



With big software changes afoot, the ROI of refresh has never been greater

THE BUSINESS CASE FOR

REFRESHING YOUR SERVERS

After more than a year of playing budgetary defense in a down economy, small and midsize businesses (SMBs) are finally beginning to find opportunities to move forward with strategic IT initiatives. As they examine their needs and pain points, one top priority is emerging: the need to refresh both client and back office software, particularly Microsoft SQL Server and Exchange.





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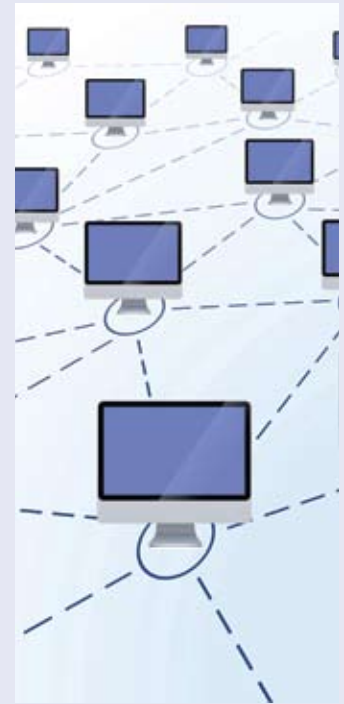
Microsoft is scheduled to release major upgrades to both SQL Server and Exchange early in 2010. Many if not most SMBs are not using even the most recent versions of these business critical applications. Some of these older versions are now at or past the deadline for extended support, making any future support both inconvenient and costly.

But with an upgrade this year, these companies can leapfrog into significant productivity and features gains in a single bound. However, is installing new software on aging servers the most operationally efficient or cost-effective way to upgrade to better software?

The answer is no. For SMBs that want substantial performance improvements as well as potentially dramatic cost savings, it makes sense to support these necessary software upgrades by investing in new servers as well. With more powerful, more energy-efficient hardware that supports both software upgrades and virtualization, SMBs can achieve a greater return on investment in less time than it could with a software upgrade alone.

The case for server refresh

As recently as the end of 2009, more companies were still using SQL Server 2000 than all the three subsequent upgrades combined, says Andrew Hargett, Global Alliance Manager for Database and Business Intelligence at Dell. All of these companies are missing out on the ability to manage terabytes of data, as well as data integration, analysis, and reporting functionality so powerful that even Oracle users are turning to SQL Server as a reporting front end.



Collaboration: Working Together Means Working Smarter

Working together in a small business means finding ways to share your business's vital information with your entire team so that everyone can work more productively. Your data is the hub around which your business revolves, so your team and the external clients, customers and partners you work with need to be able to connect to it, work on it, talk about it and share it.

Any growing business should store all its information in one safe, central and expandable repository and access it from there. Installing a server-based network storage environment is an effective way to achieve

By upgrading to the new release of SQL Server, SMBs can implement data management capabilities that rival those of much larger companies, at an affordable price point, with full support.

However, companies with much older versions of SQL Server are typically running it on much older servers which simply may not be able to maximize the benefits of upgrading, as the architecture of the SQL Server database has changed significantly, Hargett notes. He advises companies upgrading directly from SQL Server 2000 to SQL Server 2008 or later to seek out expert support from a vendor that has done exhaustive migration testing—and can provide guidance in writing.

Dell chose to replace its own servers that power Dell.com, one of the world's largest e-commerce sites, in order to upgrade SQL Server 2000 to SQL Server 2005 and 2008. Migrating in 32-bit mode delivered Dell a 40 percent performance increase, Hargett says, and upgrading to 64-bit mode a year later boosted performance another 45 percent.

A midsized restaurant chain that upgraded its servers and SQL Server in 2007 simultaneously achieved even more impressive results. The new servers and software were so much more efficient than the legacy systems they replaced, the company was immediately able to process and report on data from its franchisees 75 percent faster.

What's more, its newfound ability to manage more data in less time enabled the company to improve data quality and capture more data, allowing it to do more complex reporting to fine-tune its marketing programs—and achieve full ROI in less than two months. It is now planning to upgrade yet again, projecting that the latest version of SQL Server and new servers will improve performance another 20 to 30 percent.

Make the most from Exchange changes

Exchange users, too, have been slow to upgrade, with roughly two-thirds of users still relying on Exchange 2003, says Casey Birch, Exchange Solutions Project Manager for Dell. Yet as individual emails get larger and the volume of email increases, Exchange 2003 has reached its limits in terms of the number and size of mailboxes it can support.

By comparison, Exchange 2010 allows for higher availability, more and larger mailboxes, total redundancy using just two servers, and easier recovery. It adds up to an upgrade that lets employees focus on work instead of email management. Furthermore, new productivity features like integrated unified messaging and native archiving make it easier for SMBs to communicate in multiple ways—and archive those communications to comply with relevant laws and regulations without costly, complex third-party solutions.

A recent study by consulting firm Principal Technologies compared a typical Exchange 2003 implementation, using servers and storage four or five years old, with an Exchange 2010 implementation on new server and storage hardware. The upgraded system was more available, user productivity improved, and the hardware was roughly twice as power-efficient, yielding an estimated ROI of just one year.

this crucial goal. No matter what its size, your business can benefit from a server, so there's no need to fear the technological leap. A server-based computing environment network is easy, affordable, and a pivotal step toward getting true control of your information.

When stored on a server, the files your employees work on can become much more visible to those who need to access them. Employees can work together: communicate with each other about them—even when they're out of the office—and share information over the Internet with clients and customers, as needed. Think about the ways your business could perform better if your employees were connected to each other and to your data. Following are some typical business collaboration challenges, and how servers can help conquer them.

EASY ACCESS TO FILES

Challenge: Who has the spreadsheet with last month's receivables? Who's working on the new presentation? Most small businesses have little control over their



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“Without exception, we find enormous performance increases because both the software and the sheer power of servers have improved so much,” Birch notes.

A multifaceted ROI

In addition to the benefits of newer, more powerful software, a server refresh provides ROI in other forms.

Efficiency: Server technology has become so much more powerful and efficient in just one or two generations that the latest servers can support two to three times the workload while consuming an average of 40 percent less power. As a result, investing in new servers benefits your IT budget in two ways. Initially, virtualization and consolidation lower the up-front cost of buying hardware. Then, over time, they shrink the total cost of ownership through smaller power bills, diminished rack space, less hardware for your IT team to manage, and fewer OS and database licenses.

Stability: Older software is usually installed on older hardware—at least four or five years old—which is reaching end-of-life and is therefore at high risk of causing expensive downtime. “You have to replace it at some point, so better sooner than later,” says Birch. “Having your business systems collapse will cost you a lot more.”

files because everyone works on his or her own PC independently. As multiple versions of files are scattered across many computers, all those systems can't communicate easily with each other. There is no central storage for critical data, and no way for people to work on files together. Searching for the right version of the right file is a time waster.

Solution — A server puts your files in their place. It has centralized file storage that helps you make sense of your daily information flow. Imagine how in control you'll feel knowing the current status of every important document. A server stores both applications and files in one secure location, accessible to all. You control permissions, granting file and folder access rights only to those people who need to work with them. It's easy to set up collaborative teams that share a single up-to-date version of a critical file—be it a document, an accounting ledger or a presentation. You no longer need to search around the office for the current version of a file, so you can save time. And changes to the files are easy to track.

Support: Microsoft has discontinued extended support for SQL Server 2000 as well as Exchange 2003. Paying per incident for support adds up. By comparison, enterprise vendors include support for new applications bundled with new hardware. In addition, if your business uses other legacy applications for which there's no support because the vendor no longer exists, a hardware upgrade offers a perfect opportunity to introduce high-performance applications that can provide new business advantages while meeting current standards and integrating more smoothly with other tools..

Help from a trusted partner

Your company may opt to upgrade its software and hardware at the same time. Alternatively, you may be able to move old software to a new server until you have a maintenance window in which to complete the upgrade. Either way, your company needs to assess its current IT environment and draw up a road map for a safe, affordable, effective migration. The process is much easier with the assistance of a technology partner with expertise in both servers and the applications they support.

Dell is one such partner. According to Microsoft, Dell sells about 10 percent of all SQL Server software—more than any other distributor or OEM. That makes Dell the world's largest single point of contact for the solution, from hardware and software to services and ongoing support. As Microsoft's largest software partner in general, as well as a significant end user of Microsoft applications, Dell works closely with Microsoft from the beta stage on to share customer feedback and suggest features and enhancements.

Conclusion

The global economic forecast suggests that a recovery is on the way—but slowly. Businesses of all sizes will remain under pressure for some time to maximize their existing resources. Given that reality, it also makes sense to make wise IT investments that will increase efficiency and productivity both now and in the future.

Investing in new hardware to support necessary software upgrades is that type of wise investment. Next-generation servers have the processing power to make the most of the latest productivity applications. They also address power and space constraints by supporting virtualization software that consolidates applications and increases system usage levels. Upgrading today may sacrifice short-term frugality, but it's almost certainly a worthwhile tradeoff for long-term strategic and operational advantage.

You have a complete record at hand.

DATA SHARING

Challenge: Your company may have 50 hot sales leads, but if they're scattered around the office in the contact lists of four different employees, you may not even know you've got them. Data that you don't know about has absolutely no value to you. Wouldn't you prefer just one constantly updated place to track your customers, your inventories or any other rapidly changing information that's vital to your operation?

Solution: Servers come with operating systems specially designed to help groups work together productively in all sorts of ways. They provide a single place where an entire staff can share constant updates to databases and task lists. Microsoft® Windows® Small Business Server 2008 facilitates application and file sharing so that anyone who needs to access data in spreadsheets, databases, accounting ledgers, customer relationship management tools and other applications can do so. These kinds of



How a Virtualized Server Saved One Small Business

Even tech companies need an IT overhaul from time to time. Case in point: Last year, a Canadian software developer (who preferred to remain nameless for the purposes of this story) called my team at Microtek to give its server room a badly needed upgrade. The six-person company, which develops a suite of subscription-based applications allowing small businesses from across a variety of vertical markets locate and and acquire specialty parts, was in desperate need of a new server to host the home-built CRM system it uses to manage roughly 100 client accounts.

The company's internal IT infrastructure are no longer with the organization, and virtually no documentation has been left behind to guide the current staff. Their server was running on unreliable aging hardware that was rapidly running out of disk space. To keep the business running smoothly, the developer needed an immediate upgrade to this CRM server, add more disk space, establish a backup option for Internet service, upgrade the network, assist with remote access for the owner who travels, and have updated documentation on their network. And of course, all of this had to be done on a cash-flow sensitive budget.

Before calling us, the company's existing data center consisted of a generic whitebox Windows Server 2000 server powered by a 2GHz single-core Xeon processor with 1GB of RAM and a 3x36GB RAID 5 stripe. This antiquated machine connected to the network via a 16-port Linksys 10/100 Ethernet switch, and to the Internet by way of a D-Link broadband router connected to a local telecom's cable Internet service. It was an ad-hoc solution that was destined for failure and, fortunately, bound for the scrap heap.

applications that growing businesses rely on to thrive can become even more powerful when they're embraced and optimized by an entire team. The server provides the processing power you need to help run these business applications, while it simultaneously handles your communications needs and backs up your data.

COORDINATION

Challenge — Two's company. Three's a crowd. Four's a mess. And five? It's like herding cats. Getting a team to coordinate its tasks and schedules can be nearly impossible when no one can see anyone else's calendar or get a feel of anyone else's workload. How annoying to set up a meeting only to find out that the key person is on vacation. When your office communication techniques include Post-It notes and bulletin boards, you know that your important messages can be missed and that work can slow down.

Solution — Microsoft Windows Small Business Server 2008 gives your business many of the same tools that much larger businesses with huge IT infrastructures

The Solution

In place of the outdated 16-port 100 Mbps switch, we installed a D-Link DES-1024D 24-port gigabit switch. We left the cable Internet service in place, but added a wireless ISP as a secondary fail-over service to keep the company connected in the event that the cable connection goes down. Meanwhile, we installed a Fortinet Fortigate 60 firewall appliance to support VPN remote access for the company's owner, who frequently travels to visit clients.

We replaced the underpowered server box with a Dell PowerEdge 2900 III equipped with a quad-core Xeon 8 CPU, 8GB or RAM, and a 4x400GB SAS 15000 rpm RAID 5 array. This beefy server packs enough punch to run the company's old server several times over, so we did exactly that: Using VMware ESXi vSphere 4.0, virtualized the old Windows Server 2000 system on the new hardware, making the transition seamless for the six-person staff, and getting the whole solution back up and running with only two hours of downtime.

To protect the company's data from potential loss, we deployed a layered backup solution. For file-level backup of the server, we implemented full server imaging with support for bare-metal restores and more granular file level restores. We searched long and hard for a very economical solution and found a program called Image for Windows, which is amazing (and only \$40!). This achieved a strong peace of mind for their backups.

Because it is a VM environment, we also implemented ghettoVCB which runs in the VMware service console, is supported by ESXi, and does a snapshot and then clone for a full hot backup of the server. This is a free script we found on the VMware forum community.

We also implemented another file-level backup using MirrorFolder to synchronize a full copy of their critical files to external USB hard drives every two hours. By having the exact same make and model of external USB drive connected to the same USB port, you always get the same drive letter. It works for rotational backups and basic archiving.

The Payoff

Unsurprisingly, the six workers at the company noticed a huge performance increase in their network as soon as we brought the system back online. Accessing files and their CRM on the server was much faster than before. It responded right away. The programmers were now able to access their files directly on the server with no performance issues, and keeping the files on the server helps ensure that stray copies don't escape the backup schedule. They also have more storage space to work with now.

The owner can access important customer data securely as he travels to visit clients, and he is assured that his business has a disaster recovery plan. The revamped network and equipment are now robust enough to ensure trouble-free operation for the next three to five years. They have even had to use their backup Internet a few times now and this helps keep productivity up and doesn't bring their business to a halt.

may take for granted. Microsoft Office SharePoint® Server lets you share group calendars, contacts and task lists. Your employees can easily find the best times for meetings and schedule them in seconds. You can also create your own internal company Web site (intranet), which simplifies sharing the latest company news and updates with your team around the clock.

ANYTIME ACCESS TO EMAIL AND FILES

Challenge — The availability of email, cell phones and wireless Internet access has turned most businesses into all-day (and all-night) operations. How nimble is yours? Some businesses find that any attempt at team collaboration ends at 5 p.m., when everyone hits the "off" switch and heads home. Team members who are on vacation or on the road will have to catch up when they get back to the office. As for live online collaboration with clients and customers outside the office, forget about it.

Solution — Successful collaboration means being in touch when you

Exchange 2010: Five Reasons Why I'm Upgrading

EXCHANGE 2010 SHIPS NEXT WEEK, FACING MORE HEAT THAN EVER FROM GOOGLE APPS AND OTHER HOSTED OFFERINGS. HERE'S A LOOK AT ONE CIO'S DECISION-MAKING PROCESS AND THE FIVE KEY REASONS WHY HE CHOSE ON-PREMISES EXCHANGE 2010.

Microsoft faced increasing competitive pressure from its Web-based rival, Google Apps, when it prepared to make Exchange 2010 generally available late last year. Microsoft promises an online version of Exchange 2010 to follow in 2010.

While there are examples of businesses moving to online productivity suites, plenty of businesses say that they are still uncomfortable with having important company e-mails living on someone else's servers and prefer to keep e-mail system management on premises.

"We don't have any plans to use the hosted model of Exchange. I think only a small company can do something like that," says John Bowden, CIO and IT Director for Lifetime Products, a Utah-based manufacturer of outdoor sheds, folding tables and chairs, and playground and basketball equipment.

Lifetime Products CIO John Bowden discusses his company's move to Exchange 2010.

With 1,400 employees spread out in locations in the United States, Mexico and China, Lifetime is upgrading to the on-premises version of Exchange 2010 from Exchange 2007 to improve communication, Bowden says.

The need to be in contact with supply chain partners in different parts of the world keeps Lifetime's IT department very focused on unified communications. Lifetime has been on Exchange for many years. In 2007, the company deployed Exchange 2007 with Unified Messaging, which established one messaging platform for all its employees by standardizing Outlook on desktop, the Web and on mobile devices.

But Lifetime CIO Bowden says that he saw enough new unified messaging features and potential cost savings in Exchange 2010 to push for an upgrade. Lifetime initially upgraded 150 mailboxes to Exchange Server 2010 and then sought to complete the entire migration to Exchange Server 2010.

In a recent interview, Bowden discussed new features in Exchange 2010 and how they will improve communication at Lifetime, reduce the amount of desk phones and cut down on IT and storage costs.

need so that your projects keep moving forward. Just because you're not in the office doesn't mean that you should not be able to work with your colleagues. Server-based email supported by Microsoft Exchange Server offers huge email inboxes, integrates with Microsoft Outlook® and is accessible remotely on a variety of devices, including notebooks, PDAs and smartphones. Everyone's email address carries your company's domain name for a more coordinated and professional appearance. There's no need to rely on less secure and underpowered Web-based email systems anymore. SharePoint also helps you implement remote access to company files. This means that you can work from home or on the road, do paperless faxing (with fewer phone lines), and have secure connections over the Internet and automated data backup—all within the familiar Microsoft Office interface.

COLLABORATION WITH CLIENTS AND CUSTOMERS

Challenge: In today's connected world, your clients and customers

ONE VOICEMAIL SERVICE, WITH TRANSCRIPTIONS

With Exchange 2010, a feature called Voicemail Preview allows workers to receive text-transcriptions of their voicemail messages, saving the time it takes to listen to messages.

"Often you can't listen to voicemail because you're around other people, and seeing the text and being able to forward it or copy and paste it is becoming a big deal to users," says Bowden.

Another voicemail feature in Exchange 2010 that Lifetime will use is the ability to centrally manage employees' voicemail and e-mail using the Active Directory service in Windows Server 2008 R2, rather than having a separate voicemail system with a separate directory.

"The cost savings from avoiding a third-party voicemail maintenance contract is around \$43,000 a year," Bowden says.

DOWNTIME PROTECTION

More significant for IT, says Bowden, is a feature in Exchange 2010 called DAG (database availability groups), a data replication technology that protects an Exchange server from experiencing downtime.

DAG does both on-site and off-site data replication by storing copies of Lifetime's data on different servers with automatic failover.

"All our employees around the world are connected to the corporate data center in Utah on the same Exchange server," Bowden says. "So we can't have any downtime, even when we do maintenance. What DAG provides is offline databases sitting there waiting to fall back on if you need them."

PREVENTING INFORMATION LEAKS IN E-MAIL

Lifetime plans to use the beefed up IRM (information rights management) features in Exchange 2010 and Windows Server 2008 R2 to prevent the sending of sensitive e-mail messages and attachments.

Exchange 2010 automatically identifies corporate keywords predefined by IT that a company would not like to go outside the company.

"Right now we have content filtering of words and phrases coming into the company's e-mail system, but with Exchange 2010 we can protect what's going out. It will help with compliance," Bowden says.

SHARING WITH SUPPLY CHAIN PARTNERS

Lifetime also plans to use Exchange 2010 to collaborate with partners and customers through a feature called Federation for Exchange Server 2010. This feature allows Lifetime employees to share calendars and distribution lists with partners and customers, as if they belonged to the same organization.

Bowden expects Lifetime to use Federation the most during research and de-

expect you to be available, informed and responsive. Any inability to communicate and share information with them, at their speed and on their schedule, can make you look unprofessional and may diminish future business.

Solution: SharePoint lets you follow easy-to-use wizards to set up your own Web site, so you can then use to reach out to your client base with surveys, discussion groups and more. It's an easy way to build, host and control your vital Web presence at minimal cost. You can even share documents, calendars and presentations with your clients in real time to facilitate virtual meetings. And if these tools can help you cut down on the time and money you spend on travel, all the better. With server-based networking and the right Internet connection, your clients can become your collaborative partners.

Now you know how to make your work life easier by getting your team in sync and reaching out more effectively to your business partners. Even if you only use a few of the collaboration features a server-based network

velopment, when there are frequent meetings with supply chain partners about deadlines and schedules.

"We work closely with our supply chain vendors. Calendars are always something our R&D people are dealing with, so Federation in Exchange Server 2010 should add value there."

SAVING WITH CHEAPER STORAGE

Exchange 2010 has 70 percent less disk I/O (input/output) requirements than Exchange 2007, according to Microsoft. Thus, Lifetime is able to use the slower, cheaper disks of DAS (direct-attached storage).

Bowden says using the DAS approach will be 80 percent cheaper than the SAN (storage area network) that Lifetime has been using.

offers, you're bound to create a more efficient operation that helps improve your workflow in ways you can measure in time and money.

No business is too small for a server-based network. You'll gain control over your information, and your employees will discover new ways to work together better and faster, even as you reach out to new clients and customers. What better way to position yourself for growth?