

*"In the world of IT,
rarely do products
work as advertised.
The Cirrus CMO
has lived up to
and exceeded our
expectations. Simple,
intuitive, fast and
non-disruptive."
AE Business Solutions*



THE CHALLENGE

Data is the lifeblood of financial services companies. The loss of records can be catastrophic. At the same time, growth for the company equates to more data, advanced storage requirements, and tighter restrictions on downtime. For any firm in this market, there is vital importance placed on the data storage environment. Unfortunately, these demands can also result in enormous maintenance fees on aging technology.

Cirrus Data Solutions worked with a Fortune 500 financial services company to migrate from their legacy Dell EMC storage to Pure Storage All-Flash arrays. The Dell EMC storage products only had two months left on their hardware support contract and enterprise license agreement. The penalty for a support extension was astronomical. The firm's business required the upgrade of the data center to Pure Storage, but also didn't allow for scheduled downtime within the two-month window. The company and its services partner were looking for a miracle to meet this urgent storage refresh challenge.

Additionally, the client needed to ensure there was no impact on their production environment during migration. With a long reputation of outstanding service to uphold, this organization needed its status to be "business as usual" during all phases of the migration and required a high performance, real-time, and non-disruptive migration method to migrate their 600-plus servers and almost one petabyte of data between their Primary and DR sites.

The company initially investigated built-in Dell EMC tools for the migration to Pure; but upon further review, it realized this method would not only take too much time but would also require downtime for cutover—downtime that was not available in this timeframe. If the company did not meet the timeline for migration, it faced multi-million-dollar (yes – millions) maintenance and licensing renewal fees. The company needed a new approach, and it needed it yesterday.

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THE SOLUTION

Working with Cirrus Data Solutions partner AE Business Solutions, the customer chose to migrate using Cirrus Data's Cirrus Migrate On-Premises (CMO). CMO was chosen for several reasons, most significantly: Cirrus Data's unique pMotion capability, which allows the new storage to stand-in for the old storage indefinitely. This provides significant flexibility as the customer can delay the final cutover as long as the CMO appliances remain inserted. Cirrus Data's proven ability to meet very tight deadlines and to provide a non-disruptive migration via Cirrus Data's patented TDI technology made the decision to use CMO even more evident.

The project started with the CDS team collaborating with AE Business Solutions and the client's implementation team to plan the overall appliance insertions and data migrations. This migration required significant planning as the client was inserting four CMO appliances at each site (primary and disaster recovery), and the migration included six source arrays – two eight-engine VPLEXs, six target Pure Storage arrays, 600+ physical hosts (Windows and Linux) and 4933 volumes. The time invested up front resulted in a complex data migration completed securely, seamlessly, and ahead of schedule, allowing the client to avoid financial penalties.

The CDS technical team was onsite for the planning, insertion, and the initial batch of migrations. During this phase of the project, CDS was instrumental in identifying and resolving any issues that were encountered. Cirrus Data provided training to the partner and client and assisted in the initial migrations. After the first few migrations, the client only required minimal assistance for the remaining migrations. They found CMO intuitive and easy to use. Additionally, the ease of use of the CMO appliances and the overall migration process using CMO allowed AE Business Solutions to use minimal client personnel for migration activities. Aside from verification exercises during CMO insertion, the migration was executed by the core project team, allowing the client to focus their resources on running their business.

This financial services company has a production environment that is very sensitive to downtime, unplanned outages, and performance impact. Using Cirrus Data's patented TDI technology, the appliances were inserted into the data path without incurring any outages or service interruptions. Taking advantage of the throttling and iQoS capabilities of CMO, it minimized the impact of the migration on the overall system performance. Utilizing iQoS functionality it ran data migrations around the clock without impacting production workloads, therefore adding to the speed of the migration.

Cirrus Data's CMO was chosen primarily for its unique pMotion capabilities that allowed the client to retire the source storage before final cutover to avoid a significant financial penalty, saving the company millions in fees. This cost savings alone justified the decision to migrate with CMO, but the benefits didn't stop with the cost savings.

The pMotion functionality delivered additional meaningful benefits, including:

- Application performance increased on the Oracle database volumes by up to 700% immediately without any remediation, host intervention, application or database changes.
- Host-level cutover from their source storage to Pure storage was performed with zero application downtime by remediating the cluster node hosts one node at a time.
- Cutover for non-clustered hosts was able to be scheduled during their annual, semi-annual, quarterly, or monthly maintenance cycle, while pMotion allowed their hosts to access the performance gains of the new storage without any downtime or host remediation before the regularly scheduled maintenance times for these hosts.

Additionally, CMO provided the customer a SAN visibility that it never had before with its built-in un-paralleled reporting on the health, performance, and availability of the SAN environment in real-time and with I/O reporting from historical performance perspective while CMO was inserted into the environment. The advanced reporting functionality allowed automatic real-time monitoring of hosts and paths and enabled the client to monitor and mitigate any performance or hotspot issues immediately with either the source or target storage. The Managed Services Storage team lead on the project was thrilled with this level of visibility into the storage environment, "We paid for migration, and got the best SAN management tool I have seen basically for free."

The iQoS feature provided top performance in migration activities while also incurring zero impact, disruptions, or change to the business processes or workflows. This benefit became apparent when the client attempted to use some pre-owned Oracle tools for the migration. These tools turned out to be slow and cumbersome, and also placed an unacceptable burden on the hosts and Database Administrators (DBAs). Eventually, 300TB of the total 500TB of Oracle data was migrated with CMO, which freed up the DBAs to support applications, promote new applications, and to develop content for applications, where previously they had been focused solely on migrating the Oracle data.

AE Business Solutions and the client both feel that this migration could not have been done without the unique features of CMO and Cirrus Data's outstanding customer service. The project was completed two weeks ahead of schedule, and the company saved millions in fees it would otherwise have incurred.

CDS has once again proven that both its technology and staff are unique and reveal a commitment to working exhaustively to make sure deadlines are met with as little impact to the client as possible.

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QUICK FACTS

Customer Type

Fortune 500 Financial
Services Company

Source Storage

Dell EMC VNX VPLEX, VMAX
and VNXArrays

Target Storage

Pure Storage All-Flash Arrays

Number of Hosts

600+ hosts

Host Types

Windows and Linux

Host Applications

Oracle, MSSQL, SharePoint,
Exchange

Migration Type

Local using pMotion option

Number of CMO

8 CMO (4 at the Primary site,
4 at the DR site)

Insertion Method

Storage Side Multi-Target
Physical Insertion

CHALLENGES

- No downtime available until months after migration deadline
- Extremely tight timeline due to the imminent end of hardware support contract and enterprise license agreement
- Significant fees incurred if the timeline is not met
- Downtime, performance impact, and problems with data integrity would not be tolerated

SOLUTION

- Using TDI patented technology, CMO was inserted into path entirely transparent to the hosts, FC switches, and the Dell EMC storage
- Intelligent QoS (iQoS) made it possible to move data 24x7 without impact to the production environment
- pMotion allowed the client to retire the source equipment before final cutover

RESULTS

- The migration and retirement of source storage was completed ahead of schedule—avoiding multi-million-dollar financial penalties
- The customer was able to track immediately upon migration completion a 700% increase in application performance
- The overall success of the project significantly enhanced the partner's relationship with the client

ABOUT CIRRUS DATA

Cirrus Data Solutions Inc. is a leading technology provider of next-generation solutions for data mobility, specializing in block data migration and protection. The company distributes its solutions through systems integrators, managed service providers, channel resellers, and partners including HPE, IBM, Dell Technologies, Microsoft Azure, AWS, Hitachi, NetApp, Pure Storage, Infinidat, AEBS, AHEAD, CDW, SHI, Park Place, Presidio, ePlus, Insight, Computacenter, Sirius, WWT and many others. Cirrus Data Solutions is headquartered in Syosset, New York and has offices located in Dublin, Ireland, and Nanjing with sales and support offices in Boston and Chicago.

To begin your digital data transformation, [visit Cirrus Data Solutions online](https://www.cirrusdata.com).

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