

Thacher Proffitt & Wood LLP

Law firm benefits from expanded VMware virtualized infrastructure with EMC Symmetrix DMX and storage management, remote backup and recovery solutions



For over 150 years, Thacher Proffitt & Wood LLP has been a leader in the commercial law sector. Today, it continues its mission to provide creative legal solutions to a global clientele, offering in-depth, cross-industry knowledge and expertise in nearly 20 practice specialties.

An early advocate of server virtualization, Thacher Proffitt began using VMware[®] technology several years ago to provide a consolidated, cost-efficient, virtualized environment for its less critical applications. These early successes led to the recent build out of the firm's virtualized server infrastructure, which now includes all tier-one and tier-two applications—including business-critical Microsoft Exchange and SQL environments.

An integral part of the newly expanded virtualized infrastructure is state-of-the-art EMC[®] Symmetrix[®] DMX networked storage, supported by powerful EMC storage management software, and strengthened by unsurpassed backup and disaster recovery technology.

"We wanted a proven, soup-to-nuts, under-maintenance solution with a tier-one storage array that was very fast, and of course, resilient because Exchange and SQL were going to ride on it," says Mario Danza, Director of Information Systems. "We also wanted a solution that would provide us with a much better replication model than the host replication we had in place. EMC delivered on all counts."

Virtualized servers and centralized storage match up for ease and effectiveness

A successful proof-of concept for VMware and Citrix, followed by the conversion of domains, domain controllers, and other applications from physical to virtual machines, set the stage for the recent and major consolidation of first tier-one and later, tier-two applications within the firm's VMware environment.

The storage to match this cutting-edge and business-critical virtualized environment is an equally innovative 25-terabyte EMC Symmetrix DMX[™] information infrastructure. Offering industry-leading performance, availability, flexibility, and scalability, it delivers the highest service levels possible for Thacher Proffitt's key applications, which include all of its financial software, including a payroll system, a document managing system, several Microsoft SQL Server databases, and a massive Exchange e-mail environment.

Simplified monitoring, management, and optimization of this consolidated and virtualized storage and server infrastructure facilitated in several ways. Within the VMware environment, VirtualCenter serves as the control point, providing a full view of the infrastructure. It also preserves historical data which can be used for troubleshooting. VMotion[™] enables the IT staff to quickly and easily move virtual machines from one physical server to another, and assists them in engaging in such activities as hardware repair, upgrades, or even moving data around to plan storage allocation—all without impacting end users. Valued for its ability to distribute the workload automatically, VMware DRS facilitates proper utilization across the firm's server farm. If one virtual machine begins to take up

too much of the CPU resources, it automatically moves other virtual machines to an underutilized VMware ESX Server™.

“VMware technology has given us a tremendous administrative advantage,” says Danza. “Normally we would need two or three engineers spending a lot of their time analyzing server workload and acting on hardware failures. Now it only takes maybe half of one person’s time to do the same thing, which means our engineers can focus more of their time making other improvements throughout the network.”

On the storage side, EMC ControlCenter® management software gives the IT team a graphical view of what is occurring within the EMC Symmetrix DMX environment.

“ControlCenter provides a cleaner view into the system than the command-line interface and allows some of our administrators who do not have CLI expertise to carry out basic functionality,” says Danza. “We can see the architecture, how different disks are connecting to different I/O cards, and because we have a graphical picture of the entire system, we can troubleshoot and plan more easily.”

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Of added benefit is that the new VMware and EMC infrastructure fits into a considerably smaller space than the old IT environment. This is a highly beneficial feature to the firm given that its primary data center is limited in space and located in downtown Manhattan.

“A square foot is extremely expensive here,” says Danza. “Now that we have larger servers holding many virtual machines and centralized storage, we definitely have a smaller footprint. It’s also easier to cool so we’re saving on power as well. This solution has definitely helped us be ‘green.’”

Local and remote backup and recovery solutions fully protect information assets

Acquiring the capabilities to fully protect virtualized tier-one applications and their data, even in the event of system failure or disaster, was a key requirement for Thacher Proffitt.

Deployed with the help of the EMC Global Services team, EMC TimeFinder® with Replication Manager now automatically clones VMware ESX Server-specific volumes daily to provide fast, local recovery capabilities at the primary data center. For added protection, it is also used to create clones of replicated data at the firm’s recovery site 20 miles away.

“Now that we have a local disk-based copy of all of our data, we can quickly restore without having to go to tape,” explains Danza. “In the past, we would have had to call our tape storage provider to deliver the tapes, and then it could take us from an entire evening to days to restore terabytes of data. Now we can recover in 15 minutes per server.”

Configured to integrate with Thacher Proffitt’s virtualized Microsoft Exchange and SQL applications, EMC Replication Manager software automates the creation of TimeFinder business continuance volumes (BCVs) of these environments every 12 hours. Built, tested, and certified by EMC engineers prior to deployment, this solution also streamlines database testing by facilitating an automated process that creates a backup of a database in a consistent state, mounts it to a host server, tests to see if the database is in good condition, and then e-mails the IT staff.

“We always know if we have a consistent database on a business continuance volume, which is extremely helpful,” says Danza.

Advanced disaster recovery capabilities are facilitated through EMC SRDF®/Asynchronous software. This software is used to mirror virtualized applications and their data between two EMC Symmetrix systems, each residing within the firm's primary and remote data centers, and accompanied by virtualized server hardware.

"With SRDF, we're able to quickly bring up a virtual machine from New York at our backup site without an issue," says Danza. "SRDF disaster recovery capabilities, combined with TimeFinder clones created at both primary and remote data centers, mean we now have full protection against a triple disaster scenario."

Providing added peace of mind is EMC's call-home functionality which remotely monitors the EMC Symmetrix DMX machines to quickly address problems or potential issues that may arise.

"The call-home feature has been fantastic," says Danza. "Whenever there is a problem, EMC lets us know immediately. In fact, we've never had an incident where EMC hasn't been on top of the problem first."

Significant improvements in efficiency and business continuity for Microsoft Exchange environment

Essential for conducting business, Microsoft Exchange is arguably the most vital of Thacher Proffitt's applications. It supports the daily transfer of a high volume of e-mails, their attachments, and updates between the firm and clients—and very large mailboxes are common.

Previously, this I/O and storage-intensive environment resided on one large Exchange server supported by a mid range EMC CLARiiON® CX series storage system. The problem with this setup was that if the server failed, the entire firm was affected. Today, better resiliency and even faster response times have been realized by spreading the Exchange environment and its mailboxes evenly over six separate virtual machines running on VMware, and backed by lightning-fast EMC Symmetrix DMX storage.

"Now, for example, a branch office can be split over two or three Exchange servers so that if one server goes down the entire office is not out of business," says Danza.

Server recovery is automatically achieved through VMware's High Availability (HA) feature. Used in both of the firm's primary and remote data centers, VMware HA automatically transfers virtual machines to another hardware server if that server fails.

On the storage side, Microsoft Exchange information residing on the EMC Symmetrix DMX array is supported by both local and remote backup and recovery solutions to help ensure non-stop operations.

A flexible, cost-efficient IT platform for continued business success

Today, the integration of VMware and EMC technology, coupled with rapid and reliable backup and disaster recovery capabilities for business-critical tier-one applications, are considered by Thacher Proffitt to be vital assets in helping the firm consistently meet and exceed the expectations of its clients.

In addition, cost-efficient and readily available virtualized server and centralized storage resources can now be set up within 15 minutes to provide a test environment for new applications and quickly get them up and running to support key business initiatives.

"We no longer need weeks of lead time to acquire a physical server, and then more time to rack it before we can accommodate a request. With VMware we already have that capacity built into our server farm. That, along with the high capacity and easy scalability of Symmetrix DMX, gives us plenty of flexibility to address the future needs of our business."



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