

BANKING ON THE COMMUNITY

Northeast Bank reduces power and cooling costs by 25-30% with Dell PowerEdge servers, Dell EqualLogic storage and VMware



SOLUTIONS

- BACKUP/RECOVERY/ARCHIVING
- CONSOLIDATION
- GREEN COMPUTING
- POWER & COOLING
- VIRTUALIZATION



CUSTOMER PROFILE

COUNTRY: United States

INDUSTRY: Banking and Finance

FOUNDED: 1872

NUMBER OF EMPLOYEES: 250

WEB ADDRESS:

www.northeastbank.com

CHALLENGE

Northeast Bank needed to refresh its server and storage technology while meeting stringent company requirements for realizing savings, efficiency and community values with IT implementations.

SOLUTION

The company consolidated and virtualized 50 servers onto 6 Dell™ PowerEdge™ servers using VMware® Infrastructure 3 and consolidated and virtualized DAS storage onto Dell EqualLogic™ SANs.

BENEFITS

RUN IT BETTER

- Able to deploy virtual servers in minutes
- Less time spent maintaining servers, restoring servers and applications, and performing backups
- Can provision new storage on the fly
- Thin provisioning defers purchase of additional capacity
- Testing on demand delivers better IT services

GROW IT SMARTER

- 88% reduction in server footprint
- Ability to purchase server and storage virtualization solution for 1/3 more than the cost of replacing 22 servers, the number that was originally proposed
- Cost of new disaster recovery solution paid by server savings
- 25-30% reduction in utility bill for power and cooling
- Green solution provides value to the community
 - \$30,000 to \$60,000 cost of new cooling system avoided

With \$600 million in assets and 25 locations across western Maine, Northeast Bank is hardly a small institution. Yet it distinguishes itself from its larger competitors on the values it maintains as a community bank. “Needs-based” selling and building customer relationships are the foundation of Northeast Bank’s mission statement. You can observe this philosophy in action if you request a product or service the bank doesn’t provide: it refers you to a competitor.

“WE’VE LOOKED AT HP AND IBM SOLUTIONS, AND YEAR OVER YEAR, WE CONTINUE TO STAY WITH DELL. DELL’S UPTIME IS GREAT.”

Greg Thompson, vice president, director of information technology, Northeast Bank

Fortunately for the bank’s profitable bottom line, there aren’t a lot of services that it doesn’t offer. “We provide banking, investment and insurance products just like the big guys do, including online banking,” says Greg Thompson, vice president, director of information technology, Northeast Bank. “All the regulations that apply to big banks apply to us, and we perform the same due diligence and the same compliance. The major difference is that we don’t have deep pockets. A dollar that we spend has to serve the greater good of the company and the communities we serve.”

Reducing complexity and enabling employees to do their jobs more efficiently are two of the most important goals of the eight-person IT staff. “We don’t just keep processes running,” says Thompson. “We streamline processes.”

REDUCING ENVIRONMENTAL IMPACT

When servers in the central data center needed to be refreshed, the IT team looked beyond the immediate problem of aging technology and focused on processes that needed to be fixed. “Northeast Bank’s data storage consisted of mostly direct-attached storage and a handful of network-attached storage devices,” says Drew

McKinley, network engineer, Northeast Bank. “Maintenance of the end-of-life servers and the NAS storage was an ongoing issue.”

Another problem was the growing utility bill from the cooling and power needs of the expanding server farm. “We were pushing the limit of our cooling product,” says Thompson. “Adding to it would have cost \$30,000 to \$60,000. Northeast Bank is committed to green environmental practices, whether it’s through recycling, car-pooling or using low-energy technology. A server and storage virtualization solution would provide us with the most value in terms of process minimization and efficiency, and reducing our energy impact.”

To consolidate its servers on a virtual infrastructure, the bank chose Dell PowerEdge 2950 servers running VMware Infrastructure 3 software, also purchased through Dell, a technology partner for more than 10 years. “We always shop around to see what options there are,” says Thompson. “We’ve looked at HP and IBM solutions, and year after year, we continue to stay with Dell. Dell’s uptime is great.” Although the bank’s original proposal was to virtualize 22 servers, it was able to go beyond the scope of its proposal and virtualize 50.

HOW IT WORKS

HARDWARE

- Dell™ PowerEdge™ 2950 servers with Intel® Xeon® processors
- Dell EqualLogic™ PS5000XV and PS5000E iSCSI SAN arrays

SOFTWARE

- Citrix Presentation Server, Version 4.5
- Microsoft® Exchange Server 2003
- Microsoft SQL Server™ 2005
- Symantec Backup Exec™, Version 12.5
- VMware® Infrastructure 3

“THE BENEFITS OF DELL EQUALLOGIC TRULY OUTWEIGHED ALL THE FEATURES OF THE OTHER PRODUCTS WE LOOKED AT. IT’S JUST A PHENOMENAL PRODUCT, AND WE USE EVERY SINGLE FEATURE THAT COMES WITH IT.”

Drew McKinley, network engineer, Northeast Bank

REDUCING SERVER FOOTPRINT BY 88%

Northeast Bank chose VMware virtualization software because of the convenience of the single vendor solution that Dell offers, which enables customers to purchase both servers and software as a virtualization platform. “We don’t have to piece the solution together,” says McKinley. “And Dell servers and VMware work together as if they were designed that way.”

Originally, the IT team did not foresee virtualizing its Citrix servers. But on paper, virtualization worked for all their applications and, with cost advantages for the whole environment, it was worth testing. As a result, Northeast Bank virtualized its entire server farm. In total, the bank was able to consolidate approximately 50 servers, onto 6 physical hosts, a more than 88 percent reduction in server footprint. In testing, the bank has run as many as 15 to 20 virtual machines concurrently on one physical server.

SAVING 25-30% OF UTILITY COSTS

The complete virtualization project cost 1/3 more than what it would have cost to refresh 22 of the bank’s physical servers—the number that had to be refreshed—and brought a host of manageability benefits. Northeast Bank saved days and weeks of administrative time that had been spent maintaining the physical machines and provisioning new servers.

In addition, the company saved 25-30

percent of its utility costs for power and cooling and avoided the cost of having to buy another cooling unit for the data center. “We’ve reduced our carbon footprint, and that’s very important for Northeast Bank,” says Thompson. “Doing more with less makes us good citizens as well as reliable financial guardians.”

“CRAZY” VALUE

According to Thompson, “we got a crazy amount of value from these products for the things that we can now do that we couldn’t do before.”

An important part of that value proposition is the virtualized storage that the bank acquired with Dell EqualLogic PS5000XV and PS5000E iSCSI SAN arrays.

The bank evaluated storage solutions from HP, LeftHand Networks, EMC and NetApp, as well as Dell. “The benefits of Dell EqualLogic truly outweighed all the features of the other products we looked at,” says McKinley. “It’s just a phenomenal product, and we use every single feature that comes with it, including snapshotting, auto-replication, alert notification and thin provisioning. The best part is that all of these features are included at no extra cost.”

SAVING ON HARDWARE COSTS

Thin provisioning, for instance, enables the IT team to stretch its 36 terabytes of raw storage by provisioning

servers with more storage capacity than is actually available. This safely forestalls the purchase of more disk while keeping applications and users blissfully unaware of the actual limitations. “We use thin provisioning frequently since it helps us avoid hardware purchases,” says McKinley. “It was one of the reasons we chose Dell EqualLogic. We can add storage when we actually need it, instead of overbuying to plan for maximum capacity.”

The IT team was also impressed with how easy it is to scale the EqualLogic SAN. “It’s easy to snap on another chassis to an EqualLogic SAN,” says Thompson. “We like the fact that controllers come with the chassis. The product is not just a hard drive enclosure. We have the ability to not just increase storage, but also increase performance as our needs grow. And maintenance and management of the Dell EqualLogic SANs is simple. We don’t need to bring in an entire engineering team to re-engineer our environment every time we grow.”

FREE DISASTER RECOVERY

Moving to a virtual environment for servers and storage has enabled Northeast Bank to enjoy the protection and security of operating its own in-house disaster recovery (DR) environment—something which IT had considered to be out of reach for lack of financing, staffing and hardware. Now the bank replicates the data from

its EqualLogic SAN at the primary site to an EqualLogic SAN at the DR site. “We can bring up the volumes at the DR site, mount the servers and have them up and running within minutes,” says McKinley. “We didn’t have to introduce a costly or complicated solution. The money we saved by virtualizing our servers paid for the DR solution.”

The DR solution makes it possible to recover applications and servers from the most recent replicated copy or to any point-in-time replica stored on the SAN. Recovery was previously a task which would have taken hours or days using tape alone.

For disk-to-disk backups, Northeast Bank uses a hybrid design that features Symantec Backup Exec, other third-party solutions and the EqualLogic snapshots. “The speed of restoration and ease of file access save hours just in getting the data back to our site to complete the physical restore of needed data,” says Thompson. “We can restore data within an hour where before it would have taken a day or more just to get access to the tape.”

EASIER TESTING DELIVERS BETTER PRODUCTS

Moving to a virtualized environment has enabled the IT team to focus on projects that would have been postponed or delayed for hardware allocation and configuration reasons. The team can now provision new virtual servers in minutes to fulfill any need for testing and development. “We currently have a handful of templates that we use depending on the application or the type of server we

need,” says McKinley. “We can deploy a machine that’s already secure and configured for our purpose within minutes, compared to days or hours as it was before.”

In addition, with the EqualLogic iSCSI arrays, the team can provision storage on the fly to any server that needs it for new applications. “We are able to test software and updates before putting them into production, and that delivers a better product to the consumer,” says Thompson.

A WELCOME CHALLENGE

The bank has a support contract from Dell that it has used rarely, except for receiving new included EqualLogic software features. “But on the few occasions we have needed them, Dell support has been prompt and accurate,” says Thompson.

In working with Dell PowerEdge servers, Dell EqualLogic storage and VMware, Northeast Bank has changed its IT infrastructure and has transformed the IT team’s work processes. “It’s a challenge for us because we have to rethink how we do things now,” says Thompson. “We have a tool that enables us to be more efficient. It’s a nice challenge to have.”

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