

Nimbus Data All-Flash Arrays Deliver the Performance and Uptime Meritrust Credit Union Needed, All at an Affordable Price

By Jerome M Wendt, DCIG Lead Analyst

Affordable. Easy. Fast. Reliable. Meritrust Credit Union's challenge was to identify a solution that met all four of those requirements to replace its aging and tapped-out hybrid storage array. By selecting the Nimbus Data Gemini all-flash array, it satisfied these four requirements while getting the additional flexibility it needed to future-proof its storage environment.

COMPANY

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CHALLENGES

- Existing storage array out of capacity
- Existing storage array already using performance acceleration module
- Replacement array exceeded budget

SOLUTION

- Nimbus Data Gemini All-flash Array

BENEFITS

- Significantly lower cost than the competitor's array
- Increased Oracle database performance
- Multiprotocol support and scale-out configuration to future-proof environment
- Simpler, no-tuning-needed all-flash configuration

“The Nimbus Data all-flash array gave us the boost in capacity and performance that we needed now with the flexibility to adapt to whatever requirements we may encounter in the future.”

— Cliff Shoff,
Meritrust CU Director of IT



OVERVIEW

Facing the issue of needing more storage space, Meritrust Credit Union's Director of IT, Cliff Shoff, knew it was time for Meritrust to look for a storage solution that would not only add space, but would have the potential to add performance. With the need to increase the speed of its mission-critical Oracle database, Meritrust needed an affordable, flexible, reliable and well-performing solution. The Nimbus Data Gemini all-flash array provided Meritrust with the performance and reliability it needed at a price point it could afford, while giving it the flexibility needed to meet its future requirements.

MERITRUST CREDIT UNION PROFILE

Meritrust is a not-for-profit organization that is locally owned by more than 75,000 members. Starting out in 1941 as credit union serving only Boeing Aircraft Company employees, it changed its charter in 1994 to serve more Kansas communities before taking on the Meritrust name in 2009 to reflect its commitment to “Merit” and “Trust.” Meritrust was ranked no. 3 among credit unions nationwide for the value it returns to its members and was also ranked in the top 20 of the best performing credit unions in the nation.

All-flash Array Not an Automatic No-Brainer

On the surface, the decision sounded straightforward. Meritrust needed a new storage array to provide more capacity and performance at an affordable price point to host its production Oracle database. These criteria would normally make the selection of a low-latency all-flash array by any organization almost a no-brainer.

As more organizations look to acquire new storage systems, they find they can often achieve 2-3x or even greater increases in performance by simply upgrading

from existing HDD-based storage arrays to the new generation of all-flash arrays. Further, with the steadily dropping price of flash in these arrays, they are now within reach of even budget conscious organizations.

Yet in Meritrust's case, replacing its existing storage array with an all-flash array would likely NOT result in such a dramatic increase in performance. Meritrust already used a competitor's storage array that included flash memory as a caching mechanism to improve performance.

“Nimbus Data was more cost-competitive than other all-flash systems by a significant margin.”

— Cliff Shoff, Meritrust CU Director of IT

By utilizing this feature, data read and written by the Oracle database often resided in the storage array's cache resulting in high levels of performance for the database. However, the competitor's array was running out of capacity. This put Meritrust's Director of IT, Cliff Shoff, on the hunt for a possible new storage solution.

Multiprotocol Support and Affordability Cinch the Deal

Meritrust first turned to its previous vendor for suggestions on solving their storage issues. In response, the vendor presented Meritrust with a newer SSD-centric model of its array as a replacement. While it appeared to provide the additional capacity and performance that Meritrust sought, it also came with a higher price tag. This prompted Shoff to expand his search to identify a lower cost all-flash array option.

Nimbus Data and Texas Memory Systems (now owned by IBM) were the two providers of all-flash arrays that Shoff contacted. Though it was still late 2012, both offered all-flash arrays that had been on the market for a more than a year, had array

management software that was more mature than competitive solutions and offered all-flash arrays that provided performance in excess of 2 million IOPS and 500,000 IOPS respectively.

It was in reviewing the literature of these two products that the Nimbus Data array stood out. It included support for both block (FC, InfiniBand, iSCSI) and file (SMB, NFS) over Ethernet, FC and InfiniBand interfaces. Conversely, the Texas Memory Systems (TMS) array only supported block protocols over FC and InfiniBand.

PROTOCOL		NIMBUS DATA ALL FLASH ARRAY	IBM FLASHSYSTEM*
Block	FC	✓	✓
Block	iSCSI	✓	✗
Block	56Gb InfiniBand	✓	✗
File	NFS	✓	✗
File	SMB	✓	✗

*Texas Memory Systems acquired by IBM.

As Meritrust had a 10Gb Ethernet SAN infrastructure, it could keep its existing SAN infrastructure in place using the Nimbus Data array and then use either block or file protocols to access the array such as it did with its previous storage solution. Yet what cinched the deal was the quote. Shoff says, *“Nimbus Data was more cost-competitive than other all-flash systems by a significant margin.”*

CONNECTIVITY	NIMBUS DATA ALL FLASH ARRAY	IBM FLASHSYSTEM*
1/10Gb Ethernet	✓	✗
8Gb FC	✓	✓
56Gb InfiniBand	✓	✗

*Texas Memory Systems acquired by IBM.

Fast and Easy

Having made the decision to move ahead with Nimbus Data, Meritrust proceeded with acquiring two Nimbus Data all-flash arrays—one for its primary site and another for its disaster recovery (DR) site. Both arrays arrived in early 2013. The first one was installed, configured and ready for operation in the production site in less than three

hours, while the second one, located at the DR site, was up and ready to go in less than an hour.

Moving the data on these two all-flash arrays and using them in production was just as easy. The storage on the Nimbus Data all-flash arrays was accessed by the Oracle database servers using iSCSI on Meritrust’s existing 10Gb Ethernet SAN. The data was then migrated at the production site from the previous array to the Nimbus Data using Oracle DataGuard and then replicated to the DR site in the same manner.

Shoff says, “We already had a sophisticated deployment with the previous storage setup. However, once we had the more-simply configured Nimbus Data all-flash array deployed, our production Oracle database still experienced a 20 percent increase in performance.”

The Reliable All-Flash Solution that Holds Up to Financial Institution Scrutiny

Financial institutions are very conservative risk-averse IT buyers, and for good reason. There are certain terms that a financial institution like Meritrust wants to use when it describes its storage environment. Reliable, stable, well-performing and maybe even boring are among them. This is part of the reason many financial institutions are reluctant to use next generation, such as all-flash arrays, because regardless of the performance benefits they offer, the last term they ever want to use when describing their storage environment is “Exciting!”

Using the Nimbus Data all-flash array Meritrust got the stable, reliable, well-performing storage environment that it wanted plus one more: future-proofed. Even though it only currently hosts its Oracle Database on the Nimbus Data all-flash array, its multiprotocol support and scale-out capabilities give Meritrust the flexibility to anticipate future requirements such as hosting VDI deployments. Shoff says, *“The Nimbus Data all-flash array gave us the boost in capacity and performance that we needed now with the flexibility to adapt to whatever requirements we may encounter in the future.”* ■

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About Nimbus Data

Nimbus Data Systems, Inc. develops award-winning **Sustainable Storage®** systems, systems, the most intelligent, efficient and fault-tolerant solid state storage platform engineered for server and desktop virtualization, databases, HPC, and next-generation cloud infrastructure. Combining low-latency flash memory hardware, comprehensive data management and protection software, and highly-scalable multiprotocol storage features, Nimbus systems deliver dramatically greater performance at a significantly lower operating cost than conventional disk-based primary storage arrays, all at a comparable acquisition cost.

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