



Overview

Country or Region: United States
Industry: Medical Services (Hospital)

Customer Profile

Maimonides Medical Center, a 705-bed facility serving the Greater New York metropolitan area, is the third largest independent teaching hospital in the U.S.

Business Situation

Maimonides approached THG to provide architectural design expertise to assist in upgrading its messaging systems, including a migration from Novell GroupWise, and based on a Geo-Clustering configuration.

Solution

In addition to architectural advice regarding geo-clustering, as well as custom scripting, The Henson Group provided Maimonides with expert assistance leveraging the Quest GroupWise Migrator for Exchange (formerly Wingra GroupWise Migrator for Exchange), which offers a secure and reliable migration from GroupWise to Exchange.

Results & Benefits

The Henson Group exceeded Maimonides expectations, providing the architecture to facilitate the configuration of a single geo-cluster of Exchange 2003 servers to replace a solution including five GroupWise servers, to provide messaging of 2,500+ user base.

MAJOR NYC HOSPITAL RELIES ON THE HENSON GROUP TO ARCHITECT ENTERPRISE-WIDE MESSAGING INFRASTRUCTURE MIGRATION

MAIMONIDES MEDICAL CENTER

Microsoft Exchange Server 2003 Migration from Novell GroupWise

"This project is significant, not just because it is the latest in a widening stream of US companies migrating from GroupWise to Exchange, but it also encompasses the latest techniques in what is known as 'Geo-Clustering' that really enhances the availability and recoverability of the overall messaging infrastructure."

Mike Stacy, Principal Architect,/Director, Consulting Services, The Henson Group

When Maimonides Medical Center decided to consolidate and upgrade its messaging systems, including a migration from Novell GroupWise, the large Brooklyn, NY-based hospital sought architectural and implementation consulting expertise from award-winning Microsoft Gold Certified Partner The Henson Group, Inc. (THG).

BUSINESS SITUATION

Maimonides Medical Center is an almost 100-year-old vital and thriving non-profit, non-sectarian hospital that is the pre-eminent treatment facility and academic medical center in the New York City Borough of Brooklyn – and among the best in the country.

Maimonides Medical Center, a 705-bed facility serving the Greater New York metropolitan area, is the third largest independent teaching hospital in the U.S. Widely recognized for its major achievements in medical and computer technology, Maimonides expertly serves the distinct needs of New Yorkers in a patient-centered environment.

In 2004 (the most-recent year for which such statistics are available), the Medical Center serviced more than 91,000 emergency room visits, 241,000 ambulatory care visits, and delivered more than 6,300 babies. As a leading academic medical center, Maimonides trains more than 400 residents and medical students each year and routinely contributes to the progress of medicine through its broad base of clinical and

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laboratory research. The Medical Center is affiliated with the Mount Sinai School of Medicine and serves as the Brooklyn center for the school.

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To manage electronic messaging needs across the enterprise, Maimonides relied on Novell GroupWise, a so-called 'collaboration software solution' designed to provide information workers with e-mail, calendaring, instant messaging, task management, and contact and document management functions.

GroupWise originated in 1986 with an extension of the Wordperfect suite, which ran at the time on the Data General and Amiga platforms, called WordPerfect Office. The product was developed by WordPerfect Corporation in conjunction with some of its largest customers, including the US Department of Justice, as well as with the programming input of some individual system administrators of smaller government agencies, such as Eliot Lanes.

WordPerfect was acquired by Novell in 1994 and the server components were ported to the NetWare network operating system. At the same time, WordPerfect Office was renamed GroupWise and integrated with Novell Directory Services (now known as Novell eDirectory). In 1996 Novell sold WordPerfect to Corel Corporation, but decided to keep GroupWise.

Maimonides installed GroupWise several years ago and was running an out-dated, un-supported version of the product. Struggling with the challenges of an antiquated solution, Maimonides viewed this as an opportunity to revamp its entire messaging infrastructure. Not surprisingly, like most companies eyeing alternatives to GroupWise, Maimonides wanted to leverage its existing investments in Microsoft technology and integrate Exchange Server 2003 and the Outlook client in the Office suite.

Microsoft's incumbency at Maimonides played a pivotal role during evaluations, which should not be surprising.

According to a research report on email migrations developed by Yankee Group analyst Dana Gardner, the choice of server and network platform plays a highly influential role in choosing a messaging strategy.

"More often than not, the choice of platform and server consolidation dictates the choice of messaging systems," Gardner states in the report, entitled *Messaging Migration Trends Show Move from Novell GroupWise to Microsoft Exchange*.

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When Maimonides engaged The Henson Group, following an endorsement from Microsoft, the hospital was actually in the midst of its migration. However, due to the complexity of the environment and the nature of the advanced configuration, Maimonides needed an expert on-site to assist in key architectural decisions and planning.

The Henson Group offers a full-service Messaging unit staffed by experienced Microsoft Certified consultants, usually specializing in multiple technologies. The Henson Group is consistently ranked at or near the top of Microsoft’s official Resource Directory for Microsoft Certified Partners for Exchange server messaging infrastructure projects (<http://directory.microsoft.com>).

This group is led by Architectural Consultant Mike Stacy, who is also the head of The Henson Group’s overall Consulting Services division and a former high-level Exchange expert at Microsoft. (*Stacy resigned his position at Microsoft in late 2005 to join the consultancy.*)

Stacy’s experience includes very challenging projects for major Fortune 100 U.S. companies, global conglomerates, U.S. federal departments and agencies, and industry leaders across many verticals. Inside Microsoft, Stacy demonstrated his leadership on many occasions. For instance, he helped conceive and develop the popular “Exchange Health Check” (*now known as the Exchange Risk Assessment program, or ExRAP*) for Microsoft customers. Since arriving at THG, Stacy has enhanced that program, which is now offered to clients.

The Henson Group also achieved Microsoft’s Advanced Infrastructure Solutions Competency by demonstrating its expert-level Exchange-related abilities, maintaining a roster of Microsoft Certified Consultants with applicable experience, and producing numerous client references to objectively testify to our abilities.

What this meant for Maimonides was that The Henson Group had the resources, project experience, and proven technical ability to help ensure it achieved its objectives.

The Yankee Group found that in its survey of Exchange deployments, users who have undertaken a migration from GroupWise to Exchange 2000/2003 have been less concerned about license acquisition and migration costs than other factors (such as long-term TCO, ease of administration, reducing the numbers of types of platforms, and the ability for their end users to gain intuitive access to high-productivity functions).

SOLUTION

In examining the current market for e-mail migrations, the desire to reduce platform risk has proven formative in the widespread and apparently accelerating movement from Novell GroupWise messaging systems to Microsoft Exchange Server 2000 and Microsoft Exchange Server 2003—especially those businesses with 2,000 seats or less, according to the Yankee Group report.

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“The widespread and apparently accelerating movement from Novell GroupWise messaging systems to Microsoft Exchange Server 2000 and Microsoft Exchange Server 2003 reflects the desire to reduce risk,” Gardner wrote. “Businesses—especially those with 2,000 seats or less—are perceiving a lack of developmental support from Novell for the GroupWise product and sense they will see more complexity with Novell’s own migration from NetWare to Linux.”

Since its acquisitions of Ximian open source applications and the SUSE LINUX platform in 2003, Novell has been working toward a transition from NetWare, its proprietary network operating system (NOS), to an open source stack built on Linux. *(For example, NetWare 7 will run on either a NetWare kernel or a Linux kernel. Novell is increasingly portraying itself as a Linux company.)*

“With its larger strategic shift, the ultimate direction or directions that Novell will take with messaging is less clear,” Gardner wrote. “GroupWise users wonder if they will need to change their platform to Linux or change their messaging applications to an open source (or Linux-supported) e-mail system, as they plan functional e-mail upgrades. In addition, GroupWise users, channel partners and integrators are concerned about whether they need to rethink their platform strategies to advance the productivity and modernization of their messaging systems and associated services.”

These issues were further exacerbated at Maimonides, an enterprise that was struggling with an outdated version of the product lacking active support from Novell. As is the case with all software vendors, a predetermined cut-off date was announced well in advance by Novell. Still, despite discontinuation of support, Maimonides was not in the position to launch an upgrade and has labored along with the older version ever since.

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On its wish list of functionality, the basis for its evaluation of Exchange and other technologies, Maimonides sought reliable, more secure access to resources for mobile and remote users. Maimonides professionals, especially doctors and other medical practitioners, rely on secure access to their e-mail and applications from many places and from a variety of mobile devices.

Maimonides also cited a lack of an integrated suite of collaboration tools and needed a tightly integrated working environment all managed from a single location, as well as the ability to see the exact trail of messages sent and received at a particular date.

In light of the challenges posed by GroupWise, Maimonides also demanded a solution with lower cost and management complexity and one that addressed users' dissatisfaction with the client experience. (The downtime of GroupWise through this interface was noticeable for everyday users.)

Helping architect this migration, The Henson Group needed to address paramount security and stability issues. The result: an architecture based on geographically dispersing cluster nodes in Exchange Server 2003, a practice otherwise known as 'Geo-Clustering.'

Geographically dispersed clusters provide high availability to data access. Often, the costs of implementing a geographically dispersed clustering solution are steep enough to make customers think twice and go hunting for a different solution that provides the added data and uptime security they want.

However, for an organization such as Maimonides, where messaging can have an impact on delivery of healthcare services, Maimonides insisted on the additional redundancy of a fault tolerant installation and, therefore, geographically dispersed clusters were an ideal solution. At the time The Henson Group was approached for this engagement, Maimonides was already leveraging its existing infrastructure for the geocustering and, in fact, they already had SQL geoclusters deployed.

Geographically dispersed clusters, also called stretched clusters or extended clusters, are clusters comprised of nodes that are placed in different physical sites. Geographically dispersed clusters are designed to provide failover in the event of a site loss due to power issues, natural disasters or other unforeseen events.

To truly understand how geographically dispersed clustering works with Microsoft Exchange Server 2003, you must first understand the basic requirements for a geographically dispersed cluster solution.

A geographically dispersed cluster is a combination of hardware and software. In other words, a geographically

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dispersed cluster is a combination of pieces supplied by different vendors. Due to the complex nature of these configurations and the configuration restrictions that are fundamental to Microsoft Windows Clustering technology, geographically dispersed clusters should be deployed only in conjunction with vendors who provide qualified configurations, such as The Henson Group.

To run Exchange Server 2003 in a geographically dispersed cluster solution, the solution must meet the following criteria:

- The nodes must share a common disk subsystem.
- The nodes must live on the same local area network (LAN)/subnet.
- The nodes must have a network heartbeat with low latency, less the 500ms.

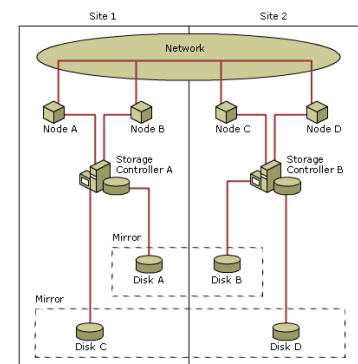
For geographically dispersed clusters, the above criteria are met by replicating data at the disk level and creating a virtual LAN (VLAN) that allows the same subnet to exist over high speed wide area network (WAN) links.

For Maimonides, geographically dispersed server clusters ensure that a complete outage at one site does not cause a loss of access to the application being hosted. All nodes hosting an application must exist within the same cluster. Therefore, to provide fault tolerance, a single cluster spans multiple sites.

(Windows Server 2003 supports two-site geographically dispersed clusters. However, Microsoft does not provide a software mechanism for replicating application data from one site to another. Instead, Microsoft works with hardware and software vendors to provide a complete solution. For more information about qualified clustering solutions, see the Windows Server Catalog link or the Geographically Dispersed Clusters link on the Web Resources page at <http://www.microsoft.com/windows/reskits/webresources>.)

A geographically dispersed cluster requires multiple storage arrays, at least one in each site, to ensure that in the event of failure at one site, the remaining site will have local copies of the data.

In addition, the nodes of a geographic cluster are connected to storage in such a way that when there is a failure at one site or a failure in communication between sites, the functioning nodes can still connect to storage at their own site. For example, in the simple two-site cluster configuration shown in the figure to the right, the nodes in Site A are directly connected to the storage in Site A, so they can access data with no dependencies on Site B.



In performing its actual migration from Novell GroupWise to Exchange 2003 Server, Maimonides faced challenges, such as removing the GroupWise client, configuring the new messaging server product, and installing Outlook or another Messaging API (MAPI) email client.

NOTE: Maimonides' configuration is actually less complex than this figure, because it uses 2 nodes instead of 4. Therefore, Maimonides configuration is similar, but that the graphic is greatly simplified. — Nodes A and B are connected to one array in Storage Controller A, while Node C and Node D are connected to another array in Storage Controller B. These storage arrays present a single view of the disks spanning both arrays. In other words, Disks A and B are combined into a single logical device (by using mirroring, either at the controller level or the host level). Logically, the arrays appear to be a single device that can fail over between Nodes A, B, C, and D.

Meanwhile, in performing its actual migration from Novell GroupWise to Exchange 2003 Server, Maimonides faced challenges, such as removing the GroupWise client, configuring the new messaging server product, and installing Outlook or another Messaging API (MAPI) email client. Subsequently, with Exchange running, the most important tasks for Maimonides progressed to moving mail and calendars.

To achieve these objectives, The Henson Group provided Maimonides with expert assistance leveraging the Quest GroupWise Migrator for Exchange (formerly Wingra GroupWise Migrator for Exchange), which offers a secure and reliable migration from GroupWise to Exchange.

This product converts users' mail, calendars, tasks, personal address books and frequent contacts and stores them on users' new mailboxes on the Exchange server ensuring preservation of important enterprise information. It also migrates GroupWise Archives into Microsoft Outlook personal stores.

In fact, this tool did not actually meet all of Maimonides' needs and The Henson Group provided expert custom services for the migration, such as to populate Active Directory attributes in a specific manner.

RESULTS & BENEFITS

The Henson Group exceeded Maimonides expectations, providing the architecture to facilitate the configuration of a single geo-cluster of Exchange 2003 servers to replace a solution including five GroupWise servers, to provide messaging of 2,500+ user base.

Furthermore, the solution is easily extendable, but even in its current iteration can support a 50% increase in users (the five-year projected growth rate set by Maimonides).

Keep in mind that this solution was architected to meet the demands of a workforce that is literally in operation 24/7.

The survey referenced in this Case Study on e-mail migration trends was an independent, web-based questionnaire

The top reasons cited by respondents for migrating from their older systems were, in descending priority, operating system upgrade, to progress from obsolete systems, to gain improved scalability/performance/throughput and easier administration.

(conducted jointly by the Yankee Group and Sunbelt Software, Inc.) completed by 90 pre-qualified IT administrators with Exchange 2000/2003 deployments in the US.

They ranged from small firms with 100 users to large enterprises with more than 10,000 users worldwide.

Among those surveyed, 44% either had installed their latest e-mail systems in last 3 months or were still in the process of migrating and deploying them at the time the survey was conducted.

Of those with Exchange now in place, 67% of respondents represented organizations with 500 end-user seats or less—clearly SMBs. Twenty percent were medium businesses of 500 to 2,000 seats, while 12% were organizations with 2,000 e-mail seats or more.

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Maimonides' decision reflected nearly all of these criteria. Today, Exchange Server 2003 offers IT professionals and knowledge workers at Maimonides advances in system performance and productivity. These benefits include:

Increased productivity for IT staff

Maimonides administrators can save time and increase productivity with:

- Single-seat administration for Exchange Server and infrastructure through Active Directory directory service.
- Single mailbox restoration.

Enhanced security

To uphold the tenets of the Microsoft Trustworthy Computing initiative, Exchange Server 2003 and Windows Server 2003 share the goal to be secure by design, secure by default, and secure in deployment. Exchange Server 2003 protects Maimonides messaging environment better with:

- Improved spam controls with Exchange Intelligent Message Filter and support for real-time block lists.
- Secure/Multipurpose Internet Mail Extensions (S/MIME) support and automatic sign off after inactivity in Microsoft Outlook Web Access.
- Updated Virus Scanning Application Programming Interface (VSAPI) and enhanced action and reporting through vendor software.

According to the Yankee Group survey, one administrator estimated that in moving to Exchange Server 2003, licensing costs went up by 2% to 3%, while total support costs decreased by 30% to 35%.

Anywhere access

The Henson Group's Exchange architecture enables Maimonides' mobile medical services workforce to stay connected:

- Exchange ActiveSync provides direct synchronization between Windows Mobile-based Pocket PCs and Smartphones and other mobile devices such as the palmOne Treo 650 and enabled Motorola mobile phones. This capability reduces costs by eliminating the need for additional servers and special services.
- Extensible HTML (XHTML) (Wireless Application Protocol [WAP] 2.x), compressed HTML (CHTML), and HTML browser-based devices and mobile devices that can browse Exchange Server 2003 mailboxes.
- Ubiquitous client access using a single URL for all external client types such as Outlook, Outlook Web Access, and mobile devices.

Immediate increase in user productivity

Integration improvements with next version of Microsoft Office Outlook 2003 and Outlook Web Access offer:

- Greatly improved Outlook and Outlook Web Access performance that enables high productivity for mobile workers connecting over slow, latent, inconsistent network connections.
- Increased security for Internet access from Outlook through remote procedure call over hypertext transfer protocol (RPC over HTTP) that reduces the need for a virtual private network (VPN) connection when used with the Windows Server 2003 operating system.
- Improved Outlook Web Access interface and features offering a faster, richer, and more useful user experience.

Lastly, in regards to cost, according to the Yankee Group survey, one administrator estimated that in moving to Exchange Server 2003, licensing costs went up by 2% to 3%, while total support costs decreased by 30% to 35%. The rise in user collaboration productivity, he estimated, was higher by 5% to 8%.

In the report, cost was near the bottom of the list—only 22.5% said that cost was a compelling reason for migrating.

Maimonides was less concerned about license acquisition and migration costs than about other critical factors, including long-term total cost of ownership, ease of administration, reducing the number of platform types and the ability for their end users to gain intuitive access to high-productivity features.

In fact, according to the Yankee Group survey, even companies such as Maimonides that recognize a move to



About The Henson Group

Founded by former Microsoft engineers in 2000, The Henson Group is an award-winning Microsoft Gold Certified Partner specializing exclusively in deploying Microsoft technologies, official product training, and strategic consulting for overcoming today's business challenges.

The preferred solution provider for many major US and international corporations, The Henson Group is designated an official "Go To" partner for most major products, consistently ranked within the top three consultancies in Microsoft's partner directory (found at: <http://directory.microsoft.com>), holds a seat on the national Microsoft Partner Advisory Council, has direct ties to the product groups, and offers a price guarantee that assures the highest quality service at an unbeatable value.

Exchange 2003 will cost more than systems such as GroupWise in upfront costs have opted to seek the prospect of lower backend costs—including fewer administrators—over time.

Indeed, up-front acquisitions and migration costs are not a deciding determinant in systems choice—long-term total costs of the IT environment, mixed with higher levels of user productivity, make the more significant difference to a growing segment of solutions architects.

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