Westfälische Wilhelms-Universität Münster

Customer Snapshot

"By leveraging VMware and Intel technologies for our virtualization efforts, we can handle an environment of 10,000+ users with just two or three full time people. That's critical when you don't have a lot of extra time or bodies on hand."

Heinz-Hermann Adam
Technical Director, University of Münster

VIRTUALIZATION TRANSFORMS IT AT LEADING EUROPEAN UNIVERSITY

The University of Münster is one of Germany's largest institutions of higher education, with more than 38,000 students spread amongst 15 different departments.

Within the university, the natural sciences department is responsible for an environment of 10,000+ users and 3,500+ machines. Almost all the Windows and Linux workloads in the department run virtually: the workloads were moved from physical servers onto an HP Bladesystem with the latest Intel Xeon processors running the VMware Infrastructure 3 platform. This virtual infrastructure has provided superior performance while increasing ease of management.

After experiencing success using VMware Infrastructure 3 and Intel-powered hardware to streamline its IT infrastructure, the university further expanded its use of the two technologies to strengthen its business continuity capabilities.

"We duplicated the whole solution in a second location, forming a fault-tolerant, dual site VMware cluster," says Heinz-Hermann Adam, technical director for the natural sciences department. "We feel that our installation is a very good example of how leading-edge enterprise technologies can be successfully incorporated and utilized within the world of academia to tackle a number of IT challenges."

HIGHLIGHTS

CHALLENGE

Transition from a physical IT infrastructure to a virtual IT infrastructure within an academic environment

SOLUTION

VMware® and Intel technology creates a scalable and flexible virtual infrastructure to support university IT goals.

VMWARE AND INTEL AT WORK

VMware® Infrastructure 3 Enterprise, featuring:

- ESX Server 3
  - HP c-class 480c blade servers with Intel Xeon processors attached to HP EVA 8000 SAN
- VirtualCenter 2
- VMotion™
- Distributed Resource Scheduler (DRS)
- High Availability (HA)

DEPLOYMENT ENVIRONMENT

- Guest operating systems: Windows 2003, Linux
- Virtualized Applications: Sassafras Key-Server and Flex LM license managers, NX nomachine Cluster (Terminal services) on Linux, Microsoft Windows Terminalservices NLB Cluster, Quorum node to Windows Storage Server MNS NAS-Filer-Cluster, Windows Deployment Services, Windows Software Update Services, Samba, McAfee ePolicy Orchestrator, Condor Central Manager, database servers

RESULTS

- Save dozens of hours on IT administration. "The ability to use VMware VMotion across all my Intel-based servers is a real time saver," says Adam. "We can shift loads around to do maintenance on the servers during the workday, rather than having to have people come in on the weekends or off hours."
- Reduce system downtime to minutes. "We have two computing centers at different buildings on campus," says Adam. "Intel technology helps us create one shared resource pool for our virtual machines – so, if one of the computing centers fails, we can just switch over to the other one, and in just a couple of minutes, we're back in production."
- Increase scalability of IT infrastructure. "We have a 10:1 server consolidation ratio right now, but there's ample room to grow," says Adam. "Leveraging Intel's high performance, energy efficient multi-core processors allows us to add virtual machines as needed, without impacting performance."

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Building the Foundation of Virtualization