Global Financial Review Makes the Smart Move to Nimble Storage Environment

Leading mortgage service provider slashes storage costs in half, reduces latencies by 10x, and simplifies management by switching to Nimble Storage arrays

Providing the Highest Quality Mortgage Servicing Services

Global Financial Review, Inc. (GFR) provides due diligence and a wide range of mortgage consulting services to financial institutions and large investors around the world. Founded in 1994, GFR performs forensic reviews, litigation and put-back defense support, compliance assessments, due diligence reviews, securitization preparations, data aggregation services, asset management SaaS applications, and many other mortgage-related services to its rapidly expanding client base.

Headquartered in Denver, CO with staff in the Washington, DC, Sacramento, CA and Austin, TX metropolitan areas, GFR employs a highly skilled team of knowledgeable professionals with extensive experience in the financial, mortgage, and real estate industries. With an outstanding reputation for high quality services and unsurpassed client satisfaction, GFR has now become one of the world’s leading providers of comprehensive information and analytics in all facets of the sale, purchase, management, and oversight of mortgage loan portfolios.

Utilizing its unique proprietary databases, GFR captures and processes asset data from multiple sources and presents this information to clients in a concise and uncomplicated platform. Designed for efficient and accurate data capture and analysis, GFR's databases are customizable for each and every assignment. The firm's reports provide both portfolio and loan-level information as well as analysis in objective, modifiable, easily understood formats – tailored to meet each client's needs and focus.

GFR’s IT Environment

Jeremy Odle is the IS Manager for GFR. He is responsible for the procurement, management, and daily operations of all IT infrastructure for the rapidly growing mortgage services firm, including GFR's security network engineering and software development services. "We are a relatively small company," Odle noted. "We currently have about 40 fulltime employees and anywhere from 50-100 contractors at any point in time performing services for our client base. Since our IT team is responsible for supporting all of the large institutions and investors that use our software, we must operate as a 24x7 shop. Maintaining a highly reliable and robust IT environment is essential for our clients in the financial industry."

Performance Problems Emerge

GFR had been relying on seven aging servers, located inside of a telco closet at one of the company's headquarters. But significant challenges began to emerge in 2009, when the firm was getting ready to bring on 90 new contractors within a six-week period. "In order to support that rapid headcount expansion, we knew we had to rush to virtualization," Odle recalled. "But we didn't have the experience, time, or money to implement all of our own SANs and virtualization infrastructure, so we chose to have one of Denver's largest managed service providers handle our IT infrastructure for us. That way we could focus on..."
our core competencies—managing the high quality mortgage software and services we provide to our client base."

The hosted service worked fairly well for the first two years, but Odle began to see significant problems with performance. "We didn’t have visibility into the health of any of our hosted infrastructure," Odle explained. "We weren’t able to see what was actually happening, we just knew we had performance problems. Our hosting provider kept reassuring us that everything was running fine, but clearly the issues were mounting. Eventually we were able to gain access into some of the statistics and saw crazy latencies—ranging from 75 to 3,000 milliseconds from the service provider’s shared NetApp storage environment. We kept giving them an opportunity to fix the issues, but it became obvious that we needed to bring our IT infrastructure back in-house and take charge of our own destiny."

**Looking at the Options**

Odle and his team then started looking at storage solutions from the industry’s existing SAN-based vendors. "We brought in a couple of consultants to help us compare the options," Odle explained. "We began vetting several different vendors, including storage offerings from EMC, HP 3PAR and NExGen. But we weren’t excited about the cost and complexity of any of the solutions. We knew we would have to add storage specialists in to our team to manage the proposed environments. Being a small company, we have several significant challenges. One, we can’t afford to hire a dedicated storage admin or architect to manage the environment, and two, we don’t have an enormous budget for procuring the necessary infrastructure."

**Nimble Storage to the Rescue**

GFR started looking for a simpler and more cost-effective solution to solve the firm’s storage issues. Odle contacted some of his colleagues in the IT industry and several recommended the Nimble Storage arrays. "One of the most influential references came from one of our partner companies that was already running on Nimble Storage," Odle related. "This company has a very similar business model to ours. Even though they are more than 10x our size, they were running their operations quite successfully on the Nimble arrays. We figured if it was working well for them, we ought to give it a try."

Two days before Odle was planning to sign the deal with another vendor, GFR’s Nimble sales rep brought in an array so that Odle and his team could try it out. "To be honest, I was a bit skeptical at first," Odle admitted. "But we were blown away by the simplicity and performance of the Nimble arrays. The ‘secret sauce’ did work! To begin with, it made managing volumes and all of the infrastructure so much easier than with the other storage platforms. This meant that I would not need to hire a dedicated storage engineer or an architect to build out our new environment."

"The Nimble arrays performed extremely well in our mixed environment, between Citrix and the heavy loading on our SQL servers. Our IT consultants were telling us that we couldn’t run this kind of environment on SANs. But through testing and implementing best practices for virtualization on the Nimble arrays, we quickly proved that assumption wrong. Another factor in our decision, of course, was that the solution cost less than half of the other proposals. The combination of high performance, easy manageability, and the low cost of the Nimble approach is simply unbeatable in the industry today."

**Fast and Easy Deployment**

GFR operates out of two datacenters to provide high availability for its SaaS applications and Citrix infrastructure. The firm’s main datacenter is located in Denver, Colorado, and the second in Dallas, Texas. "We just finished building up our primary data center in Denver,"
Odle explained. “We put in HP Blade systems that are driven off of the Nimble SAN environment. Our second datacenter in Dallas is a semi-active datacenter running a second Nimble with just pizza boxes on that side.”

The Nimble environment was extremely easy to implement, Odle reported. “The Nimble arrays were in place and we had our primary datacenter online in just three days. We plugged both of the arrays in at our Denver site, seated the data, and then shipped the second Nimble array and other servers out to our Dallas datacenter. We flew out the next day, hooked everything up, wired the networking and communication between the two sites, and it worked perfectly.”

“Support of the infrastructure was one of our key selection criteria,” Odle reported. “Nimble Support was even better than we expected. The Nimble Support engineers are much more ‘hands on’ than the other storage vendors. We used to have to go through at least three tiers of support to get an answer or what we needed with EMC. By using InfoSight, we can see exactly what is happening in our environment. We can tell where we are low on cache or capacity. We are now seeing more ‘greens’ than ‘browns’ on the dashboards in terms of latencies, and have the data to support our strategies for long-term scalability. With InfoSight, we can instantly see what it all means.

“This is the level of support that I was looking for! We are growing very fast, and I need the ability to react quickly as well as plan for our future needs. InfoSight was a huge selling point for us when selecting the Nimble arrays.”

The New Environment and Nimble Arrays

“We are running Citrix XenApp and are starting to get into virtual desktop (VDI) solutions as well,” Odle explained. “We have always been a heavy SQL 2012 Enterprise shop with a lot of functionality and our data running off of our Nimble arrays. We run a small cluster of Big Data Hadoop instances. Our Web Services, IIS, Citrix, and SQL applications are all running on the Nimble arrays.”

GFR’s IT infrastructure is now 100% virtualized, running VMware. “All of the backend data and VMs are running off of the Nimble at the main site,” noted Odle. “We have other servers that are running on the same farm from VMware at the second site. With this setup, we can easily go back and forth or move servers between the different sites. We are using the Nimble arrays for replicating data in correlation with Veeam software for backups.”

Gaining Better Visibility with Nimble Storage InfoSight

GFR started using Nimble Storage Infosight a few months ago. Nimble InfoSight integrates, automates, and substantially simplifies the storage administrative tasks for GFR, ensuring the optimal health of both Nimble Storage arrays. Built on powerful deep data analytics technologies, the centralized InfoSight Engine monitors all Nimble Storage assets across a wide spectrum of parameters. The engine analyzes millions of data points every day per array to build complete insight into overall storage health.

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“We love the ability to see the information ourselves, but it is reassuring to know that Nimble is watching too! It’s great that there is someone we know by name that we can email when we have an issue or a question. Our support rep replies, ‘Yes I see that too. I already have some of our Nimble engineers looking into the details. Based on what we see, here are a few options for you...’ This is the level of support that I was looking for! We are growing very fast, and I need the ability to react quickly as well as plan for our future needs. InfoSight was a huge selling point for us when selecting the Nimble arrays.”

Improving Performance

“Before Nimble, our latencies were typically running around 75ms at the storage level, with peaks up to 3,000ms,” Odle reported. “That’s the amount of time it takes to ping China! But the performance of our Citrix applications is dependent on very low latency connections. Anything over 50ms is when we start seeing problems—with disconnected users and other anomalies. Citrix just can’t handle that amount of latency.
“When we were initially testing the Nimble arrays, we maximized throughput on the disks—running iometers, etc. Even with the excessive workloads we were forcing onto the Nimble arrays we were topping out at just 30ms latency. Now in production, we are seeing very rare spikes up to 35ms, but we are typically running between 0-10ms. By leveraging InfoSight and working with the Nimble Support engineers, we immediately saw that the latency was from insufficient cache and misaligned volumes. We have since fixed the misalignments causing a drop in overall latency, and are now planning to increase our cache to normalize the spikes even further.”

Final Thoughts

“We have been extremely happy with our Nimble Storage arrays. We spent four months working with EMC, and in just two days of working with Nimble, we knew it was a far better solution. One of the main reasons we chose Nimble was the open community. We were able to talk to lots of Nimble customers with real-life scenarios. It alleviated all of our concerns.

“We are a relatively small company. Personnel is our greatest expense here. Anything I can do to keep the number of people down—and accomplish more at the same time—is a win-win scenario. That’s where Nimble really shines. Nimble Storage is a less expensive solution, it is far less complex, yet it performs and handles everything in a mixed environment far better than the competitors’ solutions. What more could we ask for?”

Nimble Storage solutions are available through a global network of world-class channel partners. For more information, visit www.nimblestorage.com and follow us on Twitter: @nimblestorage.

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