

Making Wall Street history with HP 3PAR F400 Storage System

Samuel A. Ramirez & Co., Inc. improves storage performance 24-fold while reducing backup times by 75 percent, consolidating its storage footprint by 66 percent, and cutting storage administration time by 90 percent.



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—Jason Elizaitis, Chief Technology Officer,
Samuel A. Ramirez & Co., Inc.

Objective

Consolidate server environment with virtualization, upgrade under-performing storage platforms, and enable simplified technology management

Approach

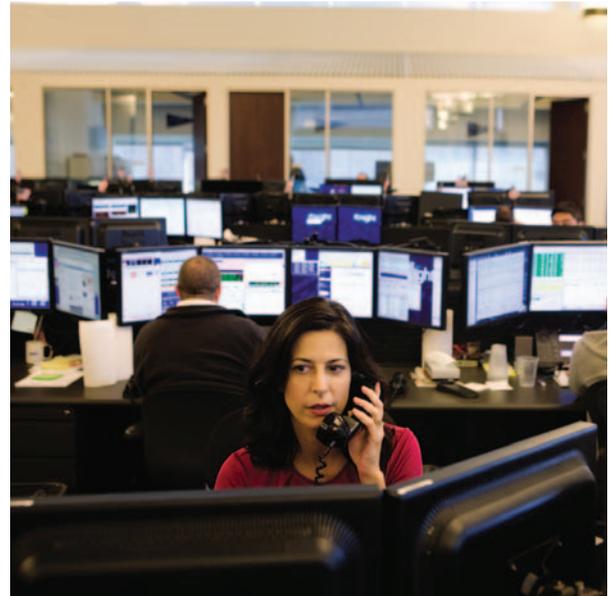
Design a high-performing storage environment to support server virtualization, allow for flexible growth, and deliver better capacity management

IT improvements

- 24-fold improvement in application performance
- 66 percent reduction in storage footprint reclaims data center square footage
- 75 percent reduction in backup times minimizes network traffic
- 90 percent reduction in physical server count drives energy savings

Business benefits

- 80% reduction in floor space costs
- Reduction in future storage purchases
- Reduction in IT administration costs
- 82% reduction in server power costs
- 100% adherence to aggressive deployment deadlines



Investing in more ways than one

Samuel Ramirez has been described by *Hispanic Trends* magazine as a “groundbreaking financier” whose investment-banking firm has experienced “stratospheric success” and “made Wall Street history.”* The firm he founded in 1971, Samuel A. Ramirez & Co., Inc. (Ramirez) now has over \$2 billion USD in customer accounts and continues to grow. As a result, it needed a technology upgrade to keep pace.

* Jennifer LeClaire, “Making Wall Street History,” *Hispanic Trends* magazine, January 2006, 30–34.

HP customer case study: storage virtualization

Industry: finance





The firm's chief technology officer, Jason Elizaitis, ran into problems with an old storage system when he introduced a new market data application connected to a data warehouse and driven by SQL servers. "The application worked well while we were piloting it," says Elizaitis, "but when we opened it up to our user base, it just collapsed."

After experiencing multiple several-minute outages on its Dell EqualLogic SAN, Ramirez began looking for a system that would not only increase performance but also support long-term growth.

Wealth management, meet HP 3PAR F400 Storage System

To affordably boost the performance of its storage systems and scale as its business grew without affecting end users, IT leaders at Ramirez narrowed down their search to two finalists: the Dell Compellent Fluid Data Network Storage Solution and the HP 3PAR F-Class Storage System. In the process, Ramirez took the opportunity to virtualize its storage environment as well.

Anticipating the demands this move would place on its storage systems, Ramirez wanted an agile solution that includes the ability to provision storage, scales easily and rapidly, and requires no dedicated administrator. Based on an impressive demonstration and an exhaustive analysis that proved the system both high performing and easily scalable, the firm chose the HP 3PAR F400 Storage System with HP 3PAR Virtual Copy Software and HP 3PAR Dynamic Optimization Software.

A single, consolidated system

Elizaitis cited the efficiencies of the HP 3PAR F400 Storage System as major factors in his decision. The system allows the firm to purchase less capacity to store its data and spend less time managing its SAN infrastructure compared to competing solutions. The HP 3PAR F400 supports multiple tenants securely on a single, consolidated system.

"We decided to purchase HP 3PAR F400 Storage System over Dell Compellent mainly based on the head-to-head performance comparison as well as the underlying architecture," says Elizaitis. "A major factor is that I can add two more controllers within the same system.

"I can scale within one system with the HP 3PAR F400 Storage System. With the Dell Compellent system, scalability relies on putting in a second system and then managing two SANS. So that was a major factor for us that with the HP 3PAR Storage System we have the four controller capability," adds Elizaitis.

"With wide striping and mixed workload support, the HP 3PAR F400 Storage System has improved our application performance 24-fold."

—Jason Elizaitis, Chief Technology Officer,
Samuel A. Ramirez & Co., Inc.

About Samuel A. Ramirez & Co., Inc.

[Samuel A. Ramirez & Co., Inc.](#) (Ramirez) is a full-service securities firm serving the investment needs of individuals, business owners, institutional investors, and government agencies. Founded in 1971, Ramirez offers professional services focusing on wealth management, underwriting, banking, institutional brokerage, and asset management. Ramirez provides retail and institutional trading expertise in municipal bonds, equities, government bonds, agency bonds, and corporate bonds.

75 percent reduction in backup times

Before installing HP 3PAR Virtual Copy Software, backups required up to four hours due to slow performance of its previous system.

Ramirez is currently experiencing a 75 percent reduction in backup times. "Our backups went from taking four hours to just under an hour," says Elizaitis. "With the HP 3PAR F400 Storage System, we've completely eliminated performance issues."

24-fold improvement in storage performance

HP 3PAR F400 Storage System increases performance with features such as wide striping and mixed workload support. The added performance comes without sacrificing reliability so Ramirez can scale up to 100 percent server virtualization.

Mixed workload support enables the firm's market data application, which has a throughput-intensive workload, to run alongside other business applications without disruption or a drop in performance.

Because wide striping distributes each VMware volume across all array resources, Ramirez can leverage the performance of all its disk spindles and controller nodes for even the smallest volume. "With wide striping and mixed workload support, the HP 3PAR F400 Storage System has improved our application performance 24-fold," explains Elizaitis.

66 percent reduction in storage footprint

HP 3PAR F400 Storage Systems come with silicon-based Thin Built In™ technologies, which allow Ramirez to meet performance and service-level objectives for more users with less hardware. "We've reduced our storage footprint by 66 percent with our HP 3PAR array because we have less equipment to house," says Elizaitis. "We also gain in energy efficiencies with fewer disks to power and cool, less hardware to down cycle after it has reached end of life, and a reduced carbon footprint." Thin technologies also save Ramirez up to 60 percent on the cost of a technology refresh and help it keep CAPEX and OPEX low over time.

Ramirez also estimates a 50 percent storage capacity savings over three years with HP 3PAR F400 Storage System due to the platform's thin technologies as well as its RAID hardware capabilities.

Solution at a glance

Hardware

- HP 3PAR F400 Storage System

Software

- VMware vSphere 4.0

Operating system

- HP 3PAR InForm Operating System Software

Network protocols

- TCP/IP

90 percent reduction in physical server count

Ramirez has been able to virtualize its physical server environment with VMware vSphere 4.0 using HP 3PAR F400 Storage System as a back end. Reducing its reliance on physical servers without sacrificing storage performance has allowed the company to reduce its physical server count by 90 percent and considerably increase its virtual machine (VM) density.

"We have the VM density to 50 percent currently, but that doesn't even max out the HP 3PAR array; it's just what we've pushed it to so far," says Elizaitis.

90 percent reduction in storage administration time

Ramirez didn't have a dedicated IT administrator before this upgrade and wanted to keep it that way. Not only did the firm avoid hiring a dedicated administrator after purchasing the HP 3PAR F400 Storage System, but now Elizaitis and team have significantly reduced the time they spend administering the storage system, allowing them to focus on applications that grow the business.

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"The ease of management we've gained with the HP 3PAR F400 Storage System has been huge," says Elizaitis. "With our old SAN, I went through a tedious exercise of manually allocating I/O among our various boxes and creating RAID groups that would spread performance across the various machines. I didn't have to do that with the HP 3PAR system. I just plugged it in, carved out LUNs, set the RAID level, and it's been going ever since. Between management, installation, and setup, I've reduced that administration time by 90 percent."

Maximizing storage performance to support business growth

Managing in excess of \$2 billion USD in customer accounts and growing their value are the primary goals at Ramirez. "This upgrade is really about the improved performance across our storage and connecting applications," says Elizaitis. "Being green in the data center by reducing our footprint and gaining all those efficiencies has been a nice bonus for us, but what we really care about is the improved storage performance that makes it easier for us to serve the needs of our clients."

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