



Storage Virtualization and Data Lifecycle Management Help Firm Significantly Increase Backup Frequency, Save Space and Reduce Power Consumption

Overview

Location: Cincinnati, Ohio

Industry: Corporate legal representation of business clients and the delivery of sophisticated legal services in areas such as litigation and real estate

Customer Profile:

Founded in 1954, KMK represents clients of all sizes, from small start-up companies to *Fortune* 500® corporations. With approximately 115 attorneys, KMK offers broad and deep experience to meet the varied needs of clients from all over the country.

Business Situation:

DMS, CRM, e-mail, e-discovery and other system needs had brought about an exponential increase in the firm's data storage needs. At the same time, the firm was seeking quicker and more nimble disaster recovery capabilities.

Solution:

KMK uses Lexis® Data Lifecycle Management (a part of Lexis® Hosted Litigation) plus Lexis® Disaster Recovery and Lexis® Network Services.

Benefits:

- Increase file share backup frequency and data restoration flexibility
- Reduce Exchange backup time by 93 percent
- Achieve DMS space savings of 50 percent
- Reduce data center power consumption by 30 percent

Product Summary:

Data Lifecycle Management, available through LexisNexis® Managed Technology Solutions, works hand-in-hand with disaster recovery and network services to help firms achieve storage virtualization; improve efficiencies and performance; adopt more effective approaches to backup, retention and data recovery; and benefit from extra capacity available on demand.

Working from one professional office in Cincinnati, Ohio, approximately 115 attorneys and 150 staff members at Keating Muething & Klekamp PLL (KMK®) serve clients across the country. Why have firm leaders chosen to stay with just one office? The purpose is to pool talent and minimize overhead expense while achieving optimal efficiency, effectiveness and service.

In support of that approach, the IT team at KMK provides attorneys, secretaries and paralegals with training on applications and systems, help-desk services, litigation support and more. Said Rich Wills, chief information officer, "We're a very, very service-oriented group. We talk about not necessarily users, but internal clients. We try to be as engaged in the efficiency of the business of law as we can."

With efficiency and performance in mind, KMK has maintained a firmwide computer network since 1993. Over the last 11 years, KMK has progressed from using DOS-based desktop workspaces to a new desktop image with Microsoft® Windows® 7 as the operating system platform. Most recently, through a storage virtualization project, the firm has moved to a data center infrastructure that's almost completely virtual.

By consolidating storage and moving to a virtual infrastructure with data lifecycle management services, the firm has significantly reduced its power consumption while increasing file share backup frequency, dramatically speeding Microsoft® Exchange backup time and saving storage space for various types of data by 20 to 50 percent.

“LexisNexis was truly engaged in offering a solution that fit the firm’s model. ... They also brought in the right talent to help us understand what aspects were not really that feasible, as well as elements we were not thinking about that might be of great benefit. That was important in helping us put together a really solid solution that works the way we wanted it to work, but 10 times better.”

Rich Wills
Chief Information Officer
Keating Muething & Klekamp PLL

The Situation

Before the storage virtualization project, KMK had individual server boxes in the firm’s data center with directly attached storage. This traditional environment had grown over the years with the firm’s system needs for document management, customer relationship management (CRM), e-mail, e-discovery and more.

Nearly 50 percent of the firm’s data—about 2.5 terabytes—pertains to litigation. The next 10 to 20 percent is about 600 GB in documents—nearly 3.5 million of them in the document management system (DMS), plus e-mail, SQL databases, application-related data, etc. And that data is increasing rapidly.

Said Wills, “Like many, we found ourselves dealing with exponentially growing storage needs. ... We started to get into a situation where we could start counting down the days until we could no longer add drive space and scale the DMS server as we had before. There were other things we could do, but we knew it would take some serious data gymnastics to get it done.”

At the same time, the firm was evaluating its disaster recovery and business continuity capabilities. Six years earlier, partners at the firm had decided upon a maximum tolerable outage period for access to e-mail and electronic documents. By working with LexisNexis to provide disaster recovery/business continuity for the past five years, the IT team was delivering the desired recovery time.

As rapid data growth continued, however, restoring access within the maximum time period was becoming less likely—and that recovery speed was no longer fast enough to meet attorney and client requirements. Wills said, “We needed a better plan for a quicker and more nimble recovery moving forward.”

“I had developed a very high level of confidence in the skill set the LexisNexis team brought to the project. We had proof-positive that this was a first-class organization that we would be working with through what was probably the biggest change in the IT landscape of this law firm since we installed the networked computer system.”

Rich Wills
Chief Information Officer
Keating Muething & Klekamp PLL

Exploring the Options

Wills said he and Nick Fritsch, network administrator, had been investigating the “great move toward virtualization” and really wanted to go in that direction. They spoke with colleagues at other firms, attended presentations and conducted research as they weighed the options and visualized the type of environment they wanted to develop.

When it was time to choose a technology provider, they spoke with LexisNexis as well as another company that KMK had also worked with in the past.

- If KMK chose the other company, the firm would purchase storage equipment outright. The provider would charge a fee to implement the storage solution and, after that, the firm would direct any questions to contacts at the storage and data management company, NetApp®, or the business infrastructure virtualization company, VMware. Any later purchases of disk space, shelves, servers or consulting engagements would come at an extra cost.
- If KMK chose LexisNexis, the firm would use Lexis® Hosted Litigation, which offers storage, virtualization and related elements as a service. LexisNexis would help the firm implement the solution and respond to any questions that arose on an ongoing basis—including inquiries related to NetApp and VMware®. The firm would be able to add storage and pay for it on an as-needed basis.

During discussions with the two vendors, Fritsch said, “Speaking with LexisNexis was a much easier conversation. They were more on board with what we were looking for.”

Said Wills, “LexisNexis was truly engaged in offering a solution that fit the firm’s model with storage equipment in our rack dedicated exclusively for our use. They also brought in the right talent to help us understand what aspects were not really that feasible, as well as elements we were not thinking about that might be of great benefit. That was important in helping us put together a really solid solution that works the way we wanted it to work, but 10 times better.”

“At KMK we’re very hands on. We wanted to work with the technology we’re using. It makes our jobs more enjoyable and that’s how we’ve always worked here. That’s made NetApp very attractive. It was also good to know LexisNexis backed NetApp and was already using it.”

Nick Fritsch
Network Administrator
Keating Muething & Klekamp PLL

Selecting a Solution Provider

Wills had budgeted for capital purchase of equipment. When he projected firm needs over time and compared the two data storage options, the LexisNexis option came in somewhat lower. But Wills said the decision largely came down to confidence in the LexisNexis people and service levels.

KMK had considerable experience with LexisNexis. The firm was already using the LexisNexis® services for research, Martindale-Hubbell® tools and InterAction® client relationship management software for client development, and CaseMap® fact and issue management software along with related litigation tools.

LexisNexis also had been providing business continuity services for KMK for five years. During that time, Wills came to know Allan Huber, LexisNexis technology consultant, as well as Terry Williams, vice president, managed technology solutions, and a number of people who work in the data center and network operations. From time to time, Wills and Huber would talk about what-if scenarios, the LexisNexis® Managed Technology Solutions vision, the concept of data lifecycle management and more.

When it was time to make a decision about data storage and virtualization, said Wills, “I had developed a very high level of confidence in the skill set the LexisNexis team brought to the project. We had proof-positive that this was a first-class organization that we would be working with through what was probably the biggest change in the IT landscape of this law firm since we installed the networked computer system.”

He added, “For a firm our size, if you look just at what the cost is going to be, you’re being very shortsighted ... to be able to have the depth of experience that we’ve been able to leverage by utilizing the talents at LexisNexis is of real value.”

“No matter the software solution or hardware solution, what matters at times when you’ve already implemented things is the reaction you get when you’re having problems. That’s just a huge, huge strength of utilizing an organization like LexisNexis as opposed to some of the other hosting options.”

Rich Wills
Chief Information Officer
Keating Muething & Klekamp PLL

The Solution

LexisNexis® Managed Technology Solutions

KMK chose to use **Lexis® Data Lifecycle Management**—an offering that’s part of **Lexis® Hosted Litigation**—plus **Lexis® Disaster Recovery** and **Lexis® Network Services**.

With the virtualization made possible through these services, KMK has consolidated physical data storage from multiple network storage devices onto a few servers in the firm’s data center using NetApp storage systems—and electronically transmitted that infrastructure and data to a single rack of equipment dedicated to the firm in the LexisNexis data center.

The firm has access to:

- Business continuity planning
- Data lifecycle management design and implementation
- A disaster recovery co-location hosting facility in Miamisburg, Ohio
- Primary, backup and disaster recovery storage infrastructure
- Storage scalability and capacity on demand
- Provisioning of network services and routers
- Server hardware infrastructure
- Server and storage break-fix maintenance support
- Design validation and testing and WAN troubleshooting
- Storage monitoring, management, security, performance tuning and technical operations support

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Nick Fritsch
Network Administrator
Keating Muething & Klekamp PLL

As a result, KMK has been able to:

- Migrate 95 percent of the firm’s servers to a virtual environment using industry-leading VMware® ESX™ Version 4.0 virtualization software
- Apply best-practice backup and retention policy management through proven, reliable NetApp storage systems
- Use a tiered approach to appropriately store the right type of data on the right type of disk to gain performance and cost advantages
- Access storage on demand for primary, secondary, litigation support and backup/disaster recovery
- Increase backup frequency and restoration flexibility, achieve 50 percent DMS space savings, reduce Exchange backup time by 93 percent and reduce power consumption by 30 percent

Using NetApp and VMware Tools in Conjunction with LexisNexis Services

Fritsch and Wills saw several advantages in using LexisNexis Managed Technology Solutions to implement a NetApp storage area network (SAN) and integrated tools along with VMware ESX Version 4.0.

Fritsch noted, “At KMK we’re very hands on. We wanted to work with the technology we’re using. It makes our jobs more enjoyable and that’s how we’ve always worked here. That’s made NetApp very attractive. It was also good to know LexisNexis backed NetApp and was already using it.”

Another advantage of using NetApp, said Wills, was that “If you needed to add a NetApp capability that you hadn’t initially paid for, it was a matter of obtaining a license and then you were off and running.”

VMware provides KMK with its core virtualization product, ESX Version 4.0. This software enables the firm to move a virtual machine from one host to another without any interruption in service. In addition, if a host server were to fail, with ESX Version 4.0, all the virtual machines on that host would automatically restart on another host. Said Fritsch, “These capabilities were very attractive. VMware was our only option.”

“We would be able to have our document management system, our e-mail infrastructure, our litigation support document management system and a whole host of other things available to our attorneys and staff within hours, as opposed to recovery within days with our old design.”

Rich Wills
Chief Information Officer
Keating Muething & Klekamp PLL

Why access these storage and virtualization tools through Managed Technology Solutions?

Said Wills, “The network operations people and professionals in the data center in Miamisburg are terrific. When we have had hardware issues, we have received an outstanding response and outstanding service from them.” He added, “No matter the software solution or hardware solution, what matters at times when you’ve already implemented things is the reaction you get when you’re having problems. That’s just a huge, huge strength of utilizing an organization like LexisNexis as opposed to some of the other hosting options.”

Another significant advantage is the on-demand service from LexisNexis. Said Wills, “We know we have a certain amount of storage right there waiting for us to use and pay for. And once we start eating into that, more is going to be added so that we perpetually will have additional scalability available to us. That’s a huge advantage.”

Benefits

Before starting the project, KMK had a rack of 15 workstation-class machines in its data center running applications. Storage virtualization immediately turned all but three into virtual machines consuming less energy, using fewer cables and requiring less networking.

KMK then started virtualizing Tier 3 and Tier 2 servers, to be followed by Tier 1 servers. The firm has virtualized about 90 percent of its servers with more to come.

“We have the flexibility to create a robust test environment. It no longer involves trying to replicate a server. It’s as simple as copying a few files that create a virtual machine.”

—Nick Fritsch
Network Administrator
Keating Muething & Klekamp PLL

Measured Results

- By using NetApp Snapshot™ technology for the firm’s common Internet file system (CIFS), KMK has increased the frequency of file share backup **from once a day to five times a day**, providing better restoration flexibility.
- Using NetApp deduplication is helping the firm save substantial storage space, including:
 - A **50 percent** reduction in the average amount of DMS document repository space consumed by the firm per month
 - A **20 percent** space savings on the firm’s file shares—space that would normally be consumed on a Microsoft® Windows® server
 - A **50 percent** space savings on the firm’s virtual machine file system (VMFS) data stores

Using NetApp SnapManager® for Exchange software has decreased the firm’s Exchange backup time **from 1.5 – 2.5 hours to 10 minutes**. As a result, KMK can now perform more backups of its Exchange data during normal business hours.

KMK is seeing a **30 percent** savings in power consumption as a result of the server virtualization using VMware. Expected savings once the project is completed is close to 50 percent.

Before Lexis Data Lifecycle Management, the firm had an average data storage growth of 10 GB per month. After Data Lifecycle Management that **growth is cut in half** to 5 GB on average.

A More Flexible Way to Work

Disaster Recovery

The firm’s business continuity plan is now easier to execute. Said Fritsch, “We’re backing up the virtual machine, and all we have to do is restore it. There’s no having a tape library around, restoring tapes, and so on.”

In the event of a disaster, said Wills, “We would be able to have our document management system, our e-mail infrastructure, our litigation support document management system and a whole host

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Upgrade Testing on the Fly

With Managed Technology Solutions and the resulting storage virtualization, KMK now has the flexibility to create a virtual machine in a matter of minutes to test system upgrades on the fly. Said Fritsch, “We have the flexibility to create a robust test environment. It no longer involves trying to replicate a server. It’s as simple as copying a few files that create a virtual machine.”

If the firm performs an upgrade and it doesn’t work for any reason, the IT team can go back immediately to the pre-upgrade state in a way that’s not noticeable to the attorneys and other staff using the network. “It’s the flexibility that virtualization gives you that is the biggest benefit of all,” Fritsch said.

Fritsch said Lexis Data Lifecycle Management has taken the firm’s technology capabilities to a new level and enabled his team to use that technology in the best way possible.

The Value of a Customer-Focused Technology Provider

Wills recommends that midsize firms consider the value of a vendor’s organization when making a purchasing decision. “It’s important to understand the talent behind the logo and the people behind the organization and make those choices carefully,” he said. “There’s a lot of value for a firm like ours to be able to leverage the vast talent of an organization such as LexisNexis. It’s important to look behind the curtain and see what’s there.”

LexisNexis is strongly focused on listening to customer needs and delivering on the promises made. Said Wills, “They follow through on their promises and really deliver the product they sell you. They’re very engaged in making sure you’re a happy customer.”

About LexisNexis

LexisNexis® (www.lexisnexis.com) is a leading global provider of content-enabled workflow solutions designed specifically for professionals in the legal, risk management, corporate, government, law enforcement, accounting and academic markets. LexisNexis originally pioneered online information with its Lexis® and Nexis® services. A member of Reed Elsevier [NYSE: ENL; NYSE: RUK] (www.reedelsevier.com), LexisNexis serves customers in more than 100 countries with 18,000 employees worldwide.

About LexisNexis Managed Technology Solutions

Managed Technology Solutions can help you achieve better law-firm data management:

- Decrease data management costs in large cases by as much as 30 percent.
- Reduce risk through data management automation for easier and more effective compliance.
- Increase productivity through best practices in data and policy management.
- Get law-firm-specific services with the only global hosting solution developed and tailored for law firms.
- Secure your data and prevent business interruptions by using one of our best-in-class data centers.
- Gain superior service, as rated in LexisNexis customer surveys, with 24-hour premium support regardless of location.
- Count on LexisNexis experience—35 years in legal industry data management.

About NetApp

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. For more information, go to www.netapp.com.