Performance was an initial concern for us, until we understood that we would actually need to discard our previous maximum measures for processing data in favor of a whole new, much higher ceiling. We foresee being able to improve our processing throughput by 300%.

Howard Holton
Managing Director, Network Architect
Precision Discovery

Precision Discovery Chooses Hitachi Converged and Data Mobility Solutions to Move, Manage and Protect Information

In an exceedingly competitive industry where the stakes are high, Precision Discovery stands out with innovative e-discovery solutions that expedite case data processing and reduce customer expense. Staying ahead of massive unpredictable data growth requires strategically intelligent IT infrastructure. Hitachi converged solutions and data mobility enable Precision Discovery to more easily and smartly move, manage and protect information. Now, the e-discovery company is processing data 20-30% faster, with a foreseeable 300% improvement in throughput performance.

Once a cottage industry, e-discovery now has a solid foothold in the legal system. Raw case data and pretrial evidence is predominantly housed as electronically stored information (ESI). The art and science of e-discovery uses digital forensic processes and sophisticated assessment tools to equip attorneys with relevant information necessary to building and winning their cases.

Precision Discovery is exceptionally proficient at enabling legal clients to search, analyze and gain insight from ingested information, quickly and cost efficiently. Since 2008, the company has stayed several leaps ahead of litigation support demands with its unique blend of people, processes and, well, precision. Applying superb service, expert consultancy and pioneering technology, Precision Discovery is entirely employee owned and relationship driven. Automated custom software tools, best practices and real-time dashboards help orchestrate a smooth litigation data lifecycle. The right IT infrastructure supports it all.

Relying on Hitachi technologies from the beginning, Precision Discovery has nurtured its operation from savvy startup to creating a national presence. “In this industry, it’s often about trying to reduce the spend related to e-discovery, for both the customer and the provider. We focus on trying to help our clients condense the quantity of data to shrink associated costs of managing that data. Because any given

Benefits at a Glance

- Up to 300% throughput improvement.
- Process case data 20 to 30% faster.
- 96% virtualization, with pervasive visibility and data mobility.

Howard Holton
Managing Director, Network Architect
Precision Discovery

INDUSTRY
Services: E-discovery

SOLUTION
Hitachi Unified Compute Platform for VMware vSphere

HARDWARE
Hitachi Unified Storage VM, Hitachi Compute Blade 500, Hitachi Adaptable Modular Storage 2500 (legacy), Hitachi NAS Platform 4080 (ultra cluster)

SOFTWARE
Hitachi Command Suite, Hitachi Universal Replicator, Hitachi Content Platform Anywhere
SUCCESS STORY

Being such a small IT shop, with this substantial relocation project, I’ve had to rely considerably on my Hitachi team. Never once did they disappoint me. The sense of ownership was prevalent in every single Hitachi person; they were truly invested in our success.

Howard Holton
Managing Director, Network Architect
Precision Discovery

Case data can grow significantly over time, it’s extremely difficult to forecast capacity requirements. Our infrastructure is highly resilient and we are continually scaling performance and compute resources to map to need,” explains Howard Holton, managing director and network architect at Precision Discovery.

The Challenge: Relocate Operations and Manage Exponential Growth

Recent tremendous data growth and a decision to move headquarters from Irvine, California, to Denver, Colorado, sparked a deeper look into IT needs. With goals of being more centrally located to its client base, the Denver site and a future secondary facility in Virginia are important to expansion and to support success.

Already managing 2PB of data, with upsurges in volume of new case data and metadata, Precision Discovery now supports nearly 3PB of storage under management. The Irvine data center was built on a foundation of Hitachi storage and technologies. These include Hitachi Unified Storage (HUS) 150, Hitachi Compute Blades, Hitachi Adaptable Modular Storage (AMS) 2500 and Hitachi Platform (HNAS) 3090 and 3080, all managed with Hitachi Command Suite. To accommodate some of the additional growth, Precision Discovery brought in Hitachi Unified Storage VM and another HUS 150.

While the company has internally restructured to combine Holton’s 2-man IT department with software development team and extra technology support, embarking on a relocation project is still a huge endeavor. “We are constantly ingesting massive amounts of raw data, which is usually shipped from clients on hard disks. What starts at 100GB can grow to 10TB during the length of a trial. Getting data processed rapidly is critical, and there is no industry standard method for getting it ingested fast enough. As we turned our attention to the reality of maintaining 24/7 uptime for clients while migrating operations 1,200 miles away, I knew we couldn’t do it all without integrally involving our Hitachi team,” Holton says.

The Solution

Build New for Greater Cost Efficiencies

The initial direction for relocating to Denver was to move existing infrastructure out of the Irvine data center. “We had to figure out a way to move everything. The Hitachi presales engineer evaluated the age, maintenance, functionality and requirements of what we had in place. During our collaboration, it was discussed that we could basically build a new data center infrastructure with significant technology upgrades for about the same cost structure. Hitachi would manage the entire migration, keep us up and running throughout, and we’d have a better, faster and more efficient method for managing growth. It’s a big win for us,” says Holton.

The Denver data center was designed around a vision for maximum business efficiencies and mission-critical application support. “We were looking for more capacity, better performance and greater compute resources to handle exponential data growth. We needed highly efficient, intelligent and scalable infrastructure with all the flexibility and resiliency our business demands,” he furthers.

At the base of the new data infrastructure is Hitachi Unified Compute Platform. This certified converged IT solution combines best-in-industry storage, server, networking...
and software management to solve today’s challenges and future needs. Hitachi UCP solutions accelerate the most-used applications in desktop and server virtualization, as well as the custom applications germane to Precision Discovery’s business.

For its primary site in Denver, Precision Discovery purchased Hitachi Unified Compute Platform for VMware vSphere, built with HUS VM and 82 Hitachi Compute Blade 500s. For its disaster recovery site in Virginia, a 2nd UCP for VMware vSphere was built with an 800TB HUS VM and 16 Hitachi Compute Blade 500s. The Hitachi Compute Blades are embedded with Brocade VDX 6700 Switches (10G) and Brocade VCS Fabric technology for highly automated and resilient networks.

**Improve Replication to Bolster Disaster Recovery**

Both primary and secondary locations for Precision Discovery are entirely constructed on Hitachi and Brocade technologies. Replication to the disaster recovery site is handled through a 500TB 2-node HNAS 4080 ultra cluster on HUS VM, and a 525TB 12-node Hitachi Content Platform (HCP) with AMS 2500. HCP is a single-system object storage solution that supports archival and compliance, built-in data protection, and sync-and-share demands. Once the data was virtually migrated off the previous infrastructure, the equipment at Irvine was moved to Virginia to assist with 2-site replication and redundancy.

“We are excited about creating this disaster recovery site in Virginia. It gives us the opportunity to move beyond just being a pure disaster recovery site for the hosting environment to spinning up a secondary location for hosting. What I mean is that rather than having an active/passive site, we will be able to operate an active/active recovery site and offer the Virginia site as another hosting location for East Coast clients. The proximity will speed the time for data retrieval, another benefit we can provide,” Holton explains.

**Use Smarter Software for Unified Data**

Just as Precision Discovery applies innovative digital forensic capabilities to provide better usability and insight with client information, Hitachi software promotes universal intelligence to adeptly manage and mobilize stored data. Hitachi Content Platform Anywhere exudes all the next-gen attributes necessary to collaborate, produce and securely synchronize files across multiple devices without data breach or bloat. As a fully integrated, on-premises solution, HCP Anywhere is as light as it is powerful. Highly efficient and easily scalable, HCP Anywhere delivers highest-density private cloud storage for enterprise-level control.

“HCP Anywhere is a technological big win for us. Moving data around has always been a challenge for us. We’ve relied on ftp in the past, but now we have the aptitude for customer delivery and documentation in a secure, recordable manner that’s much more collaborative and user-friendly,” says Holton. Hitachi Command Suite delivers all the necessary automation and management functionality to manage the magnitude and dynamics of Precision Discovery data. With 3 dimensions of management — up, out and deep — to fluidly scale, virtualize and integrate across the storage environment, Hitachi Command Suite removes many typical complexities. Holton particularly calls out Hitachi Tuning Manager, for its reporting and analysis tools. “Tuning Manager gives a lot more information about storage subsystems, and when something is not running correctly, it quickly identifies which LUNs are causing the issues so we can promptly fix them. It’s great for removing the guesswork, and time, and gives us more depth into our systems,” he says.

Hitachi Data Instance Manager (HDIM) is a new tool that Holton is excited about deploying. Unified, easy to use and policy- and workflow-based, HDIM supplies centralized data protection capabilities for file, Microsoft® SQL Server® and Microsoft Exchange in both Microsoft and Linux mid-tier environments. With backup, continuous data protection, archive, snapshot, deduplication and data security, HDIM is ideal for top-down policy management, made simple.

“The reason we bought Data Instance Manager is so we can keep a record and enable user-initiated search across email. We often have business requests to search back through email history, sometimes years. HDIM provides the archivable functionality so application users can look for what they need without involving IT,” Holton explains.
One more software tool he mentions is Hitachi Compute Systems Manager (HCSM). Intended to manage and operate remote server resources in a large-scale system environment, HCSM simplifies all the tasks involved in managing geographically dispersed resources. Regardless of hardware model or whether the resource is physical or virtual, HCSM allows systems to be centrally managed as tasks. “For us, we have a lot of resources to try and watch: 82 blades at the primary site. I could not effectively manage it all without HCSM,” he says.

The Benefits
Service, Service, Service

Precision Discovery built its reputation on the quality and service it delivers to each client. Holton recognizes these same essential characteristics in the Hitachi and Brocade service, sales and support professionals involved in making this project a success. “Being such a small IT shop, with this substantial relocation project, I’ve had to rely considerably on my Hitachi team. Never once did they disappoint me. From the presales engineer who answered post sales questions and remembered everything about our implementation, to the sales engineer working on-site, and the storage engineer who stayed involved past the deployment, I have had the privilege of working with an amazing team. The sense of ownership was prevalent in every single Hitachi person; they were truly invested in our success,” he extols. “The Brocade engineer even stayed in the data center overnight to make progress, because he, too, was so invested in us meeting our deadlines.”

Performance Breakthrough
While performance improvements were certainly expected with the move to UCP in the new data center, what came as a pleasant surprise was the magnitude of improvement. “Performance was an initial concern for us, until we actually understood that we would need to discard our previous maximum measures for processing data in favor of a whole new, much higher ceiling,” explains Holton.

“The magic number for our prior data processing environment was 3 pods of 36 workers. When we deployed the new Hitachi solution, we found ourselves back at the drawing board because a max of 36 no longer existed. We’re now capable of highly dynamic workload assignment, with new automation software and 250 or more workers across 7 pods to accommodate change. We foresee being able to improve our processing throughput by 300%. This new ceiling will enable us to manage more and larger projects most effectively,” Holton says.