



Case Study

Become clever at the Maastricht University

The Maastricht University is reorganising its libraries according to a server-based computing concept. Good grades for IGEL thin clients.

Business Solutions from
IGEL Technology





Maastricht University

At present, Holland's Universities and Colleges are very popular. In addition to the bonus of living abroad, the characteristic concept of the "problem based learning" particularly finds favour with foreign students. Satisfactory research facilities and modern, functional workstations are substantial for the success of the pioneering learning principle which focuses on independent work in small groups of up to 10 persons with individual tutor care. The newly designed Maastricht University Library justifies this claim technologically with a Server-based computing architecture and centrally administrated thin clients. 550 of the space-saving and economical end devices allow students access to digital stores of knowledge and book summaries from different professional libraries.

New layout of the University Library

In the forefront of "Problem-based Learning" is the search for continued information. The University implements the research facilities and workstations necessary for this through so-called "study territories" which are partitioned into various reading rooms for single persons or groups with and without computer as well as audio-visual departments. With the thin clients from the German manufacturer, IGEL Technologies, installed at different library locations, the Maastricht University has one of the largest installations in the Netherlands.

The new University Library opened in January 2003. It will combine the traditional library with its old and valuable books, including a large Jesuit collection from the 15 century with the latest digital technology and all the University publications digitized gradually.

Internal Application Service Provider

January 2001 was the starting point for the ambitious project to create a homogeneous, low-cost and centrally administered system landscape. The ICT department of the Maastricht University Library was in charge of the project. In the meanwhile, it acts as the "internal service provider" and offers the faculties "Server-Based Computing", including administration. The hardware is provided by eight Compaq Servers with two Intel XEON 2.8 GHz processors each and 2-3 GB memory each for the necessary performance to ensure via Windows 2000 Advanced Server and Citrix Metaframe XP (Feature Release 2), the simultaneous data exchange between the centrally handled library applications and the Clients connected via Ethernet via Windows 2000 Advanced Server and Citrix Metaframe XP (Feature Release 2).

The latter was purchased through the IGEL-Partner Tweco IT, and was installed independently without external support. Project Leader, Marc de Lyon, was extremely happy with the course of the project. "The estimated time plan was observed exactly and we even had reserves left in the budget." De Lyon was especially impressed with the quick set-up of the clients in comparison to the PCs. "The installation of the IGEL devices was done using the proverbial Plug&Play method. First, the Server-based computing environment was implemented. About two months later, we have started with the migration to thin clients. They were ready for use in two weeks."

Client selection: Quality and equipment convinced

15 units from various manufacturers were thoroughly examined by the Maastricht University Project Team under Marc de Lyon. According to the IT Manager, the decision in favour of the IGEL model was especially because of the quality and performance of hardware and software equipment. Actually, the IGEL-596 Premium Plus with 256 MB RAM and bundled applications was one of the more powerful models. To keep the network load low owing to the frequently opened applications, the thin client offered a standard local Internet Browser, including standard plugins such as Adobe PDF Reader. The Maastrichtites chose the Mozilla Browser with Java Runtime Environment 1.41 from Sun. This basic equipment allows students problem free, multimedia broadband access to the World Wide Web at specially allocated workstations.



Slim administration

The Maastricht University is a State University, which among other things, gets additional funds through research assignments and study fees. As in all public institutions, even here, the funds are limited. Efficient services for the students and teachers are however a must. After the workstation PCs were written off, and the budget was free again, de Lyon first convinced the University Management of the decrease in Total Cost of Ownership (TCO). These savings partly came from the lower purchase costs of end devices and a Server-based environment in comparison to the PC. "The more the end users, the better the SBC will pay off", explains de Lyon. "Thanks to central administration facility, the personnel load has already drop by 30 to 40%. One employee can now take care of 150 workstations including the entire Server-based Computing environment. Earlier, it was just 75. So per year, we save on two full-time employees, which cost approx. €50,000 each. The administration of the device firmware is quick and reliable and handled centrally via FTP updates."

University everyday life without failures

The two new library branches, "UB Randwijck" and "UB Grote Looiersstraat" today offers 500 study places that are largely equipped with thin clients. Before this reorganisation, book and Internet searches were conducted using exclusively conventional PCs, which meant constant high costs due to frequent hardware failures in comparison to the current solution. In addition, the infiltrating viruses paralysed the complete search system. The thin clients used today avoid such failures as they do not use fault-prone components such as hard disks, CD-ROMs or floppy drives or other portable parts such as network or CPU fans. These thin clients are not only associated with low noise and heat emission at the workstations that make studying more pleasant. Thin clients also come with definitely longer life cycles, an average of five years.

As floppy drives can't withstand the frequent mechanical load, only a few PC floppy stations have been provided. Instead, students can use special drives, called I-disks: "After login, each student has memory space of 50MB available. Backups of all data in the memory are created every day. Besides, data is checked for virus." At the "UB City Centre", an additional 60

called "Connection Points" have been provided. Here, students can connect their laptops and download the stored data.

High acceptance from students and staff

To assess the solution, an evaluation survey was conducted among students. According to the positive result, the research results are now delivered much faster and there are no more technical problems with end devices. Even the ICT department is satisfied since implementation, as, according to de Lyon, they no longer need to act as fire-fighters, rather can concentrate on the control and further planning of the IT environment.

Even the approx. 150 UB employees benefit from the improvement, and with the help of thin clients have even implemented a new office concept. In the past, because offices were used to capacity only maximum 70% even during peak times, the work was reorganised. The conventional offices were gradually converted into flexible workstations.

Outlook

In spite of the trend-setting implementation of the server-based computing, de Lyon does not see any technical pioneer role: "Even the Universities in Leiden and Delft use thin clients, though only in the back office. In Germany, similar projects have been implemented. It is precisely in administration intensive facilities with many workstations that SCB and thin clients can present their full potential. The initial investments are clear, the technical installation controllable and the cost-benefit calculation distinct." After the present experiences, follow-up projects are already being discussed at Maastricht. So, for example, it is planned to further optimise the client administration with the help of the current software generation, IGEL Remote Manager 2.0. Moreover, it even mobile thin clients are being considered. However, before that, the number of stationary end devices for students and staff needs to be built up. "In spite of the initial scepticism, the authorities are so impressed by the installation that the Server-Based Computing is to be introduced also for the employees", reports Lyon not without pride.

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