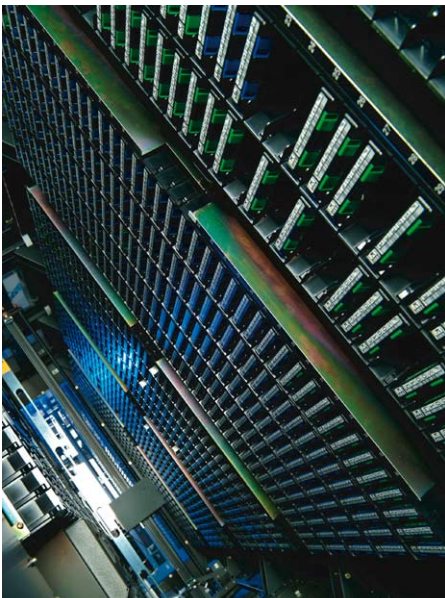


## Freudenberg IT invests in the future with Cisco Nexus

As a global SAP hosting partner, Freudenberg IT, the most successful European IT spin-off from the international corporate group Freudenberg, offers services for both small and medium-sized companies as well as for major corporations. Freudenberg IT runs SAP applications for over 50,000 productive SAP users in its data centers. Moreover, as a service provider, it also offers SAP consulting services and is successfully marketing and selling its own internally developed MES (Manufacturing Execution Systems) solution called Adicom. In order to meet its growing customer base and customer requirements, the company is now realigning itself technologically with the construction of a new data center. As part of the project, Freudenberg IT is relying directly on the Cisco Nexus product line to lay the foundation now for more advanced virtualization in its data center operations in the future.



In February 2009, Freudenberg IT announced the construction of a new data center in the Weinheim Industrial Park. Security, availability, reliability are the highest priorities for all projects. At the same time, the technologies used must also be flexible and able to meet future demands. "With this new data center, we are expanding our area capacities in order to best meet the growing demand from small and medium-sized customers in the field of infrastructure outsourcing, and application hosting," explains Michael Fichtner, CEO of Freudenberg IT.

The new data center is being constructed in accordance to the most modern security and quality criteria. Guided fiber optic cables geographically separated connect the data centers to one another redundantly so that the so-called "Dual Data Center Concept" can take hold, whereby all data can be reflected in a second data center. The data centers are operated as a logical unit. "The Nexus technology allows us to virtualize the proven Dual Data Center concept up to the network level while simultaneously keeping security and availability to a maximum," says Ekkehard Spieth, Managing Director of Freudenberg IT Europe and responsible for the Information Services Division, of its decision to opt for the new Cisco technology.



Nexus 5000, Cisco Systems

### Deployment of the Nexus product line

During the planning phase of the new data center, Freudenberg IT counted on the Nexus line from Cisco. Freudenberg IT will deploy a total of 34 machines in Germany, of those, four Nexus 7000 and 30 Nexus 5000 will be deployed. The company was already working closely with Cisco as early as the mid-90s. "The products from Cisco are not only very reliable, but are also defining new standards," explains Ekkehard Spieth.



Nexus 7000, Cisco Systems

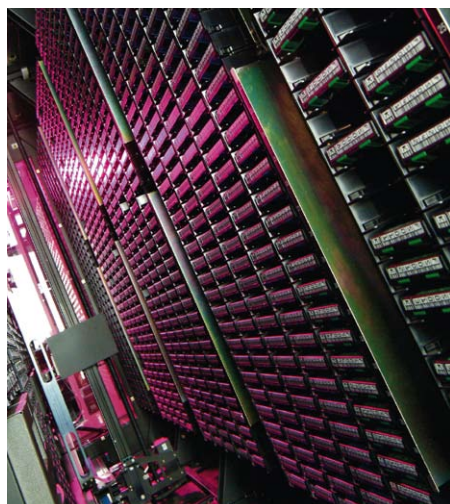
About four years ago, Freudenberg IT upgraded its existing data centers by adding Cisco SAN technology. For more service quality and shorter reaction times, the company needed a highly available, scalable, and sustainable storage network. Four director switches from the Cisco MDS 95xx series formed the nerve center of the storage infrastructure and facilitated, among other things, virtual SANs, meaning the logical instead of the physical separation of storage networks. These switches also increased the number of ports while simultaneously doubling speed to four gigabits per second. At that time, Freudenberg IT recognized the potential of virtualization. The MDS 95xx switches made it possible to set up logical storage networks, so-called virtual SANs, or VSAN for short. In terms of the principle idea and main effect, they follow the concept of virtual computer networks.



MDS9500, Cisco Systems

### Challenges for the data center

As a global partner, the company stands for high quality and innovative strength. When planning the new data center, Freudenberg IT was initially faced with several challenges: On the one hand, the data center had to be flexible and cost efficient, on the other hand, it had to meet increasing technological demands and all usual safety requirements. One important criterion for Freudenberg IT was the convergence of the Ethernet with Fibre Channel, which the Nexus line made possible for the first time. "Through the data center Ethernet, we are achieving comprehensive synergies in future design," explains Ekkehard Spieth. Also, efficient cabling between the individual racks in the data center was another deciding factor in selecting the Cisco products, which are already being fully utilized in the new building and will offer considerable benefits later on in terms of operation.

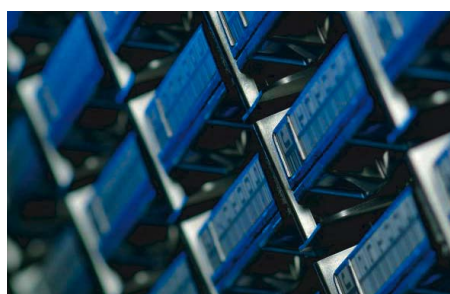


Data center, Freudenberg-IT

### Conscious decision with a view to the future

At the beginning of planning in 2008, a decisive factor was the possibility of equipping the future data center for virtualization at a later time. "The Nexus technology is helping us to scale our architectures in our data centers. It enables us to flexibly meet all requirements and maintain sufficient bandwidth reserves," says Spieth. Nexus is definitively designed for data center environments and combines storage and IP networking into a common Unified Fabric. With it, data centers can utilize their storage and server resources many times over and more intensively. Nexus also lowers administration overheads on a sustained level and meets increasing demands for capacity in a cost efficient manner. Each server can access any resource via Unified Fabric - which clears the way for varying resources to be virtualized comprehensively.

"The decision to opt for the Nexus line is based on our view into the future," asserts Ekkehard Spieth. "The features it contains perfectly match our processes and in-service software upgrades (ISSU) reduce the maintenance window on the weekend." The background to all this is the further development of the Cisco SAN Fabric Manager, called the Cisco Data Center Network Manager (DCNM) from the Nexus product line. This network manager improves management efficiency and is, at the same time, unconditionally compatible with the virtualization and provisioning solution Cisco Vframe for Data Center. The Unified Fabric architecture of the Nexus line distinguishes itself through standard I/O interfaces and supports Fibre Channel over Ethernet (FCoE). It can be used to transport conventional fibre channel data flows from storage systems via the Ethernet. LAN and SAN are integrated into a common Unified Fabric so that fewer server interfaces are needed. Besides direct cost savings, it reduces space requirements, simplifies cabling, and lowers power consumption. Overall, the data center can provide considerably higher maximum performance.



Data center, Freudenberg-IT

### Background

Freudenberg IT is a global SAP Hosting Partner with a clear focus on small and medium-sized companies and one of twelve IT service providers worldwide qualified as an SAP Global Hosting Partner. Freudenberg IT runs SAP applications for over 50,000 productive SAP users in its data centers. Furthermore, its extraordinary market position in IT outsourcing and a successful 2008 fiscal year were decisive factors in reaching the finals of the SAP AG Pinnacle Awards 2009 in the "Outsourcing" category. Eye-to-eye communication and a cooperative partnership with international small and medium-sized Freudenberg IT customers were also particularly highlighted. The Pinnacle Awards are annual awards given out by SAP in recognition of partner companies that distinguish themselves through their dedication to high quality and their capacity for innovation.

### Challenge

The demand for IT outsourcing and application hosting is continuously rising. Especially small and medium-sized companies are increasingly relying on IT processes, most notably in global business. As an IT service provider, Freudenberg IT broadly supports small and medium-sized companies as they strive for global success. In light of this, the company is currently expanding its global presence and is investing in the construction of a new data center in Germany. Even during these economically challenging times, Freudenberg IT is consciously investing in future markets so that it and its customers are ready for the recovery.

### Solution

Freudenberg IT is relying on the new Nexus line from Cisco right from the start. Four Nexus 7000 and 30 Nexus 5000 form the ideal foundation for successfully virtualizing the data center in the next few years.

### Benefits

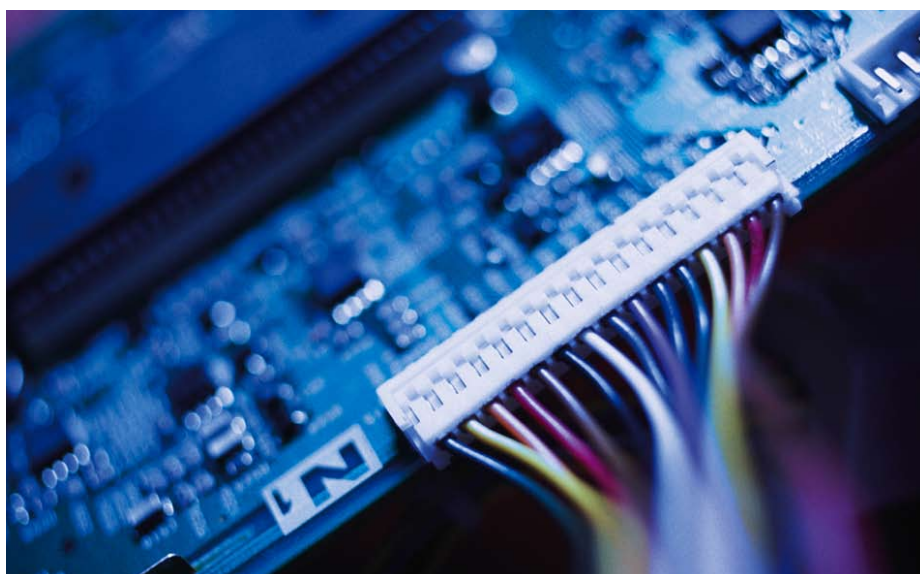
- Greater performance capacity  
Reduced complexity
- Guaranteed availability
- Foundation for future virtualization

### New architecture for the modern data center

The Nexus line is an inherent component of Cisco's Unified Computing System. The new data center architecture offers support for the Unified Fabric and unites the previously separated network areas LAN, SAN, and high-performance networks. This reduces costs for network adapters, cable, electricity and air-conditioning. The system allows virtualization to be fully utilized and increases the scalability, performance as well as operational control of virtual environments. Additional functions for more security and better diagnostic options in virtualized environments are also available. The Unified Computing System enables companies like Freudenberg IT to make individual decisions concerning virtualization based on their needs while also protecting their existing investments. Concurrently, the architecture allows new developments to be responded to faster, thus preparing companies better for future applications. The switch to the Nexus product line and the option of becoming a virtual data center thereby form an ideal foundation for the future data center of Freudenberg IT.

### Gradual migration

The company is currently right on schedule. Three separate, fully air-conditioned server rooms as well as separate rooms that will house the network, power supply, air-conditioning, and fire protection are planned for the new 900 square meter building and designed in accordance to the n+1 principle. "Our existing network will be first gradually upgraded with Nexus products until the new data center is completed," explains Ekkehard Spieth. "Ultimately, the old and new systems will be operated concurrently until migration is completed." Spieth and his employees are assuming that complete migration to the new technology will be finished by the middle of 2010. Thanks to the products from Cisco, Freudenberg IT will be well equipped to meet growing demands in the next few years.



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