

Case Study

QUICK FACTS

Industry/Solution:

- Construction

Challenges:

- Consolidation of five different IT organizations and growing legal discovery requirements created demand for centralized e-mail archive with streamlined search capabilities.
- Initial decision to deploy Mimosa required the addition of expensive hardware and was plagued with performance problems that required 40 hours/week of administration.
- E-mail searches took up to 8 hours while exporting files could take up to 12 hours.
- Retrieving e-mails from the archive took up to five minutes, which was an unacceptable delay for test users.
- Backing up the e-mail archive also was time consuming and a recommendation to install DoubleTake software for replication would add undue cost and complexity.

Solution:

- Simpana software with Backup & Recovery, Archive for file systems and Microsoft Exchange, Search and Deduplication

Benefits:

- With CommVault backup and recovery, the firm reported a 75 percent reduction in its backup window.
- Simpana Archive for file systems enabled the company to shift data to SATA disks and extend the ROI on an existing SAN by 18 months.
- Simpana Archive for Exchange easily accommodates a full range of searches; the search engine ingests data in near real-time and produces results in approximately 8 seconds.
- Self-serve searches are handled easily by construction and legal teams using an intuitive web-based interface.
- Using Simpana software's embedded deduplication, the company experienced a reduction in redundant data of more than 40 percent, which has lowered the amount of disk capacity required.
- "Set it and forget it" operation has dramatically reduced administrative overhead as there no longer is a need for a full-time resource to manage archive and search requirements.

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Global Construction Firm Replaces Shaky eDiscovery Structure With Simpana® Search, Archive & Deduplication

Simpana Software Displaces Unstable Mimosa Deployment to Offer a Better Way to Lower the Costs and Complexity of Legal Discovery

Customer Profile

The ability to ensure universal information access while streamlining the legal discovery of Electronically Stored Information (ESI) is crucial to supporting rapid business growth for a multi-billion dollar civil and building construction company based in Los Angeles. In fact, enterprise search capabilities play a pivotal role in providing worldwide construction, legal and compliance teams with the appropriate tools for finding and recovering important files, e-mails and other business-critical data.

Over the years, this global construction leader has earned a strong reputation for executing large complex projects on time and within budget while adhering to strict quality control standards. As a result, the company has amassed a significant level of repeat and referral business, which also has generated vast amounts of critical business data. To that end, the company has built a multi-faceted information management foundation supported by Simpana® software, including integrated modules for Backup, Archive, Search and Deduplication.

According to Eric Jonland, senior systems engineer for the construction firm, Simpana software offers a simple, stable solution for improving productivity as well as reducing risks and operating costs. "With Simpana software, we can take advantage of a centralized platform for protecting, archiving, searching and retrieving important business information," he explains. "Fast and efficient access to corporate data enables us to respond efficiently and cost-effectively to any eDiscovery requests."

Data Management Environment

During his tenure with the firm, Jonland has adeptly handled servers, systems and storage requirements for a predominantly Microsoft Windows environment. While the scope of his support initially encompassed approximately 1,200 users and 250 file servers, a recent consolidation of five separate IT organizations within the global entity resulted in doubling the number of users to 2,400. The server count, however, has decreased to 125 physical servers, thanks to a concerted virtualization effort. Meanwhile, a relatively small IT team is responsible for managing about 225 TBs of raw storage dispersed across multiple platforms, including an HP StorageWorks 8100 Enterprise Virtual Array, EMC CLARiiON CX4 model 960 networked storage system, EqualLogic SAN and Compellent Storage Center SAN.

In addition to project management, computer-aided design (CAD) and other software specific to the construction industry, the firm relies heavily on the full Microsoft Office suite as well as SharePoint, Exchange Server, Active Directory and SQL Server. The Exchange environment, in particular, is somewhat atypical as average message sizes are quite large because they typically include sizable attachments, including digital images, CAD files and videos. According to Jonland, annual data growth can spike rapidly, depending on the scope of current projects. "It's not uncommon for us to experience 300 percent data growth annually," he recalls. "One major project alone required a 50 TB SAN and more than 16 TBs of end-user data."

QUICK FACTS (continued)

Platform/File System:

- Predominantly Microsoft Windows 2003, with some Windows 2008

Applications:

- Microsoft Windows Server 2003 and 2008
- Microsoft SQL Server
- Microsoft SharePoint
- Microsoft Active Directory
- Specific construction-industry software

Partner Hardware:

- HP StorageWorks 8100 Enterprise Virtual Array
- EMC CLARiiON CX4 Model 960 Networked Storage System
- EqualLogic IP SAN
- Compellent Storage Center SAN

To address aggressive data growth, Jonland expanded the company's storage environment and replaced its legacy Backup Exec data protection in 2005. After evaluating Symantec's NetBackup, HP Data Protector and Simpana software, the team determined that CommVault provided the best mix of performance and capabilities, especially for safeguarding the company-wide adoption of SharePoint. "We really liked how innovative CommVault's data management software was and how easy it was to use the centralized console to manage all backups and restores from different data silos and applications, including SharePoint," says Jonland. "I also was amazed at the throughput, which reduced our backup window by 75 percent."

Blueprint for Discovery and Compliance

After stepping up to CommVault technology to handle backup and recovery, Jonland next optimized the firm's storage resources by installing Simpana Archive module for file systems and NAS environments. The company moved aged data from Windows file systems off expensive primary storage and onto lower-cost secondary, tiered storage. "Simpana Archive software works great," Jonland adds. "We shifted approximately 4 TBs of file-system data to SATA disk with minimum user impact since they still had transparent access to archived data. Most important, we achieved a much better ROI on our existing SAN by extending its life by another 18 months." As a result, the company was able to postpone a large capital expense until the IT budget could better accommodate the expenditure. Moreover, the team was able to use the existing SAN until the maintenance contract expired instead of being forced to upgrade prematurely, which saved the company approximately \$20,000 in additional maintenance fees.

With the Simpana Archive module, the company assembled an early blueprint for meeting discovery challenges while reducing risks. Simpana software's comprehensive reporting capabilities also simplified the process of tracking all archive and retrieve jobs for compliance purposes. As litigation is ever-present in the construction industry, the company soon

developed a requirement for e-mail discovery, which added a new layer of complexity to their search and archive demands. In particular, litigation in the construction industry comes with a unique set of challenges as legal concerns span a wide range of areas, including construction defects, land contracts, insurance coverage, bid protests, as well as worker safety and injury issues. As a result, discovering pertinent information in vast e-mail stores with large attachments can become a complicated and time-consuming process unless automated, intelligent search and archive capabilities are used to produce requested data in a timely, efficient manner.

Initially, the construction firm approached e-mail discovery cautiously by first mounting recovery databases in Exchange, then manually searching and copying files that were part of the discovery response. This proved too laborious, however, as one discovery request could exceed 1,000 man hours, which caught everyone's attention. Next, the team looked at HP's StorageWorks Reference Information Storage system as a possibility for automating the process—but found the \$250,000 price for 4 TBs of storage highly cost prohibitive.

During the second quarter of 2008, Jonland once again recommended software, since extending its Simpana Archive system to encompass Microsoft Exchange posed no major concerns. However, an executive management decision led to the deployment of Mimosa to handle the e-mail archiving portion of the company's eDiscovery and compliance strategy.

Mimosa Misses the Mark

From the onset, the team experienced a series of setbacks with Mimosa. First, the hardware that Mimosa specified for the implementation proved inadequate. This led to an unexpected yet crucial need for additional grid servers and storage systems. "Mimosa drastically underestimated the amount of hardware we'd need to run the solution," recalls Jonland. "While we were told it would take a single Mimosa server and one dedicated SQL server with SATA storage, totally about \$50,000 in hardware, we

ended up needing a new \$200,000 SAN and three servers at \$40,000 each, which brought the total hardware investment to approximately \$320,000."

Second, the implementation took three months and sporadic onsite support from Mimosa did little to alleviate early problems. Unfortunately, even once the system was running, e-mail searches took an inordinate amount of time. "Mimosa e-mail searches could take up to eight hours; exporting e-mail files then could take up to 12 hours, which was a real problem for our users, especially since they were used to quick and easy file searches with Simpana Archive," notes Jonland. "We ended up having to dedicate a full-time person who spent 40 hours a week just managing up to three dozen discovery requests a month."

When recurring performance problems weren't remedied by frequent patches, even more administrative overhead was required. "The system would re-index frequently, which was process intensive and slowed searches significantly," Jonland remembers. "We also struggled with the fact that Mimosa only stubbed e-mail attachments, leaving the entire text of the e-mail in Exchange. This didn't work well for us as it took our test users up to five minutes to retrieve an e-mail when they were used to 20-second file retrieval times with Simpana Archive. The delay with Mimosa proved unacceptable."

Jonland also had some reservations about the fact that Mimosa doesn't support Microsoft Exchange journaling, which eliminates the risk of message alteration and loss. "The lack of Microsoft journaling support was another concern as it exposed us to potential litigation problems," he notes. "Safeguarding every e-mail with Microsoft-approved capture and preservation capabilities is an important part of meeting our legal discovery and compliance requirements."

Backing up Mimosa files was yet another challenge, which the team attempted to solve by purchasing a dedicated library just to handle what became perpetual backups. "We couldn't tolerate being a day or week behind in backups," says Jonland. "Mimosa recommended adding DoubleTake software to replicate data to a remote site and that option it was out of the question as it would have required another \$30,000 in software licenses, a duplicate set of hardware priced at \$320,000, along with even more administrative resources to manage the replication process."

Seamless Archiving and Simple Searching with Simpana® Software

The breaking point came shortly after company consolidated its five IT groups. At that time, it was discovered that Mimosa, which had been running at three of the divisions, lacked the ability to integrate separate archive databases into one centralized repository. "Nobody wanted to pull data out of three separate Mimosa databases to create one new database," says Jonland. "Once it became clear we'd be starting over, we took the opportunity to replace Mimosa with Simpana Archive module for Exchange along with Simpana Search to meet all our legal discovery demands."

By leveraging the CommVault singular platform approach, Jonland's team was able to streamline the implementation of the Simpana Archive module for Exchange, the Simpana Search module and Simpana software's embedded deduplication capabilities. Additionally, the team was able to manage these integrated modules—along with the company's existing Simpana software for file archiving and backup—from a centralized console. "CommVault's singular platform approach took the complexity out of managing different aspects of our operation, which also lowered our operational costs," Jonland says. "We just knew all the products would work together seamlessly, which was a big relief."

Jonland then led his team in repurposing the hardware previously dedicated to Mimosa so they could support additional CommVault functionality, including content indexing and disk-to-disk backups. "We would have needed to double our existing hardware environment if we had attempted to do all that using Mimosa," he says. "With CommVault® software, it was just a matter of selecting the set of licenses that gave us the feature set we wanted. The entire switch, including training, took place in one day."

The performance differences between Mimosa and Simpana Search have been like night and day. "No matter how strange a Boolean search I submit, the entire process has never taken more than eight seconds," explains Jonland. "Data can be ingested in near real time, which is incredibly fast." Initially, Jonland hoped to produce search results as part of discovery requests in about an hour yet has found that most searches produce results in seconds, which has far exceeded his expectations.

The Simpana Search module offers web-based, self-serve access to all e-mail files while providing a compliance interface for the legal/auditing team. In particular, Jonland appreciates the simplicity of the Simpana software GUI, which he plans to open up to the help desk so they can expedite file restores and accelerate first-call resolutions.

The ability to content-index all types of data using the intuitive web interface also has been well received by the firm's entire user community, which includes construction engineers, project managers, superintendents and foremen along with accountants and members of the company's legal team. Now there are plans to open access to outside litigators to further streamline compliance and eDiscovery requests while reducing outsourcing costs. Addition-

ally, the team has reallocated the 40 hours it used to take to manage Mimosa to focus on other projects because Simpiana software's "set it and forget it" operation requires minimal administration.

Fortified Foundation for Information Management

To further streamline eDiscovery searches as well as control escalating storage costs, the company deployed CommVault software's content-aware deduplication capabilities. "We've been able to reduce redundant data by more than 40 percent, which has really lowered the amount of disk capacity required to store archives," Jonland says. "We can store more data on less space, which will prove invaluable in decreasing our storage footprint while expediting search and discovery."

Looking ahead, the company is considering the CommVault Storage Resource Management module to improve storage resource utilization. Also under review is the CommVault Content Director module, which is designed to automate the process and workflow of categoriz-

ing information. "Having the option of classifying, organizing and retaining information based on its business value is very appealing," adds Jonland. "We definitely see where this would help us increase storage efficiency and further improve access to information."

When it comes to data protection, compliance and eDiscovery, Jonland gives CommVault high marks. On the few occasions when CommVault technical support has been needed, he rates the response as "phenomenal." All this adds up to a winning formula for meeting both current and emerging information management requirements.

"With CommVault, we have confidence that we can protect, find and recover all the data we need, when we need it," Jonland concludes. "Additionally, we can empower our end-users to participate more in the process since they now have easy access to simple search and discovery tools. With CommVault Simpiana software, we've built a strong, stable information management structure that we believe will stand the test of time."



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