College cuts desktop maintenance by around 80 per cent by adopting a server-based computing infrastructure

Benefits
- Routine desktop maintenance is cut by around 80 per cent
- Energy consumption is reduced by approximately 30 per cent
- Reliable Dell infrastructure provides a good base for further enhancements
- Centralised application delivery gives users faster access
- Processing speeds improve by around 20 per cent

“Client maintenance used to be hugely labour intensive, but it’s improved by around 80 per cent with the Dell OptiPlex 160.”
Markus Aumer, Deputy Head of IT, Eckert-Schulen

Customer profile
Company: Eckert-Schulen (ES)
Industry: Education, secondary
Country: Germany
Employees: 800 employees, 5,000 students
Website: www.eckert-schulen.de

Business need
ES wanted to extend the benefits of server and storage virtualization to desktops, reducing IT complexity and costs, while giving employees faster access to applications.

Solution
Working with Dell consultants – as well as Microsoft and Citrix – ES created a server-based computing environment featuring Dell™ OptiPlex™ desktops and Intel technology.
Eckert-Schulen (ES) is a public sector organisation that runs graduate and professional education facilities in Germany. Since it was founded in 1946, ES has become an ambassador for the German school system and helped more than 40,000 students gain degrees and training certification.

Courses cover more than 70 occupations, including medicine, hospitality and technology – as well as occupational rehabilitation for disabled adults. The organisation prides itself on equipping its students with real-life skills, and course content is strictly quality controlled and tailored to the shifting demands of the workplace.

ES is always looking for ways to maximise IT resources to serve its employees more effectively. Teachers need reliable, round-the-clock access to the IT infrastructure, whether for remote learning, classroom activities or administration. A large fleet of desktops remains a necessity – and a major cost.

ES had previously worked with Dell to reduce energy consumption and management time. The college installed a virtualized server environment with Dell™ PowerEdge™ servers running VMware software, as well as Dell PowerVault™ solutions for storage, backup and archiving.

ES was looking to take the next step in cutting costs, complexity and energy consumption, by creating a server-based computing (SBC) environment for staff where applications are accessed using thin-client devices.

Past success with Dell inspires confidence for the future
ES has worked with Dell since 2007. Markus Aumer, Deputy Head of IT at Eckert-Schulen, says: “It’s the quality and long lifecycles of Dell products, and the reliable service and support, which have always convinced us – although we rarely need the support. We’ve had several Dell projects and all have worked out exactly as planned.”

Because the organisation’s experience with its virtualized Dell infrastructure had been positive, it contacted the Dell account team about further updating its IT.

Designing an end-to-end virtualization solution with Dell
“In the past, most of our applications ran locally on individual desktops,” explains Aumer. “This left us with the complex task of managing many different models, drivers and applications.” Dell helped ES embark on

Dell is a reliable partner with exceptional know-how.”
Markus Aumer, Deputy Head of IT, Eckert-Schulen

Technology in practice

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a migration to a SBC infrastructure, and supported it with updated servers and storage. The deployment includes Dell PowerEdge R610 servers with Intel® Xeon® processors 5500 series, running VMware® vSphere™ 4 server software and Windows Server® 2008 R2, as well as a Dell PowerVault MD1000 direct attached storage. The updated servers give ES greater energy efficiency, more memory and faster performance with Intel Xeon processors 5500 series.

Central to the SBC infrastructure are the Dell OptiPlex™ 160 desktops with Intel® Atom™ 230 processors, which provide access through Citrix® XenApp™. These allow anytime, anywhere access to resources, without exposing those resources to outside threats. Administration staff also spend less time maintaining hardware and updating software.

**Making a smooth transition, with a reliable partner**

As part of the Dell Workshop, Assessment, Design & Implementation process, ES worked closely with the Dell Consulting team. After successful testing, ES proceeded with deployment. Aumer says: “The proof of concept was vital because we knew how many servers were required to virtualize and run our thin clients optimally. The Dell consultants also established whether our applications were suitable for Citrix XenApp. Dell is a reliable partner with exceptional know-how.”

A smooth installation process was crucial to avoid disruption to life on campus. The proof-of-concept (POC) phase doubled as a learning tool, enabling ES to carry out its own migration without any issues. Aumer says: “Thanks to Dell, we used the knowledge we gleaned from the POC to virtualize 99 per cent of our applications ourselves.”

**Cutting routine desktop maintenance by around 80 per cent**

Maintaining physical desktops typically requires time-consuming desk-side visits, which reduces user productivity and increases management costs. Dell OptiPlex 160 desktops help solve these challenges. Deployment and maintenance are easier with centrally stored software, applications and files. Critical data is also kept safer from loss, threats or unauthorised use.

“Client maintenance used to be hugely labour intensive,” says Aumer. “But it’s improved by around 80 per cent with the Dell OptiPlex 160. If there are problems with a desktop, we can quickly upload an image to a replacement, keeping maintenance and downtime to a minimum.”

Aumer adds: “Essentially, it’s maintenance at the click of a mouse. And the small size of the thin clients means deployments or replacements are completed quickly.” Freed from routine maintenance, the technical team can shift its energies to what really counts.

**Technology-on-demand for staff**

Thanks to faster application delivery, the biggest winners in the SBC environment are its ES personnel. Applications and data are stored on a central server, but with Citrix XenApp, application delivery is on-demand.

“Thanks to Dell, we used the knowledge we gleaned from the POC to virtualize 99 per cent of our applications ourselves.”

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Whether employees are in a computer lab, classroom or library, they have access to the data and applications they need. Access is encrypted and controlled, so flexibility doesn’t mean compromising security.

Aumer says: “Thanks to Citrix XenApp on our Dell OptiPlex 160 thin clients, staff simply log on to any desktop to access their own data and applications. End-user support is also better because each profile is centrally managed and stored.”

Virtualized solution pays for itself within three years
Centralising applications helps significantly reduce administration and maintenance costs, and Aumer is confident that the lower total cost of ownership will allow ES to recover its initial investment quickly. He says: “Our Dell solution will have paid for itself in about two-and-a-half years.” The future-proof solution is designed for easy migration and a five-year lifecycle.

Desktop energy consumption is cut by around 30 per cent
The OptiPlex 160’s low-power Intel® Atom™ micro-architecture helps cut power consumption. Thin clients also reduce the heat generated by hardware, minimising cooling requirements. “Thanks to the SBC infrastructure and thin clients, we have achieved energy savings of around 30 per cent,” explains Aumer.

Serving up simpler IT with Dell
With VMware vSphere 4 on Dell PowerEdge R610 servers, ES has transformed its datacentres, taking an important step in its mission to cut complexity. Pooling resources in a private cloud maximises application availability and system flexibility.
In addition, the servers offer clear, graphical system health monitoring and control, so managing the virtualised infrastructure is simple.
With VMware vMotion™, the IT team can perform live migrations. This means there’s no disruption while hardware maintenance is being carried out, plus the team can manage multiple applications with ease, offering a better service to users.
Aumer says: “In the past, we carried out updates on all 20 individual servers. Tasks that took half a day now take half an hour. With our Dell solution, response times and processing speeds have improved by about 20 per cent.”
In addition, Windows Server 2008 adds new features to the existing Windows Server environment, enabling ES to increase the reliability, flexibility and security of its server infrastructure.

Choosing maximum uptime and peace of mind with Dell ProSupport
To protect its investment and maximise availability, ES chose Dell’s most rapid resolution – Dell ProSupport™ with Mission Critical. This offers the support of an onsite service – if an emergency occurs, Dell experts will be at the campus within four hours.

Customer creates foundation for more effective teaching
Students will gain faster access to applications when ES rolls out thin clients in classrooms.

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