HOSPITAL GROUP RELIES ON GO-GLOBAL TO LOWER COSTS AND IMPROVE PERFORMANCE.

CHC Migrates from Windows NT Client/Server Architecture to Windows 2003/XP Server-Centric, Thin Client Infrastructure.

Customer Solution at a Glance

Customer Profile: CHC Group delivers high quality, high technology medical care to patients in Liege, Belgium.

Business Need: CHC needed a cost-effective, efficient way to migrate their applications and network infrastructure from Windows NT-based client/server to thin client Windows 2003 and XP.

GraphOn Solution: Using advanced server-centric technology and near zero-footprint clients, GO-Global® for Windows provides CHC with fast, simple, affordable application access from Web browsers and Windows-based Terminals (WBTs)

Results:

- Lower licensing costs with "concurrent user" licensing model
- Improved response time for client/server applications
- Improved security and simplified administration through server-based computing
- Complete cross-platform compatibility and Web-enabled remote access

The Christian Hospital Center (CHC) Group operates a network of hospitals throughout the Liege region of Belgium. With an annual budget in excess of $300 million, the CHC Group spans 19 divisions, 6 hospitals, 1058 beds, 9 convalescent homes, 3,100 staff employees, and 850 doctors.

CHC management recently determined that its hospital network needed to be upgraded from a classical Windows NT-based client/server infrastructure to a more advanced, cost-effective approach based on Windows 2003 and XP. With over 3,000 users, however, Microsoft's licensing policies meant that the budget for such a migration would be cost prohibitive. As a result, CHC decided to evaluate alternative solutions to cut down IT infrastructure costs.

The hospital group decided that an advanced server-centric computing solution incorporating application publishing and thin clients would be the most cost-effective and efficient solution.

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Server-Centric Computing Alternatives.

In order to quickly and successfully complete the Windows NT to Windows 2003/XP migration, CHC decided that a centralized application publishing solution would best meet their requirements. After a thorough review of available products, the hospital group selected three alternatives: Citrix Presentation Server, Microsoft Windows Terminal Services (WTS), and GraphOn's GO-Global for Windows.

Financial Considerations.

CHC hospitals are in operation around the clock, 24 hours a day, 7 days a week, 365 days a year. With multiple shifts, the hospitals employ 3,000 users accessing 2,000 workstations. However, at any given time, only about 750 concurrent users are actively using the network.

Due to GO-Global's highly efficient "concurrent user" licensing model, the overall project cost of the GO-Global alternative was far below Citrix and very competitive compared to Microsoft WTS.

With Microsoft's restrictive licensing policies for WTS, the hospital group would need to purchase 2,000 WTS "per device" licenses or 3,000 "per named user" licenses. As for Citrix, CHC would be forced to purchase not only Citrix licenses, but also WTS licenses. The GO-Global alternative, on the other hand, required only 750 "concurrent user" licenses, a much more reasonable requirement.

Prototype Deployed.

"With the financial analysis favoring the GO-Global solution, we decided to initiate a pilot as proof of concept," said Luc Ceyssens, Director of Information Services at CHC.

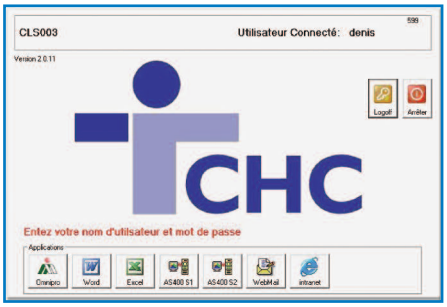
The prototype was implemented with 35 users at one of the CHC pilot sites. The prototype platform leveraged GO-Global's load balancing capabilities across three different machines: one relay server and two dependent servers.

During the successful three-month pilot, a close working relationship was established among CHC's IT department, GraphOn's technical staff, and personnel from Planet Europe, GraphOn's distributor in France and Belgium, to tune the platform, confirm the robustness of the architecture, and qualify each of the CHC's applications.

Solution Roll-Out.

Based on the positive results of the pilot phase, CHC selected GO-Global as the solution of choice and proceeded to implement the following architecture:

- IBM blade servers with dual Xeon 3.6 GHz processors and 8 GB of memory.
- VMware under Linux. Linux manages the components of the cluster, with CHC having verified that Linux can handle the virtual memory management much more efficiently than Windows.
- Three 4 MB virtual machines running Windows 2000 Professional on each physical server and 50 concurrent users per virtual machine.
- Dedicated server farm (one relay server and two dependent servers) to publish 200 Microsoft Office licenses.



Because medical file security is a very important, CHC has developed a front-end application residing on each WBT that displays the application icons which the user has the right to access via GO-Global. Doctors can access medical files, while clerical staff can only access administrative documents.

Windows-based Terminals.

Today, all CHC application are centrally published under GO-Global. CHC offers its users two efficient ways to access the centralized platform: either via Windows-based Terminals (WBTs) or using Web browser-based access.

"We selected HP and Bull as suppliers of WBTs and plan to replace most of the old NT workstations with new WBTs," said Ceyssens. "We chose to use Windows XP Embedded devices rather than Window CE or Linux-based terminals."

CHC selected Windows XP Embedded (XPe) to protect its investment for the future. XPe offers the flexibility to install local tools without having to upload flash memory dumps from device suppliers. They standardized on the installation of Acrobat Reader on their WBTs to be able to use the GO-Global Universal Printer Driver functionality.

Remote Access via Intranet.

The other way for users to access CHC applications is via any Web browsers on any device. CHC has deployed an intranet/extranet portal. GO-Global is used to run application portlets based on the product's ActiveX/HTML logon capabilities. This allows easy access for any doctor who needs to retrieve medical files via the Web.

"This is a particularly useful way to enhance the quality of medical care when a doctor wants to share the view of medical pictures with a specialist not based within one of the hospital buildings," explained Ceyssens.

Performance and Security.

One of the key reasons CHC is so satisfy with the GO-Global solution is the overall performance of the system, especially when doctors are working remotely. Because CHC's medical file application is a very demanding client/server application, the new location of the client module within CHC's computer center has eliminated the previous bandwidth requirement and has significantly reduced application response times.

Accessing Legacy Applications.

CHC is also using GO-Global to access IBM AS/400-based legacy applications via 5250 terminal emulation. Most of the existing back-office infrastructure has been integrated into the new architecture.

As for the future, CHC is currently moving its network onto fibre optics to fully benefit from its new centralized architecture, and will soon be implementing single sign-on and ID card identification for increased security. GO-Global will continue to play a key role in the evolution of CHC's IT infrastructure.

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