



Lifesaving solutions for kidney patients

For people living with chronic kidney disease, Fresenius Medical Care counts on high-performance, efficient and highly available IT to deliver dialysis treatment and other quality care



Healthcare

Worldwide

Business needs

Gathering critical data from tens of thousands of dialysis machines in approximately 3,500 clinics worldwide, Fresenius Medical Care depends on robust, highly responsive IT so that patients have the best experience possible. With an aging infrastructure, the provider was looking for a way to improve performance and meet budget challenges.

Solutions at a glance

- [Dell EMC PowerMax](#)
- [Dell EMC CloudIQ](#)
- [Dell EMC Future-Proof Loyalty Program](#)
- [VMware vSphere](#)

Business results

- 50% decrease in data center footprint
- 35% reduction in power and cooling costs
- “Rock-solid” availability to ensure uninterrupted care
- As low as 1 millisecond sustained latency response times
- 5.1:1 data reduction ratio to increase effective capacity
- Up to 15% higher administrative efficiency

50%

Smaller data center footprint



5.1:1

Data reduction



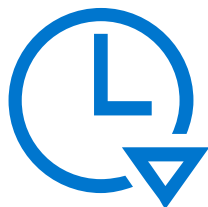
Around the globe, 850 million people suffer from kidney disease. Some 2.8 million patients with kidney failure rely on dialysis treatments to lead longer and better lives. Fresenius Medical Care is unique in that it both manufactures the machines and formulates the drugs needed for treatment in its approximately 3,500 clinics.

All of this requires a robust IT infrastructure that performs efficiently and cost-effectively, and is highly available to meet the demands of the patients and caregivers.

Fresenius Medical Care was dealing with aging storage arrays that were becoming increasingly inefficient and expensive—posing obstacles to the responsive data access that’s critical to patient care. The solution was Dell EMC PowerMax arrays.

“Dell EMC PowerMax provides exceptional performance to improve our patients’ quality of life—while reducing operational costs,” says Joe Pesaturo, senior manager enterprise systems—storage. “We’re able to provide a seamless dialysis experience from a more efficient and easier-to-administer storage environment.”

As low as
1ms
response times



Responding to patient needs

Fresenius Medical Care relies on PowerMax for its core eCube application, which continually collects data from the dialysis machines for care as well as for billing purposes. The provider has also efficiently consolidated other major workloads onto PowerMax, including SQL and Oracle databases for online transaction processing and real-time analytic processing, SAP HANA, and more—in a highly virtualized VMware environment.

“Many of our applications are extremely IO or latency sensitive,” Pesaturo notes. “PowerMax, with end-to-end NVMe, provides sustained latency rates of as low as one millisecond—enabling our nurses to deliver timely patient care. The array’s rock-solid availability and resiliency have also been a staple in our environment.”

In addition, the new platform has been a big boost to the VMware team at Fresenius Medical Care. “Moving the VMware

data stores to PowerMax has provided increased performance and bandwidth, with lower latencies for applications and workloads across the board,” remarks Pesaturo. “Applications are running better than ever on VMware. And for demanding solutions such as SAP HANA, we’ve been extremely happy with our implementation on PowerMax.”

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Joe Pesaturo
Senior Manager Enterprise Systems—Storage
Fresenius Medical Care

35%
Lower costs



Improving efficiency and reducing costs

In processing enormous volumes of patient-related and operational data through its three PowerMax 2000 arrays, maximum efficiency is a must. With the help of inline deduplication and compression, PowerMax provides Fresenius Medical Care with a superior data reduction ratio of 5.1:1.

“PowerMax has allowed us to reduce our data center footprint by 50%, while decreasing our power and cooling costs by more than 35%,” Pesaturo states.

Fresenius Medical Care has consolidated from two arrays onto a single PowerMax 2000 on its critical tier one eCube application. It has also been able to consolidate multiple Oracle databases onto a single array, which has reduced its substantial Oracle licensing costs by 25%.

Tools to work faster and better

PowerMax comes with many great tools to simplify the storage environment and make it easier to manage—improving administrative efficiency and agility by up to 15%.

“Non-Disruptive Migration ensured a hands-off migration,” Pesaturo recalls. “We completed our work quickly and effectively—without interruptions or diverting resources from our database or application teams.”

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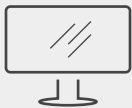
Other timesaving PowerMax tools include: SnapVX for zero-impact, space-efficient snapshots for dev/test as well as local protection and recovery; SRDF/Metro to replicate transaction logs for the eCube app; and AppSync for more efficient non-production storage environment refreshes.

“We’ve implemented CloudIQ within our environment, and it’s a great tool that provides one ‘pane of glass’ for our entire infrastructure,” says Pesaturo. “This has helped us reduce costs while enhancing performance and availability, as well as assisting in our long-term capacity planning.”

“Dell has long been a trusted partner, and the Future-Proof program really solidified this for us. The clear price maintenance component was extremely important in our discussions during the purchase process for the new PowerMax arrays.”

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Senior Manager Enterprise Systems—Storage
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