SW SOUTHWESTERN® | Customer Case Study

VMWARE® AND INTEL® TECHNOLOGY PROVIDE ROCK-SOLID PLATFORM FOR SAP DEPLOYMENT

A Case Study on Southwestern/Great American's Virtual Infrastructure

HIGHLIGHTS

CHALLENGE

SAP® ERP is critical to business operations

SOLUTION

VMware® Infrastructure and Intel® Xeon® processor based servers create a scalable and reliable platform for SAP ERP

VMWARE AND INTEL AT WORK

VMware vSphere 4, featuring:

- VMware ESX™ 4
- VMware vCenter 4.0 - VMware vSphere™
- VMware® VMotion™
- VMware® High Availability (HA)
- VMware Distributed Resource Scheduler (DRS)

DEPLOYMENT ENVIRONMENT

- ESX 4.0 running on three IBM HS21 blade servers with Intel Xeon processors, attached to an IBM DS 4700 SAN

- Mission-critical applications running in production in virtual machines: SAP ERP 6.0, SQL Server 2005

- Guest operating systems: Windows Server 2003 R2 x64 edition

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Ed Solima
Director of IT

Southwestern/Great American, Inc.

Southwestern/Great American has a long history: 155 years, to be precise. In 1855, the company's focus was religious tracts, but today it has a dozen distinct lines of business, including direct selling, customized publishing, school fund-raising, sales training, and executive search and recruitment. A big reason Southwestern/Great American has lasted as long as it has is because its business model has changed to keep up with the times—as has its IT infrastructure.

The most critical application in that infrastructure today is SAP ERP. "It's the backbone of our business," says Director of IT Ed Solima. "It handles all our financials, our order processing, our inventory management, our warehouse management. It's the most important piece of software we run here—no question about it."

Southwestern/Great American has been successfully running SAP ERP on VMware solutions for several years. It all started when the company decided to transition its IT systems from a dual environment in which its SAP ERP ran off of a legacy IBM AS/400, while most of the company's other applications were running on Windows-based hardware.

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"We have some fairly large VMs–our SAP central instance and SQL Server both are assigned 16GB of memory–and they just run really well. It's also a much simpler environment not having a separate piece of hardware for each part of our SAP ERP system. The flexibility to take a couple of blades and fire up a bunch of VMs on them is really an advantage, since it lets us respond quickly to shifts in user demand and other variables. We've found that ESX on Xeon is a really solid foundation for our SAP ERP system. Because of our success, we now have a VMware-first policy."

Ed Solima, *Director of IT*

Southwestern/Great American chose to swap this dual environment for a leaner infrastructure based on VMware ESX and IBM blade servers with Intel Xeon processors that could run both SAP ERP and its Windows applications. "By virtualizing, we saved ourselves a lot of money by not having to replace outdated legacy servers, and we could consolidate our storage," Solima says. "Our investment was roughly $560K for a three-year lease and maintenance contracts, and the estimated savings over three years was $218K."

Before Southwestern/Great American decided to virtualize its SAP ERP infrastructure with VMware software, the company evaluated Microsoft's Virtual Server. "We run a lot of Microsoft applications here, so it made sense to give Virtual Server a try," Solima says. "To be honest, we were quite disappointed. After struggling with it for a while, we changed gears and went with VMware.

The VMware architecture was more robust in our evaluation, and VMware infrastructure proved to be significantly better in performance and ease of use."

Solima says he didn't have much trouble convincing Southwestern/Great American's management to not only virtualize, but to begin the process with its most important application: SAP ERP. "Besides emphasizing the money we'd save," he recalls, "our presentation to our CEO pointed out that other companies have virtualized key applications with VMware, and that VMware technology is a really solid, well-established approach to building an economical and reliable infrastructure.

"And that's exactly what our experience has been. With VMware on the latest Intel® Xeon® powered platforms, we had enough processing power and throughput to maintain a great user experience for our SAP ERP users—they don't even know it is virtual."

Benefits of Running SAP ERP on ESX

Increased flexibility is perhaps the biggest benefit Southwestern/Great American has seen from running SAP ERP on ESX. "We have some fairly large VMs–our SAP central instance and SQL Server both are assigned 16GB of memory–and they just run really well. It's also a much simpler environment not having a separate piece of hardware for each part of our SAP ERP system," Solima says. "The flexibility to take a couple of blades and fire up a bunch of VMs on them is really an advantage, since it lets us respond quickly to shifts in user demand and other variables. We've found that ESX on Xeon is a really solid foundation for our SAP ERP system. Because of our success, we now have a VMware-first policy."

Fast and easy server provisioning is one of the VMware benefits that's most popular in Southwestern/Great American's data center. "Now we can create temporary VMs for software testing," Solima says. "That was something we could never do before, because we didn't have hardware just lying around. And it's fast: we can get a VM up and running within an hour. With physical equipment, that would have taken much longer. We would have had to make a requisition, get that signed off, place an order, wait two weeks for the equipment to come in, and then maybe spend half a day to a day to install the software."

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The company has also seen significant benefits in terms of uptime by using features like VMware High Availability, VMware Distributed Resource Scheduler, and VMware vMotion across all of its Intel-based servers. "You get all the uptime you need, without investing a ton of money in redundant hardware," says Dave Brogan, database analyst at Southwestern/Great American. "In the old environment, we would typically take the system down, do maintenance, and then bring the system back up. Now, whenever we need to do either hardware or firmware maintenance, we just VMotion the virtual machines off one physical server onto one of the other two. There's no downtime at all. We stay up pretty much seven days a week."

The move to ESX has also saved space in the data center—and lots of energy. "We had some pretty big gear in here on the AS/400 side," Solima says. "Now that has been reduced to basically three blades, so power consumption has been significantly reduced. And that will continue to get better."

"We have gradually been moving the rest of our Windows environment into the same virtualized blade center that's running SAP ERP," he adds. "We've been doing a server a week, verifying that it's good to go, then moving on to the next one. Now that we've got this SAP project under our belt, our goal is to be as close to 100 percent virtualized as we can, and that should happen in the near future. And since virtualization gives us the flexibility to seamlessly integrate new servers into our existing infrastructure when we upgrade or refresh our hardware, it's the best of all worlds."

RESULTS

- Savings on hardware and overhead add up to about $218K over three years.

- The more flexible SAP ERP environment can keep up with both user demand and IT changes.

- Server-provisioning time shaved from weeks to under an hour.

- VMotion allows for better maintenance—with no downtime.

- Considerable savings on both space and energy consumption in the data center.

- A VMware-first policy for all new servers, with plans to have its applications infrastructure 100 percent virtualized.

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