data Center

With support from T-Systems, EDV-Centrum für Kirche und Diakonie (ECKD) is building a next-generation data center. Following the same architecture as the Cisco® Data Center 3.0 Vision, the new center will use Cisco Nexus switches, a first for the church sector, and the innovative Unified Computing System (UCS). The result is a highly energy-efficient, secure, and scalable platform for any imaginable IT and communication service. The new ECKD data center is an impressive demonstration of how economic and ecological objectives can be brought together and harmonized.

ECKD, with its headquarters in Offenbach and branches in Berlin, Hamburg, Kassel, and Suhl, is one of the Germany's leading IT providers for the church. Its key partners are the Evangelical Church in Hessen and Nassau, the Evangelical Church of Kurhessen-Waldeck, the Evangelical Credit Cooperative eG, the North Elbian Evangelical Lutheran Church, and the Evangelical Church of Berlin-Brandenburg-Silesian Upper Lusatia. However, an increasing number of customers from the Catholic Church and public sector are turning to ECKD's individually tailored products. ECKD's managing director is Willi Hanselmann.

Getting Closer to the Customer with a Dedicated Data Center

"IT requirements in the church, charity, and welfare sectors have gone up dramatically in recent years," says Michael Otto, head of reporting, IT, and fundraising at ECKD. The digitalization of activities in church organizations is happening just as quickly as in public offices and the private sector. ECKD has supported this trend for years with a secure church connection, based on a Cisco network, as well as intranet and hosting solutions tailored to customers' needs. Until now, the organization's ISO-certified IT services were set up in cooperation with a communal data center.

"That's all changed now," Otto says. "We have built our own data center, so we can react more quickly, improve the quality of service, and expand our product range." Leaving out the external operator means shorter lines of communication between ECKD and its customers. This approach makes adapting the IT to changing customer processes a more flexible task, and the company can resolve problems more quickly. Because there will be no communication with an intermediary partner in the future, ECKD employees have significantly more time on their hands. For this reason alone, Otto is expecting a significant rise in production at the new data center.



The team of experts employed at the new data center, the IT Centre for the Protestant Church and Welfare Services (left to right):

Cécile Willems, Head of Sales Training, Research & Healthcare at Cisco Germany

Gottfried Ostendorf, IT Sales Manager with T-Systems' Church and Social Sales Team

Michael Otto, Head of Reporting, IT, and Fundraising at ECKD

Dorothe Brohl, Account Manager at Cisco Germany

Willi Hanselmann, ECKD Company Director

Wolfgang Stender, Head of Sales with T-Systems' Church and Social Sales Team

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ECKD is one of the leading IT providers for the church, welfare, and charity sectors. Solution Overview

Green Architecture: Virtualization in Every Aspect

A new data center, something that sounds so modest and unoriginal, is actually an example of innovation envied by many of its peers in Germany. The architecture of the ECKD hi-tech center looks almost nothing like the classic structure of a conventional data center. Instead, it is based on the Cisco Data Center 3.0 model, which reverses the physical dependency between server hardware, data storage systems, and the network. "Thanks to the complete virtualization extending across all levels of infrastructure, inefficient and inflexible silo structures don't even have a chance to form," Otto says. "Virtualization allows us to remove ourselves from the logical viewpoint of physical levels." This means that different customer applications can be provided with computer performance and memory capacity in a flexible way and adapted to specific current needs. The more the data center becomes virtualized, the higher the utilization rates of the processor, storage, and network resources. Accordingly, the company has fewer inactive IT resources to maintain and keep cool, a process which uses a lot of power, consequently reducing investment and running costs in the long term.

According to Otto, the Cisco UCS and the Nexus 1000V virtual Cisco switches are among the new ECKD architecture's most innovative elements. "There are many IT virtualization strategies out there, but no one has managed to make virtualization as far-reaching as Cisco UCS and VMware vSphere 4 have," the managing director says. The UCS brings the management of virtualized server, storage, and network resources into one compact system, which on the outside, apart from its reduced size, looks just like an everyday eight-blade rack. "However, blade servers in the UCS are packed in very tightly," Otto goes on to explain. "We fitted twice as many high-power blades as before in the same rack space, and this considerably reduces the need for cooling. In older data centers, the energy consumption would have been four times as high at the same output rates."

It was just such an ecological consideration that made ECKD choose the Cisco Data Center 3.0. Going along with ECKD's approach of "Innovative IT" can make a significant contribution towards reducing harmful CO2 emissions.

Even Switches Are Becoming Virtual

Thousands of data centers around the world are currently implementing some form of virtualization. However, one virtualization is not necessarily the same as the next. The attempt to make better use of IT resources is spreading in an ever more complex way, and often, different solutions for different infrastructural divisions do not offer in-depth built-in management interfaces. This lack of interfaces often means the added flexibility that is sought remains an illusion, because the benefit of the higher usage rate is undone through increased administration costs.

Thanks to the Cisco integrated virtualization strategy, ECKD does not have this problem, as Otto explains by using the example of the virtual Cisco 1000V Nexus Switches: "This is a pure software implementation, which is embedded seamlessly into the VMware virtualization solution vSphere for ESX servers. We can now apply regulations-based network services to all virtual machines, just like we do on hardware switches. Along with their network connection, the virtual servers can be moved about almost anywhere on the physical server farm when switched on. They do not even have to stop to be serviced." A virtual Nexus switch is managed alongside other Cisco Nexus and Catalyst switches, which is a highly efficient way of working, and also offers very simple scalability options.

Platform for New Business Areas

Scalability plays a part in the new ECKD data center, not only because the organization needs to support a growing number of customers, but also because ECKD needs to expand its portfolio. This is why, for example, the Cisco Unified Communications Manager is already installed, primarily as an internal platform for voice over IP. "Apart from our classic products for the church's Reporting, Personnel, and Accounting departments, as well as the IT Services division, this means we can also offer voice over IP and other types of collaboration in the future, as a managed service," says Otto. Small communities, just like the top church institutions, can adopt innovative collaboration solutions as a tailored service via their secure ECKD church connection. They do not need any specific on-site

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Green and efficient: The new ECKD data center unites economic and ecological objectives.

"ASA 5500 unites key security functions, such as firewalling, data encryption, and network authentication into one, extremely compact, efficiently administrated network system."

Gottfried Ostendorf, IT Sales Manager with T-Systems' Church and Social Sales Team



Cisco Unified Computing System

infrastructure for it because the network brings the functions they need straight to them without any startup investment. In business terms, the majority of calculable variable outputs are replaced with predictable fixed costs. Furthermore, network-based collaboration also offers extensive ecological opportunities, because besides verbal signals, the IP-based ECKD platform also transmits all types of digitalized information, video images in particular. "This means Cisco Unified Communications enables the most varied types of integrated audio, web, and video conferences," says Dorothe Brohl, account manager at Cisco. "Church organizations can intensify their inter-location cooperation and in turn reduce their time on the road," says Brohl. This is a reason why collaboration is one of today's key answers to minimizing travel-based CO2 emissions in almost all areas of life.

Active Partnership

What makes an ECKD church connection so secure? How do sensitive data and confidential communication contents stay protected? "With the Cisco Adaptive Security Appliance ASA 5500," says Gottfried Ostendorf, IT sales manager with T-Systems' Church and Social Sales Team. "ASA 5500 unites key security functions, such as firewalling, data encryption, and network authentication into one highly compact, efficiently administrated network system. Integrating as many services as possible into one network also further reduces energy consumption and is another building block for ECKD's green IT ambition."

In its capacity as ECKD's general contractor, T-Systems shares in the planning, design, and implementation of the new data center. "It is not at all obvious that a provider like us would adopt highly innovative technology that has only just come on the market," says Otto. "We were well aware of the risks, and still we ventured on. However, that was only possible with a partner like T-Systems on our side, taking on the lion's share of responsibilities and, where necessary, hauling other technology partners on board." It is only future-ready users like this, those who do not wait for innovative technologies to prove themselves against others, which give these technologies a chance to swiftly take over the market, to the benefit of the customer and the environment.



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