![NetApp logo]

We Removed 100% of Performance Issues

![RFA logo]

KEY HIGHLIGHTS

Industry
IT Services

The Solution
- One five-node SF3010 cluster that supports VMware, Microsoft SQL, and Microsoft
- Exchange workloads for RFA cloud customers
- Ensure transaction processing within milliseconds
- Decrease performance issues 100%

Benefits
- Scale-out
- High Availability
- Deep VMware Integration
- Guaranteed Performance

For more than 20 years, Richard Fleischman & Associates (RFA) has served the IT needs of some of the most demanding financial customers in the world: hedge funds, private equity funds, funds of funds, wealth managers, and alternative asset management firms. Even milliseconds of delay in processing financial transactions can cost financial firms big bucks.

How RFA knocked out performance issues for good

RFA's conventional storage solution had become a bottleneck to providing the right solutions and support to keep its clients' businesses running smoothly. To ensure scalable high performance for customers, and ultimately to deliver differentiating capabilities unshackling its own business potential, RFA turned to all-flash storage from SolidFire.

What this means to RFA's customers

"SolidFire unlocks our performance so we can continue to scale while guaranteeing performance to our clients," said Grigoriy Milis, CTO of RFA. "As a competitive differentiator, it unleashes our business growth."

"Our clients run heavy analytics applications that need to return results in milliseconds," Grigoriy said. "QoS enables us to guarantee certain IOPS to certain applications at certain volumes while ensuring other applications are not affected. When we promise something to our clients, we know we can deliver it."

Grigoriy Milis, Chief Technology Officer, RFA

The Whole Story

More than 520 customers rely on RFA for enterprise-class technology including onsite or cloud-based solutions, telephony or data systems, and fully managed IT or project management. Headquartered in New York City with additional operations in Connecticut, Massachusetts, and the United Kingdom, RFA delivers transaction-processing applications on its own VMware-based private cloud platform.

Business Challenges

These transaction-processing applications, which include trading systems, portfolio accounting management systems, Microsoft SQL workloads, and Microsoft Exchange, ingest large amounts of data in real time and must execute transactions near-instantaneously.

"SolidFire set us free, because it unlocked the scalability and guaranteed performance of our platforms."

Grigoriy Milis
Chief Technology Officer, RFA

RFA aimed to improve its customers' application experience. Using a conventional storage solution from a well-known company, it ran into noisy neighbor and density problems. It wanted to guarantee high performance for every customer workload during peak demand, with no infrastructure co-tenants slowing performance for others by monopolizing bandwidth even at 50,000 IOPS.

Furthermore, RFA wanted to drive its own profitable business growth with a cost-effective solution that scaled out linearly. "Throwing more and more disks into our conventional storage was not the solution, because it's a temporary relief and it's just not scalable — it can get extremely expensive in data center hardware and maintenance costs. We decided that rather than scaling up by increasing the number of disks, we needed to scale out by improving the storage architecture."

The Solution
As CTO of an IT company, Grigoriy follows data center technologies closely and had known for some time that SolidFire delivers an innovative yet proven storage platform. RFA evaluated multiple storage solutions and chose SolidFire for its scale-out architecture, guaranteed performance, automated management, data assurance capabilities, and global efficiencies. Another plus was SolidFire's deep integration with RFA's VMware environment.

"Our evaluation process included not just performance but also such factors as the resiliency of the array, data protection, fault tolerance, and upgrade procedures," Grigoriy said. "All of that at the end of the day pointed to SolidFire and its storage QoS functionality, so we can seamlessly deliver the performance and high availability our clients need within our cloud."

Quality of Service (QoS) is built into SolidFire's architecture to completely eliminate noisy neighbors and guarantee volume-level performance within its multi-tenant architecture. In a SolidFire storage array, performance and capacity are presented as independent unified pools, entirely separate from one another. Each storage volume can be allocated an exact amount of capacity and an exact amount of performance, both of which can be changed on-the-fly without migrating data or impacting performance.

Host-based iSCSI connections deliver the network flexibility to adjust to changing conditions without service interruptions, and storage can be upgraded completely non-disruptively. SolidFire Active Support proactively monitors and diagnoses the system in real time, preventing rather than reacting to issues, ensuring the highest possible levels of storage availability and performance.

In addition to providing a solidly architected, mature solution, SolidFire delivered expert sales and technical support that fulfilled all promises and eased deployment, Grigoriy added. "Everything the sales staff said SolidFire would do, it did, and implementation went without any issues."

Results
RFA uses SolidFire for its customers' mission-critical workloads, as a storage tier handling large databases and applications that require consistent, predictable performance. The solution's greater density significantly reduces rack and power consumption and raises RFA's overall storage return on investment (ROI). "The consumption on the spinning disk side was so high that for certain applications it was becoming wildly expensive," Grigoriy said. "On SolidFire, it becomes a lot more economical for us, and then we can repurpose the spinning disks more efficiently."

"Performance-related issues have decreased by 100% with SolidFire," Gair Betts, RFA Director of Sales, said. "In terms of customer satisfaction, that translates into a metric of 0% pain calling into the help desk."

SolidFire also enables seamless capacity growth at RFA. The company began with one five-node SF3010 cluster. The solution can scale out linearly one node at

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Grigoriy Milis
Chief Technology Officer, RFA

a time to as many as 100 nodes. "SolidFire unlocked the scalability of our platform. This was one of our biggest concerns," Grigoriy said. "It's a very stable solution. We can make changes to it without any disruption to our environment."

"With SolidFire, performance-related issues have decreased by 100%. In terms of customer satisfaction, that translates into a metric of 0% pain calling into the help desk."
Gair Betts, Director of Sales, RFA

Benefits of working with SolidFire
Scalability opens new business horizons
Speaking with customers day after day, Gair understands that placing their data on someone else's infrastructure can feel risky to high-intensity hedge funds and other financial services firms. Yet with space and power at a premium, more and more of the industry's 4,000 hedge funds don't want to own or maintain their own resources.

RFA is there for them with a full range of cloud, advisory, and support services. Technology experts at its clients' firms

understand how RFA has built its systems for foolproof segregation and high performance. Non-technically oriented business executives, who might not delve into the nuts and bolts of how the infrastructure works, understand that RFA delivers the security, performance, and growth capacity they require.

"You don't have to know the difference between spinning and solid-state disks to understand that. With our private cloud offering, you can scale up your business and whatever applications you use will not be a problem on our cloud," Gair said. "People are starting to trust private cloud as long as it's architected correctly — and ours is architected in a very specific, segregated way."

As a cornerstone of RFA's IT architecture, SolidFire is proving to be a competitive differentiator. RFA was the first in its business niche of financial services IT to deploy SolidFire in its private cloud platform — something Gair said he is highlighting from a sales perspective.

"SolidFire definitely sets us apart," he said. "We're seeing very good feedback from potential clients when we tell them their data will be on all-flash storage. It has given us a substantial advantage in the market where customers are running quantitative and highly transactional applications."

Free to seize opportunity
RFA today is seizing these advantages to transform its business. Always a market leader, the company now can grow in size, accommodate new customers, and explore innovative new storage-as-a-service offerings. "SolidFire's biggest impact on the data center side is that it substantially reduces our core consumption," Grigoriy said. "On the business side, it opens revenue-generating services we otherwise would not be able to provide. SolidFire's architecture and functionality allows us essentially to sell high-performance storage to clients as a service, which is not possible with other storage vendors. SolidFire sets us free."