



At Precision Discovery, High-Performance Storage Enables Highly Efficient Virtualized Data Centers

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Howard Holton,
Director of Technology, Precision Discovery

Summary

When Precision Discovery began operations in 2008 its founders turned immediately to BlueArc storage to provide the robust and high-performance storage infrastructure required for today’s rapidly growing eDiscovery market. The result? In its first two years of operation, Precision Discovery has grown significantly in revenue, in staff and in reputation as a leader in the eDiscovery market. But there has been a significant added benefit for Precision Discovery that wasn’t planned or expected, but is making a major difference in the company’s outlook and opportunities: By having the BlueArc networked storage platform in place, Precision Discovery has been able to build the foundation for a highly virtualized IT infrastructure that is saving money, boosting productivity and creating opportunities to drive new revenue streams. What started out as a simple VM solution for the accounting department has grown exponentially to the point where Precision Discovery expects nearly 80 percent of its production environment to be virtualized within the next year. Virtualization is enabling the company to take on more cases more efficiently and, with BlueArc storage as its foundation, Precision Discovery is building a highly scalable and flexible IT infrastructure that is a model for how today’s enterprise data centers can utilize virtualization to dramatically alter their business possibilities.

The Company

Precision Discovery was founded with a strong underlying premise: In order to deliver the speed, performance, quality and reliability required by customers in the eDiscovery market, it had to be a technology leader. The company founders, in fact, started the company largely because they experienced infrastructure problems at their previous company and realized that, while eDiscovery requires vast legal expertise, the foundation has to be built on a robust and high-performance technology infrastructure. “eDiscovery is nothing but technology,” says Howard Holton, Director of Technology at Precision Discovery. “We are a technology-focused company. All we do is technology.”

The Challenge

Fast, high-performance storage is absolutely critical in enabling virtualized data centers. This is especially true in data centers that process lots of files, which is a defining characteristic of eDiscovery. A single case can require several terabytes of storage and could include billions of small files. This puts a tremendous demand on the storage platform. The founders of Precision Discovery discovered this first hand: At their previous company the file storage platform was crashing an average of four times a week and causing 12 to 15 hours of downtime every single week. The impact on productivity was crippling. Out of that challenge, however, the Precision Discovery start-up team saw an opportunity to create an eDiscovery solutions provider built on state-of-the-art technology, where the IT infrastructure would be a clear business asset and selling point rather than a liability. Beyond that, as the business has grown, the company also determined it had to virtualize its data centers to manage growth, control costs and put in place a scalable infrastructure to take on more customers and larger cases.

The Solution

One of the first things the management team at Precision Discovery did after they started the company was to bring in all of the leading file storage solutions providers and conduct a head-to-head comparison. The challenge was purposefully difficult and designed to really tax the systems: Data sets that included millions of small files or large file sets that were unique and problematic. One of the big challenges was a large Lotus Notes database that was very difficult to work with. “They did the comparison and, I hate to even say it this way, but the BlueArc was truly in a performance class by itself,” says Holton. “Nothing they tried even came close to the sustained throughput BlueArc achieved in dealing with small files. And with large files BlueArc just knocked it out of the park. I have no idea how BlueArc does it, but they are much better than the competition.”

Precision Discovery now has a pair of BlueArc Titan 3200 network storage solutions with 150 terabytes of usable storage. The solution uses two types of drives in two tiers: 30 TB of usable Fibre Channel storage and 120 TB of usable SATA storage. Soon after the company first started, there was an immediate challenge to get the accounting system up and running. “We had one server where we needed four,” Holton recalls. “We were a start-up and budgets were tight. I said ‘Let’s virtualize this box.’ The founders were concerned about virtualization in the production environment: They had not had a good taste in their mouth from the last time they virtualized.”

The server virtualization deployment in accounting was successful and management realized it was working well, with no performance degradation. “Then virtualization started to find its way into the company in other functions,” Holton says. The upshot is that virtualization has spread from one worker to 20 workers and will be 50 workers in the near future and within six months more than 80 percent of Precision Discovery’s production servers will be virtualized. The projected rapid growth in virtualization capabilities is in large part due to the state-of-the-art BlueArc storage solutions for virtualized environments. Precision Discovery utilizes BlueArc’s Solution for virtualization, which builds advanced functionality into the BlueArc SiliconFS file system. As new tools for virtualization are added, Precision Discovery can add them – as it plans to do with BlueArc JetClone software, which enables users to clone only the container files rather than entire file systems while using the least amount of storage capacity. “The clone tools will allow me to work off a base image and replicate that image out 128 times,” Holton says. “It’s phenomenal. When it comes to quantifying value on virtualization tools, JetClone alone is worth it.”

The Results

For Precision Discovery, the results have been nothing short of phenomenal. In its first two years, the company grew from 16 employees to more than 50. From its headquarters in New York, it now has offices in at least 10 other cities along with numerous international affiliations. It has widely respected practices in eDiscovery and computer forensics and has been able to attract a world-class team of technology experts and legal experts. “You’d be amazed at how much data is coming in with some of these cases,” Holton says. “We have one that’s 9 TB and it’s almost all e-mail so the work product is huge. The one thing we never have to ask is, ‘Hmm, can our disk storage handle the overhead.’ That’s never a concern. I don’t think I could say that if I had different vendor in here.”

A significant benefit of having the BlueArc solutions in place has been in high-availability and in substantial productivity improvements and costs savings driven by the move to a more highly virtualized environment. “Our team went from 12 to 15 hours of downtime a week at their previous company to our environment where over the past two years we’ve had 99.9987 percent uptime,” Holton says. With virtualization, the improvements enabled by BlueArc have allowed Precision Discovery to reduce its footprint, which is allowing it to take on more customers much more efficiently.

“There are three things that cost you with virtualization: CPU and memory; network load, and disk load,” Holton says. “That’s our next focus, getting that footprint down. The cost savings are huge. I just did some numbers and, assuming the testing goes well, we expect the storage savings over the next year to be about 40 percent. The other thing is with virtualization I can dramatically increase my processing environment. If I can get to 70 workers and then go from 70 workers to 250 workers, that changes my business. That’s why these numbers are incredibly important to me. It’s not simply reducing costs, with virtualization we’re increasing production potential on an exponential level, which means more revenue and enhanced profitability.”

The Conclusion

“In the industry we’re in there are maybe 500-1,000 competitors and many are using three nodes with direct attached storage,” Holton says. “Sometimes it feels like the competition is not on a level playing field. My expanding virtualization infrastructure is designed that way and BlueArc gives me the performance to be able to say that. The other big value that BlueArc provides is BlueArc itself. The ability to call anyone and get someone on the phone, someone who knows me, who knows my infrastructure, that’s worth even more than the hardware itself. Do I contemplate other vendors? Long enough to look at the reliability I’ve seen from BlueArc and the performance I’ve seen from BlueArc, and I smile and say, ‘Thank you very much for your quote,’ and then I move back to something I’m eminently comfortable with.”



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