

Chevron Federal Credit Union opted for all-flash arrays from Pure Storage® after years of battling mass-storage systems that were complex to manage and expensive to scale. The results: superior application performance, simplified management, and a significant reduction in both capital and operating costs.

**Chevron Federal Credit Union****BUSINESS TRANSFORMATION**

Member-facing staff now serves the Credit Union members more efficiently, while the company saves on capital and operating expenses associated with its storage infrastructure.

GEO

North America

INDUSTRY

Financial Services

“With the Pure Evergreen™ Storage program, you are leveraging your investment, not throwing it away.”

Sachin Kundra,
Vice President, Information Technology

CHEVRON FEDERAL CREDIT UNION SELECTS PURE STORAGE FOR ‘HANDS-OFF’ STORAGE

For more than 80 years, the Chevron Federal Credit Union has been serving the financial needs of current and retired Chevron employees. As a credit union, a key competitive differentiator is the sense of community and personal service that members receive. A key role of the IT department is to apply advanced technology with the goal of enhancing the service and benefits that members enjoy.

“We’re a member-owned institution, so everything we do is intended to benefit our members, whether it’s at the teller window or in the data center,” said Sachin Kundra, Vice President of Information Technology with Chevron FCU.

As one of the 20 largest credit unions in the U.S., Chevron FCU serves 107,000 members in six states and manages some \$4 billion in assets. IT operations are concentrated at a primary data center in Sacramento, CA, with a backup center in Oakland, CA. Both data centers are in co-location facilities.

THE SEARCH FOR STORAGE SIMPLICITY LEADS TO PURE STORAGE

Over a period of more than a decade, Kundra had a vision of what he wanted in a mass-storage solution. “Storage is something you just want to set up, have it work, and be as hands-off as possible. You don’t want to have to think about SAN maintenance or data migration or a host of other issues. Ideally, you want it to be so smart on the back end that it’s simple on the front end.”

However, finding a system that met those criteria was always a challenge. “In 2004, we acquired a SAN that was the cream of the crop at that time. It had lots of features, but to use them you had to have a dedicated staff and a degree in rocket science. The usability of those features was outside our reach.”

A few years later, that SAN was replaced by one from another leading vendor that also was best-of-breed for its day. “But then (a major computer vendor) bought them, and it was clear that product development and the progress of the feature set were coming to an end. So, we decided to look to the market again.”

In 2013, the company performed an extensive survey of the storage market, using a weighted set of criteria that included performance (latency, IOPS and throughput), in-line deduplication, compression, thin provisioning, native encryption, ease of management, and support and maintenance. In the end, a proof-of-concept trial was conducted between Pure Storage and one other supplier of all-flash arrays.

COMPANY:

Chevron Federal Credit Union
www.chevronfcu.org

USE CASE:

- Database – Microsoft® SQL Server®
- Virtual Server Infrastructure – VMware® vSphere®
- Private Cloud – VMware vRealize®

CHALLENGES:

- Lagging storage performance slowed response times on key member-facing applications.
- Legacy storage was complex to manage and difficult to expand.

IT TRANSFORMATION:

- Response times for customer-facing applications improved by up to 70%.
- Storage-related capital and operating costs reduced by more than 50%.
- Downtime and Disaster Recovery Risk (DRR) for SQL Server and Private Cloud workloads eliminated.
- Space requirements for storage slashed from 40 to 7 rack units.

“With Pure Storage, the installs and upgrades are easy. Everything works the way it should.”

Mark Richer, *Systems Engineer*

“We didn’t go into this process assuming we wanted flash, because at that time all-flash was pretty new. We were just looking for the best product in the market.” At the end of the POC, Pure Storage was the clear winner, based on superior performance (high IOPS and low latencies), ease of use, and cost-effectiveness. “We knocked our success criteria out of the park with Pure,” Kundra reported.

One of the options that had been considered was a hyper-converged infrastructure. But the IT team rejected that approach, for several reasons. One was the relatively unattractive price-performance, Kundra said, along with the inability to scale computing and storage resources independently. “Plus, we didn’t want to learn another management system. We already were familiar with the VMware interface, and Pure Storage integrates seamlessly with vSphere and vRealize.”

CONSOLIDATING WORKLOADS ON ALL-FLASH

The credit union purchased two FlashArray//M20 models, one for each data center. The arrays now support all the company’s critical data and applications, including a data warehouse running on Microsoft SQL Server, a private cloud environment that is 95% virtualized using VMware vSphere, Microsoft Exchange, and an AIX system that runs the primary customer-facing applications.

Installation of the Pure Storage arrays was “painless,” according to Mark Richer, a Chevron FCU systems engineer who made the recommendation to purchase Pure and was eager to see it in place. “I had been managing the legacy storage system for about a year, and was frustrated by its slow performance. I really wanted to move ahead to the future, and during the POC, the performance and ease of use of the Pure system were clear to see.”

ACCELERATING MISSION-CRITICAL APPLICATIONS

Once installed, the impact of the Pure Storage array was evident throughout the organization. “Before Pure, our branches ran in a virtualized-application environment that is very I/O-intensive. Our application load times were becoming unacceptably slow, and that was a primary motivator for looking at new storage solutions,” Kundra said. “With the Pure array installed, we have seen application load times drop by 60 to 70%. Now, financial services representatives no longer say, ‘I’m waiting for my system’ when they are serving members. We get better member service and a more efficient staff.”

Because availability of data is a primary concern for a financial service company, the Credit Union sets a high standard for uptime. The goal for the AIX system is 99.9999% uptime, excluding maintenance. “With our legacy storage systems, we were never able to hit that number; but we have met that goal since installing Pure Storage,” Kundra noted.

Even downtime for maintenance has been virtually eliminated “We used to take a very conservative approach to maintenance, notifying people well in advance that we would be off-line for a period of time. We don’t have to do that anymore,” Kundra said. Added Richer, “I’ve probably done six or eight upgrades to the Pure Storage arrays since our initial deployment, and we’ve never once had an interruption. Maintenance is totally non-disruptive.”

SIMPLIFIED STORAGE MANAGEMENT REDUCES BURDEN ON STAFF

Richer said storage management is barely part of his job anymore. “With Pure Storage, the installs and upgrades are easy. Everything works the way it should.” He added, “I recently was asked by someone who was considering Pure Storage how often I go in

and look at latency and other metrics on our array. And I told him that I don't. That tells you that the Pure array just performs, and you don't have to worry about it. There's no latency, and there's never a systems issue."

A significant benefit from moving to Pure Storage has been savings in both capital and operating expenses.

The deduplication and data-compression features of the Pure Storage arrays are delivering data-reduction ratios of 4:1 across the board, and as high as 6:1 or more on certain applications, Kundra reported. As an example, he noted, "we have about 100 databases, each of which is around 65GB. Of that 65GB, about 55 is the same on each database. So, with the deduplication and compression, we're putting roughly 6.5TB of data into no more than 75GB of actual capacity.

"Other vendors say they have data-reduction, but they do it on a batch basis overnight, which impacts performance. Pure Storage does data reduction in-line, which means no hit to performance."

The high rates of data compression "mean we can purchase far less storage capacity, which saves dollars up-front, and it reduces ongoing expenses at the co-location facilities," Kundra said. Space requirements for storage in the primary data center, Richer noted, have been reduced from 40 rack units (with the legacy system) to just 7 rack units with Pure Storage.

EVERGREEN STORAGE MAXIMIZES INVESTMENT

Another major benefit of working with Pure Storage, Kundra said, is the Pure Evergreen™ Storage program, which guarantees that customers always have the latest technology while avoiding forklift upgrades and preserving capital investment.

"With Evergreen Storage, you are leveraging your investment, not throwing it away," Kundra said. "We have done incremental improvements to our //M20s that cause no disruption to operations and preserve our investment. We've never seen that from vendors before. And it goes over very well with Finance."

Kundra said he also appreciates the long-term perspective enabled by the Evergreen program, combined with the Pure Storage product architecture. "We are looking to roll out a virtual desktop infrastructure to our branches and some head-office functions, and we already know the Pure arrays will be able to handle that, without any disruption or huge investment. We run out of compute and memory before we hit our IOPS max. Pure always has the headroom we need."

Kundra recently briefed members of the Credit Union Board of Directors on the impact of installing Pure Storage. "I told them that we were able to deploy a solution that is better/faster/cheaper, that improves service to our customers, that makes our staff more efficient — and does so without an increase in headcount. Those are results upper management loves to hear."

After working with several varieties of SANs over the years, Richer views the benefits of Pure Storage from the perspective of both higher performance and effortless ease of use. "It's like going from a bus to a Fiat, with the power of a Ferrari."

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