



A charity enterprise from Austria uses virtualization solutions from VMware and Open-E

The 'Protected Workshop' St. Pölten needed a flexible IT infrastructure for its broad range of products and services.



open-e

OPEN-E

The storage solution, Open-E iSCSI-R3, is a pre-installed, pre-configured operating system which quickly converts a PC or server system into an efficient network storage device. The combination of enterprise functions with a simple, intuitive, web supported user interface makes iSCSI-R3 an optimal storage solution for medium-sized enterprises. The high performance software offers fast data transfer rates and response times, through either iSCSI or Fibre Channel network connections, supported by up to 32 CPUs. Medium-sized enterprises benefit from the advanced storage management functions of Open-E iSCSI-R3, including multiple-snapshots, support for IP Sec security protocols and advanced provisioning capabilities.

Highlights Open-E iSCSI-R3

- ▶ High data transfer rate with optimized storage software, support of 10-Gb Ethernet cards, Intel I/O Acceleration Technology, Fibre Channel (Initiator) and multi-CPU's
- ▶ Cluster support for additional security, IP Sec protocol, with time control, application and operating system on USB DOM, minimized downtimes, CHAP authentication and support of network UPS, copy of the operating system
- ▶ High flexibility with support for all major SCSI, SAS, SATA and IDE controllers, FC-HBAs, network boards, iSCSI HBAs and software initiators
- ▶ Simple administration through a web supported, password-protected user interface, console tool and integrated volume manager

VMware ESX Server

VMware ESX Server is a software solution that enables virtual infrastructures for large IT environments. It offers efficient consolidation and management of resources in large IT environments. VMware ESX server simplifies and optimizes the partition and consolidation of network, storage and server components. The platform is very scalable and cost effective. VMware ESX server is an ideal solution for medium-sized enterprise datacenters. Enterprise resources are used more efficiently, capacity scale better, server management is optimized and the total cost of ownership (TCO) of the IT infrastructure is reduced.

Highlights of the VMware ESX server

- ▶ Improved hardware utilization and considerable reduction in infrastructure investment. Operating costs have also decreased because hardware resources are shared by a large number of virtual machines, run on the same server.
- ▶ Increase in service levels and uptime for even the most resource-intensive applications through extended resource management, high availability and security functions.

The 'Protected Workshop' St. Pölten is a medium-sized non-profit enterprise. It offers pallets of products, along with related services, which span from wage manufacturing to component and system production, in a variety of end-customer markets.

The enterprise employs about 460 people, approximately 65 per cent of which are handicapped. Production spans from industrial components manufacturing to the assembly of complete systems. Additionally, customer advisory and consulting services are offered during all phases of development and production. As of 2006, the enterprise has grown to almost 34 million Euros. This was made possible through intensive and trusting cooperation with customers which range from small businesses to multi-national corporations such as Siemens, Schindler and Cincinnati. These customers all appreciate the high production quality, on-time deliveries and the overall flexibility of St. Pölten. The employees work on 170 State-of-the-art workstations, managed and supported by an internal IT department. The IT team which consists of three employees and is managed by Claus Pflieger, leader of the Information Technology and Telephony department, struggles like many other IT departments with a growing number of responsibilities and demands on their time. Their work must be managed through intelligent, scalable solutions, capable of increasing the output of the IT team with flat headcount.

The Challenge

Due to the steadily increasing requirements of the IT department, and limited IT budgets and available resources, the company decided not only to update its IT virtualization environment, but also to upgrade its antiquated storage resources. The challenge was not to accomplish this update without any impact to already strained IT environment.

IT infrastructure

All expansion and upgrades had to be integrated seamlessly into the existing IT infrastructure, so that the upgrade process did not interfere with the normal, daily business operations. The IT department accounted for this during the planning phase of the upgrade, and developed an application and data migration plan, as well. The plan included carrying out the upgrades, gradually, during periods of low activity and server usage.

Solution

In addition to upgrading VMware Server ESX 2 to ESX 3.0, the 'Protected Workshop' of St. Pölten selected Open-E's feature-rich, yet cost-effective, storage management solution, iSCSI-R3.

The existing 2-Gb/sec Fibre Channel solution, the Hewlett-Packard EVA4000, was no longer sufficient for the variety of applications, and the virtualization environment, that needed to be run. The decision was made to upgrade the storage infrastructure to a more economical, easy-to-use and scalable iSCSI-based solution. Before choosing a new storage solution, the company evaluated an upgrade of the existing HP system. However, the costs, not to mention the effort and time required of the IT department, ruled out this option. Open-E iSCSI-R3, running on an industry-standard Intel-based server, was chosen as the storage solution. The ability to quickly, and easily, provision the pre-installed system were the primary factors for this decision. Within 30 minutes, the IT department had the system running. The IT staff were able to provision the system via the intuitive, and reliable management console. The existing server hardware consists of the Hewlett Packard 25p Blade Server, using two dual core AMD Opteron processors. The company uses terminal and file servers, running applications that include database, and ERP solutions. The VMware ESX server is used as a host Operating System, upon which a variety of Windows and Linux versions run as guest operating systems. Business-critical applications are run on these servers, and uptime and server availability is critical. Of course, uptime and data availability is also critical for the storage solution. The Open-E iSCSI-R3 storage system, running on Intel-based storage servers, stores data from business-critical applications, along with the images of the virtual machines (Flat VMDK system and data disks). In the future, this Austrian enterprise also seeks to add mirroring capability and off-site data replication for Disaster Recovery purposes with its IP-based storage solution from Open-E. This would complete its migration from the original HP-based Fibre Channel storage solution to an Open-E-based iSCSI-R3 solution using industry-standard server hardware

RESULT

Claus Pflieger, the IT manager summarizes the quality of the Open-E iSCSI-R3 storage solution as follows: "The storage solution of Open-E combines all requirements one can have for an optimal storage solution in today's IT environment: Simple, easy-to-use, feature-rich, not to mention very cost-effective, which is very important in these days of tight IT budgets, make it Open-E an easy choice". The 'Protected Workshop' St. Pölten is well equipped for growth over the next several years and can now focus on its core business without worrying if their IT infrastructure can meet the growing data and server traffic needs of the company.