“We no longer question if we have the right storage or enough scalability or performance. We are wholly confident in the direction we took with BlueArc [Mercury 55]. You could say it helped us raise the bar on e-discovery services.”

Ed Robles  
Co-Founder and Managing Partner  
Smart Data Consulting

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<table>
<thead>
<tr>
<th>INDUSTRY</th>
<th>Services: E-Discovery and Managed Hosting</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLUTION</td>
<td>File and Content, Modular Platform</td>
</tr>
<tr>
<td>Hardware</td>
<td>BlueArc® Mercury 55, Hitachi Adaptable Modular Storage 2100</td>
</tr>
</tbody>
</table>
Premier E-Discovery Firm Deploys a Hitachi NAS Platform, Powered by BlueArc®, to Expand Offerings and Boost Output

Smart Data Consulting is a top provider of specialized e-discovery and managed review offerings, thanks in part to a highly robust, performance-driven solution based on BlueArc® Mercury 55 and Hitachi Adaptable Modular Storage 2100 for exceptional scalability and availability. BlueArc is now a part of Hitachi Data Systems. With this new solution, Smart Data Consulting improved productivity by 40%, decreased costs by nearly 50%, and expanded its services and business capabilities.

Electronic discovery, commonly known as e-discovery, has become ever present in the support of legal proceedings and investigations. The need for corporations to manage data and communication that is potentially relevant to a litigation drives the demand for electronic discovery expertise and discovery solutions. E-discovery describes the practices by which they can obtain, secure, search and process the electronic data pertinent to their cases. It is no wonder, then, that an entire industry has grown up around managing the e-discovery lifecycle.

Smart Data Consulting is a top-notch provider in this niche industry. The company has exacting standards for helping its clients manage all the data related to litigation and investigations as well as mitigating risks. For more than a decade, Smart Data’s consultants have been providing transparent, proven and defensible e-discovery methods and expert consultancy, supported by cutting-edge technology and cost-efficient techniques. As the e-discovery industry has evolved, so has the ability to expand offerings by e-discovery firms, today extending to managed review, hosting and software services.

In 2010, Smart Data became an Enterprise Viewpoint Service Provider. Viewpoint is a flagship application in the e-discovery space, capable of providing a cohesive, all-in-one platform for everything from collection, assessment, processing and analysis to review and production of data. Integrating the advanced Viewpoint features into its business allows Smart Data to focus on furthering its ability to provide advanced technology such as predictive coding to clients. Predictive coding is a highly desirable computer algorithmic application that reduces the cost of human review, by automatically classifying documents according to specific concepts and criteria.

“BlueArc’s [Mercury 55] mission-critical performance, immense scalability and complete redundancy have a direct impact on our ability to be successful. We have an outstanding client-facing hosted solution, we have a very advanced front and back end, and we’re now one of the fast-growing companies in our industry.”

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SUCCESS STORY

point, the DAS could only manage so much I/O, and we needed more," Robles says.

The company also employs a bank of worker computers, some physical boxes and some virtual machines. These computers are used primarily for processing the e-discovery data for each and every case coming into Smart Data. All this electronically stored information is subject to particular processes, filtering to remove irrelevant and duplicate files as well as working to identify potentially privileged documents. At any given time, all the computers could be active, calling on the storage simultaneously to execute some function.

“We added more workers to get the same output because the storage we had in place was operating at maximum capacity. The result was a diminishing rate of return,” he continues.

Performing backups in the middle of intense I/O situations was difficult at best, Robles says. “If clients were logged in and doing a lot of work on the front end, we would have to work around that for backup and processing. Even in the middle of the night, backups were a challenge because clients were online and the load on storage can be heavy.”

To win the case against overloaded, sluggish storage, Smart Data required a better way to manage its high-performance computing demands. “It was a big shift in our business to begin hosting managed services. Hosting becomes very visible, and the infrastructure needs to reflect those capabilities. Every project, every matter we handle, is about the clients’ data that we manage. It was very clear that if we wanted to get to a new level of service, we needed to put the right storage in place,” states Imer Perezic, co-founder of Smart Data.

**Hitachi Storage Solution Provides Top Caliber Support**

Smart Data had very specific requirements for attaining the right storage solution. “We require 100% uptime, the absolute definition of mission critical. A new storage infrastructure has to be redundant and secure, able to function at the highest caliber to withstand the IOPS our workloads demand, and effectively handle backup, recall and restore, at any time. It also needs to be highly scalable, something we can build upon for the long term,” Robles details.

Smart Data researched potential solutions, and even returned an underperforming demo system. Ultimately, the company chose a solution based on BlueArc Mercury 55 and Hitachi Adaptable Modular Storage (AMS) 2100. “In this industry, the technology has to be able to handle the read and write of millions of small files. Many of the solutions we looked at were great at handling large volumes, but not the small files. For example, one subject's email box in one case might have thousands of emails. Each email must be broken into its components, which quickly multiply. A small litigation can generate hundreds of gigabytes of data, and larger litigation is in the terabytes. We have one client right now with data in the realm of 40TB,” he notes.

Smart Data required storage that could efficiently manage the millions of reads and writes that applications such as Viewpoint demand. “When we saw the BlueArc technology, we knew it was going to work for us. The NAS device's purpose is to do exactly what we need, and do it well, which actually reflects how I like to look at our business. Our business is specialized and must perform at a very high level, for large projects with very high stakes,” Robles emphasizes.

BlueArc Mercury 55 is designed for highly efficient content indexing and file tiering, to overcome the typical complexities of large-scale file system management. This hardware-accelerated file system supports next-generation multiprotocol services, dynamic provisioning, virtualization and cloud infrastructure, while dramatically simplifying data movement, reorganization, classification and protection. And it does it all without sacrificing performance and availability. BlueArc Mercury 55 can cluster and scale up to 4PB of usable capacity and can manage 16 million objects per file directory at a throughput speed of up to 700MB per second, handling 40,000 IOPS per node, 80,000 IOPS total.

BlueArc Mercury 55 is ideal for managing Smart Data’s e-discovery data growth. BlueArc Mercury 55 sits in front of a pair of AMS 2100 systems, enabling storage capacity expansion up to 4PB. The AMS 2100 systems are operating as the staging area for the electronic files as they come into the Smart Data environment. Then, the processing and hosting application accesses the incoming data in order to curate, analyze and extract the metadata, at which point the e-discovery information is pushed onto the Tier 1 storage of the BlueArc system.

Smart Data employs several tiers of storage on the BlueArc technology to effectively manage the different stages of the case lifecycle. Tier 1 uses high-speed 2.5” (small form factor) serial-attached SCSI (SAS) disks to propel performance, and is dedicated to the very active and heavily accessed data. On Tier 2, Smart Data houses still active but older, less-intensive project data on NL-SAS disks. As projects close or go dormant, their data are relegated to Tier 3 for archival purposes.

**Smart Data Raises the Bar on E-Discovery Services**

The evidence is in: Smart Data Consulting has achieved its goals for expanding client offerings and reducing storage burdens. Since implementing its Hitachi storage solution, Smart Data has been able to initiate a new level of data processing and hosting services. Today, Smart Data is recognized as one of the country’s top providers of document review and hosting services.

Performance is no longer a factor when processing large jobs or managing backup. Smart Data has been able to assign many more worker computers to speed processing for a 40% productivity increase, while reducing the cost of processing by nearly 50%. And the company is better able to manage IT resources.
“We’ve been able to achieve a consistent level of read and write capability, regardless of workload, without performance degradation. We don’t worry about when backup is run; we don’t worry about migrating data between tiers. It can all happen at the same time at the speed of business without having to manage around the limitations of the storage. With regard to IT, we have moved from being reactive and spending time on maintaining the infrastructure to having a proactive, strategic plan that we can actually roll out and execute,” he proclaims.

A Look Ahead

Next up for Smart Data is expansion of its business, a new managed review site near Grand Central Station and potential locations beyond New York. “BlueArc’s mission-critical performance, immense scalability, and complete redundancy have a direct impact on our ability to be successful. We have an outstanding client-facing hosted solution, we have a very advanced front and back end, and we’re now one of the fastest growing companies in our industry,” says Perezic.

“BlueArc is the platform we’re going to continue to build upon as we grow, as we scale it out with prospective new offices in Boston, Washington DC and Chicago. Since putting this solution to work, we no longer question if we have the right storage or enough scalability or performance. We are wholly confident in the direction we took with BlueArc. I guess you could say it helped us raise the bar on e-discovery services,” Robles concludes.