

Multiple Listing Service Gains \$5.4 Million in Savings from Scalable Database Solution

IN BRIEF

• **Goal:** For the real estate information firm MLS Property Information Network to replace an outdated, inflexible UNIX-based proprietary system with a solution that can handle an increased number of concurrent users, scale quickly, provide round-the-clock availability, reduce maintenance and development costs, and allow for the quick development of new applications and services to support new revenue opportunities.

• **Solution:** Microsoft® Windows Server™ 2003 with Internet Information Services (IIS) 6.0 running on 12 servers. An in-house application built on top of Microsoft SQL Server™ 2000 with a direct link to IIS 6.0 to power the MLS Property Information Network Web site.

• **Results:** A total project five-year savings of U.S. \$5.4 million driven by the elimination of contract fees for the UNIX-based system. Additional benefits include increased flexibility and scalability, and increased revenue from new business opportunities and services, for a total five-year net benefit, including savings, of U.S. \$6,886,865. An annual return on investment of 250 percent with a payback period of 16 months.

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In the real estate information business, information is money – literally. Multiple listing service (MLS) providers are paid monthly fees by real estate professionals to access multiple listings, and so the more listings and data that an information provider can deliver, the more subscribers it will garner. MLS Property Information Network, the largest MLS firm in New England, wanted to replace an aging, proprietary UNIX system with one that would give it greater flexibility in gathering, collating, and delivering listings information, and allow as many concurrent users as possible to get the information from the firm’s subscription-only Web site. It chose to build its application on top of Microsoft® Windows Server™ 2003 with Internet Information Services 6.0, along with SQL Server™ 2000, because the Microsoft solution offered off-the-shelf simplicity, powerful tools for building applications and analyzing data, flexibility and scalability, easy maintenance, and high reliability and availability. The entire project is projected to yield nearly U.S. \$7 million in benefits and provided MLS Property Information Network with a platform it can use to easily build new products and services.

Benefits

Objective	Benefits Achieved
Seamless and easy transition from an existing UNIX system	The migration to the Microsoft SQL Server-based solution went without a hitch; there was no disruption of service to MLS Property Information Network customers.
Scalability	Under the old UNIX system, the maximum number of concurrent users was limited to 900 to 1,000. The new Microsoft-based solution already handles 3,500 concurrent users and can scale up from that.
Capacity planning	In a matter of minutes, the new system can add increased capacity. When the SQL Server-based system launched, MLS Property Information Network had planned for 2,000 concurrent users, but 3,500 logged in. Within 10 minutes, the company was able to install new servers to handle the increased capacity.
Cost savings	Under the old UNIX system, MLS Property Information Network paid monthly fees of U.S. \$120,000 a month to an outside vendor. With the new system, those fees have been eliminated.
Platform for future products and services	With its increased capacity, MLS Property Information Network is spreading throughout all the New England states. The new system also helps the firm treat its data as a product that can be sold in a variety of ways, enabling the company to pursue new business opportunities.

About MLS Property Information Network

MLS Property Information Network is a Massachusetts-based multiple listing service (MLS) that covers about 85 percent of the state, plus some coverage of neighboring New England states. It is the largest MLS in New England, and one of the top 10 in the nation. It has a staff of almost 50 people.

Some 25,000+ real estate professionals – including brokers, assessors, appraisers, and others – pay a monthly fee to access the real estate listings, and they also list their real estate properties in the firm’s database. All subscribers get access to the combined real estate listings. MLS Property Information Network provides access to its data through a password-protected Web site. The firm is looking to expand coverage throughout the rest of Massachusetts and New England.

The Challenge: Replace an Aging, Proprietary UNIX-based System

“We wound up with a legacy system owned by a company that didn’t have the staff or ability to maintain or upgrade it. The technology limitations were severe and hurting our business.”

ANTHONY MASTROIANNI
CHIEF TECHNOLOGY OFFICER
MLS PROPERTY INFORMATION NETWORK

To deliver services to subscribers, MLS Property Information Network was licensing a 15-year-old proprietary database built on top of OpenVMS 7.x running on Digital/Compaq/HP ES45 and an AlphaServer4100. The real estate information company had no control over the system – the database was owned by an outside vendor, and MLS Property Information Network could not pull information from the database on its own. Changes to the system could take a half a year: 60 days for the database vendor’s quote for the work, and then 90 days from the time the quote was accepted for the work to be finished. The real estate information company paid \$120 an hour for any work to be done to this system.

In addition, MLS Property Information Network paid U.S. \$120,000 a month to the vendor for running and maintaining the system. As MLS Property Information Network grew, the system could not handle the increased number of subscribers who wanted to log on and access the multiple listing service; it allowed from 900 to 1,000 concurrent users only. The system had to be brought down every night for six hours of maintenance, and in the words of Anthony Mastroianni, Chief Technology Officer of MLS Property Information Network, “every night, for six hours, real estate stopped in Massachusetts.” Additionally, when the maximum number of concurrent users was reached, the system would at times have to be rebooted, making it unavailable for half an hour or more. MLS Property Information Network was looking to replace the aging, proprietary UNIX-based system with a new system that it

would own and manage. This would allow the company to reduce costs, increase capacity and flexibility, and build an application that could help the firm sell new products and services.

The Need for a New Solution

“We knew we had to bring the application in-house, and we wanted a solution that would let us do it faster, better, at less cost, and with a minimum of difficulty.”

ANTHONY MASTROIANNI
CHIEF TECHNOLOGY OFFICER
MLS PROPERTY INFORMATION NETWORK

MLS Property Information Network was looking for a platform that would offer the following:

- **Increased capacity.** The existing system couldn't handle the existing demand for the company's services, and would not allow more than 900 to 1,000 concurrent users on the Web site. The firm would not be able to significantly expand beyond its 22,500 subscribers unless it could allow more concurrent users on its site.
- **Reduced costs.** MLS Property Information Network was paying U.S. \$120,000 a month in fees, and wanted to dramatically reduce those costs by bringing development work and maintenance in-house.
- **Greater availability.** Having the subscription Web site unavailable for six hours a night and occasionally throughout the day was unacceptable. The goal was always-on availability.
- **Increased flexibility and faster time-to-market.** The company was not able to develop new products and services, because all development work was in the hands of an outside vendor. It wanted changes to be able to take effect immediately, instead of having to wait six months. And it wanted a system that offered flexibility so that it could build whatever products it wanted from its data.

Information Provider Chooses a Microsoft-based Solution

MLS Property Information Network considered both the Linux and Microsoft® Windows® operating systems when it was selecting a platform on which to build its real estate information application. It chose the Microsoft Windows Server System™ integrated server software because of the ease of setup, more readily available support, and the Microsoft-related expertise that the company had on staff.

“Linux has a very home-brew mentality to it, and it's very hard to find support,” said Mastroianni of the decision. “With Microsoft, on the other hand, you don't have to chase down support – it's always there when you need it.” In particular, he said that because of the sometimes disjointed infrastructure of the Linux community, it can be very difficult to find support for Linux.

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The real estate information company also chose the solution because the combination of Microsoft SQL Server™ 2000 and the Windows Server™ 2003 operating system with Internet Information Services (IIS) 6.0 offered flexible development tools, out-of-the-box ease of installation, scalability, and affordability because the software is capable of running on inexpensive servers that can be scaled at low cost. Additionally, the combination lets the Web server run on top of a SQL Server back end, allowing for a direct connection between the Web site and the database. The solution can handle direct SQL queries from the Web without requiring extra development work.

The deployment took from 12 to 15 months, including all the design, coding, and testing done by MLS Property Information Network IT staff to build the application. Launch on March 1, 2004 went off without problems and was so smooth that subscribers did not realize that a new system was in place when they visited the Web site.

Its scalability and flexibility became apparent as soon as the system was launched. MLS Property Information Network had planned for a system with 2,000 concurrent users. But more than that many users logged on, and the system had to be scaled to handle 3,500. The IT staff unboxed several additional Web servers, plugged them in, pointed them at the source code, and within 10 minutes the system was able to handle 3,500 concurrent users.

An Inside Look at the New Solution

SQL Server and IIS make it easy for MLS Property Information Network to deliver information straight from a database to the Web, and so into customers’ hands. The main SQL Server and its backup are connected to the IIS server bank. When a customer performs a query on the MLS Property Information Network Web site, the query is sent by the IIS server bank to the SQL Server, which does the search, and in turn delivers the results to back to the server bank. The server bank formats the results and presents them to the customer. MLS Property Information Network also has a separate SQL server used to deliver information feeds to partners, and a IIS server which is dedicated to hosting customers’ Web sites. Figure 1 shows a schematic of the MLS Property Information Network setup, and Figure 2 shows the results of a customer query.

AN INSIDE LOOK AT THE MLS PROPERTY INFORMATION NETWORK ARCHITECTURE.

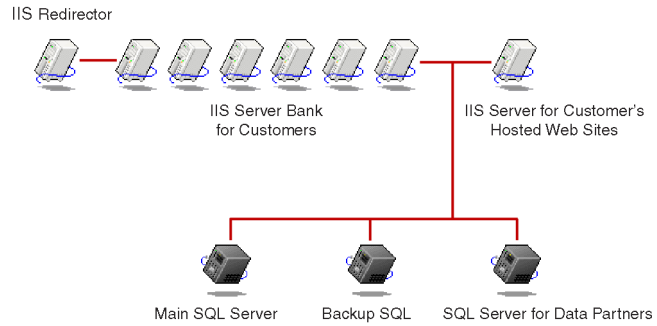


FIGURE 1

MLS Property Information Network chose the combination of SQL Server 2000 and Windows Server 2003 with IIS 6.0 because the solution offered flexible development tools, out-of-the-box ease of installation, scalability, and affordability because the software is capable of running on inexpensive servers that can be scaled at low cost.

AN EXAMPLE OF THE RESULTS OF A CUSTOMER QUERY TO THE MLS PROPERTY INFORMATION NETWORK WEB SITE.

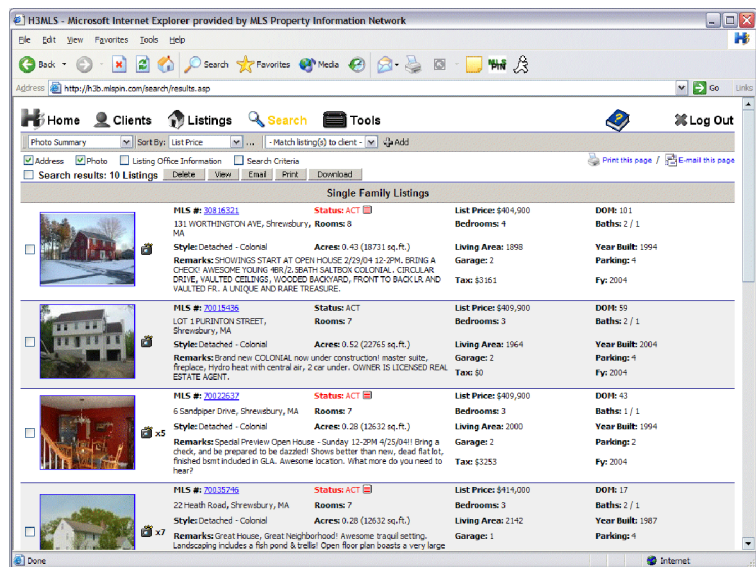


FIGURE 2

The Bottom Line

A detailed analysis of the implementation shows that MLS Property Information Network will gain a total five-year savings of U.S. \$5.4 million driven by elimination of contract fees for the UNIX-based system. Additional benefits include increased flexibility and scalability, and increased revenue from new business opportunities and services, for a total five-year net benefit, including savings, of U.S. \$6,886,865. The project will yield an annual return on investment (ROI) of 250 percent and have a payback period of 16 months.

The total benefit of nearly \$7 million comes from elimination of the U.S. \$120,000 per month contract fees paid to the previous vendor, increased revenue from new services and products that MLS Property Information Network will be able to create, increased revenue because the company will be able to handle more concurrent users, and greater flexibility.

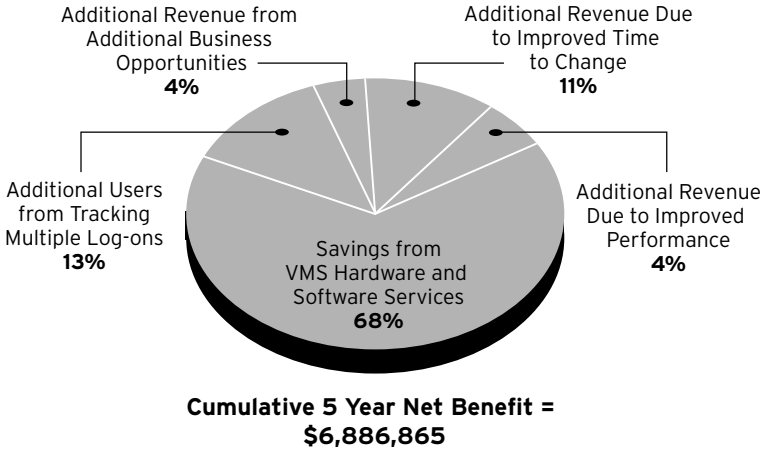
MLS Property Information Network's bottom line for the project: A total project five-year savings of U.S. \$5.4 million driven by the elimination of contract fees for the UNIX-based system.

The previous system was not able to detect when multiple users were logged on with the same account, so a real estate firm was able to buy a single account and then have all its employees log on simultaneously. The new system ensures that no more than one person can be logged on with the same account at the same time, resulting in 800 additional subscriptions.

Additionally, turnaround time for adding new features to the application went from a half a year with the previous system to a half a day with the new solution.

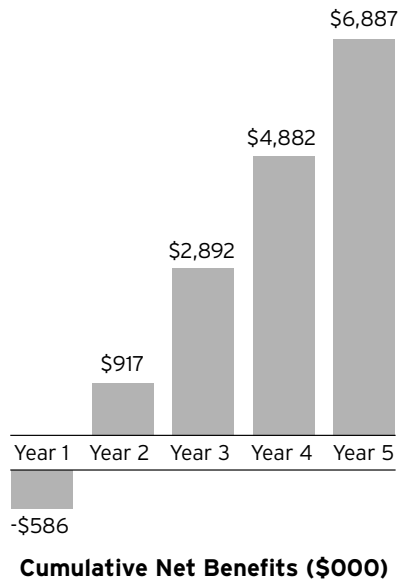
Because of decreased costs, MLS Property Information Network has been able to drop its monthly subscription fee per user from \$36 to \$27, aiming at attracting more subscribers. Ultimately, it plans to sign up enough new users so that it will increase its revenue.

Perhaps most important is that the new flexibility has allowed the company to change its business model. Rather than just selling Web-based subscriptions, it now is able to resell data through multiple methods. The system allows for the export of data streams to new business partners, and for providing new means of access such as cell phones and Personal Digital Assistants.



The following chart provides a detailed, projected, five-year analysis: (MLS Property Information Network is currently in the first year of this project.)

BUSINESS ANALYSIS OF THE SOLUTION



Project Summary						
Annual ROI	250%					
Cumulative Five-Year Net Benefit	\$6,886,865					
Cumulative Five Year Savings Eliminating VMS Hardware from and Software Services	\$5,400,000					
Payback Period (months)	16					
Project Costs (\$000)						
	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Hardware, Software & Maintenance	\$200	\$36	\$45	\$48	\$49	\$50
Rollout Costs	\$200	\$0	\$0	\$0	\$0	\$0
Development Costs	\$150	\$0	\$45	\$46	\$47	\$48
TOTAL COSTS	\$550	\$36	\$90	\$94	\$96	\$98
Benefits (\$000)						
	Year 1	Year 2	Year 3	Year 4	Year 5	
Savings from Eliminating VMS Hardware & Software Services	\$0	\$1,080	\$1,440	\$1,440	\$1,440	
Additional Users from Tracking Multiple Log-ons	\$0	\$216	\$259	\$259	\$259	
Additional Revenue due to Improved Performance	\$0	\$59	\$74	\$77	\$81	
Additional Revenue due to Improved Time to Change	\$0	\$178	\$222	\$232	\$242	
Additional Revenue from Additional Business Opportunities	\$0	\$59	\$74	\$77	\$81	
TOTAL BENEFITS	\$0	\$1,593	\$2,069	\$2,086	\$2,103	
Financial Analysis (\$000)						
	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Net Benefit	(\$550)	(\$36)	\$1,503	\$1,975	\$1,990	\$2,005
Cumulative Benefit	(\$550)	(\$586)	\$917	\$2,892	\$4,882	\$6,887
Net Present Value	\$5,147					
Annual ROI	250%					
IRR	112%					
Payback Period (months)	16					

The financial analysis that appears in this case study was powered by Precision IQ, the leading project evaluation & selection software. Precision IQ is provided by ITCentrix, the premier software and services company for measuring and managing the business value of information technology investments. Results shown are not a guarantee of equivalent performance.

The Future

With the new system in place, MLS Property Information Network has begun expanding its coverage into the remaining sections of Massachusetts where it does not have a presence, and throughout New England. The company has also begun exporting data to new business partners and will accelerate that process.

Summing up his experience with the solution, MLS Property Information Network's Mastroianni says, "All the Microsoft products we've used have been ready to go out of the box, easy to install, and rock solid. Once they're installed and configured, we haven't had any downtime... Because we can now scale instantly, we can welcome new subscribers with open arms and pursue negotiations with regional firms that can bring in large numbers of new subscribers."

Based on this experience, the firm is considering expanding its Microsoft solution by offering Web site hosting services to brokers and agents. It is also considering offering e-mail services to subscribers, using a Microsoft product to connect Exchange to extranets.