

# Wincor Nixdorf improves performance and reduces costs by over 80 percent using VMware solutions

## WINCOR NIXDORF

*“Using innovative technology and a leading IT provider pays off: energy savings and the increase in performance through virtualization are significant and allow for an extensive optimization of IT operations.”*

– Dietmar Leineweber, Head of IT Basisinfrastruktur at Wincor Nixdorf

### KEY HIGHLIGHTS

#### Challenges

- Reduce complexity: consolidation of blade server infrastructure with 150 servers
- Reduce costs
- Improve service for end users
- Implement green IT and save energy

#### Solution

- Reduction in physical servers by a factor of 12.5
- Annual saving per blade server of up to €11,000
- Green IT implemented in data center
- High availability of systems guaranteed by VMware HA

## Services with High Availability

As one of the world's leading providers of IT solutions and services for retail banks and commercial enterprises, Wincor Nixdorf aims to optimize business processes in branches of banks and trading companies. This essentially involves reducing costs and complexity and improving the service for end customers.

Wincor Nixdorf is represented in approx. 100 countries, and has its own subsidiaries in 41 of these. A total of over 9,000 employees work for Wincor Nixdorf. The IT service provider seeks to offer maximum reliability in its solutions. This includes optimal availability and failure safety of systems. Wincor Nixdorf's central data center at the company headquarters in Paderborn, Germany, offers hosting services and is responsible for all internal IT.

The department 'IT Basisinfrastruktur' pioneers the implementation of new technologies with a specific emphasis on cost reduction and increased efficiency. These two aspects have both contributed fundamentally to the decision to use VMware solutions in the server consolidation project.

### Reduce complexity, increase performance

Under the guidance of Dietmar Leineweber, Head of the IT Basisinfrastruktur group at Wincor Nixdorf, the IT team set itself the following goals: First, they wanted to consolidate the existing x86 infrastructure consisting of 150 blade servers in order to reduce complexity while lowering electricity, cooling, and maintenance costs through server virtualization. Secondly, the service to end users was to be improved by using lean operating processes in future to ensure greater flexibility in the provision of applications.

A workload analysis performed by Fujitsu Technology Solutions revealed that most smaller to medium-sized application servers at Wincor Nixdorf were utilized less than 10 percent on average, and up to 50 percent at peak times. Only one system running the management software for the entire data center processed higher workloads. Overall, it was shown that only a quarter of the available computer power was actually needed in normal operation. There was therefore considerable potential for improving the level of use of the physical hardware.

### Server virtualization and modern hardware – a powerful combination

The optimal solution for Wincor Nixdorf was a combination of new, efficient hardware (Primergy BX600 S3 Advanced Blade Eco System with Primergy BX620 S4 Blades) and the market-leading virtualization platform – VMware ESX Server, the core component of the Virtual Infrastructure 3 cloud operating system. As part of a case study, the performance-dependent power requirement of six old server blades was determined using a new model with six virtual machines and the energy saving was calculated per fully expanded blade chassis. On average, Wincor Nixdorf currently uses 12.5 virtual machines on one physical server. The number of virtual machines per ESX server was increased continually. Due to the higher consolidation rate today, the actual savings are even higher than originally calculated.

## VMWARE VIRTUAL INFRASTRUCTURE AT WORK

### VMware applications used

- ESX Server
- vCenter Server,
- VMware Update Manager
- VMware HA
- VMware DRS
- VMware vMotion
- VMware Storage vMotion, VMware Lifecycle & Lab Manager

### IT environment

#### Hardware basis:

- FTS BX620 S4, 32 GB RAM, 2 quad-core Intel Xeon 5000 CPUs

#### Operating systems:

- Various Windows versions SLES 9, 10, and 11

#### Applications:

- Oracle, SAP, SharePoint, Web Services, self-developed applications

*“Through the combination of powerful servers and the virtualization solution from VMware, we were able to reduce our hardware by one-sixth while making use of optimal computing power. We are absolutely delighted with the result.”*

— Dietmar Leineweber, Head of IT Basisinfrastruktur at Wincor Nixdorf

Through the use of VMware vCenter, provisioning, monitoring, and administration of the virtualized IT environment is performed using a single program interface and guarantees optimal service levels. In addition, VMware High Availability (HA), Distributed Resource Scheduler (DRS), Storage vMotion, Lifecycle Manager, Lab Manager, and Update Manager are used to ensure that the systems have high availability and are up-to-date.

The consolidation and modernization at Wincor Nixdorf was implemented within twelve months. In addition to the licenses for the virtualization platform, a Technical Account Manager (TAM) from VMware assisted the Wincor Nixdorf virtualization team. “The TAM helped tremendously by clarifying open issues, and also proactively with the planning of the architecture. The TAM acts as a direct link to VMware Product Management and the VMware Development department. This is very important for strategic decisions,” explains Dietmar Leineweber.

### The result is impressive...

Improved performance, greater flexibility and better utilization of the infrastructure – with inbuilt reliability and monitoring of Service Level Agreements. The focus is on the services available to users. Costs were also reduced considerably. The IT director was delighted with the result: By combining efficient systems with the virtualization solution from VMware, we have achieved enormous savings. Our server farm was reduced by a factor of 12.5 with optimal use made of the available computing power.”

Overall, this results in up to 75 percent lower electricity costs. Depending on the kWh price, the annual savings per fully equipped blade server system are between €7,000 and €11,000. Return on investment (ROI) was achieved in less than one year.

And there are further benefits to this very positive energy/cost balance: the required investment and maintenance costs are reduced and the infrastructure to be managed is now much leaner. In addition, applications and services with customized performance can now be offered to end users much more rapidly and with high availability.

Due to this highly visible success story and outstanding performance of the systems, Wincor Nixdorf is planning an imminent upgrade to the market-leading virtualization platform vSphere 4.

### Results

- Up to 75 percent lower power consumption: Depending on the kWh price, the annual savings per fully equipped PRIMERGY BX600 blade server system are between €7,000 and €11,000
- Costs reduced by 80 percent through the use of VMware solutions
- Number of physical servers reduced by a factor of 12.5
- Higher performance for applications
- Much faster on-demand provision of services and applications
- Economical high availability
- Simplified management
- Reduced investment and maintenance requirement
- ROI in less than one year

