

DELIVERING HIGH-QUALITY, COMPASSIONATE HEALTHCARE

Dealing with rapid growth and increasing complexity created by multiple storage platforms and vendors, CHRISTUS Health needed better performance, reliability and simplicity to serve patients well



Healthcare | Americas

Business needs

CHRISTUS Health's mission is to extend the healing ministry of Jesus Christ to every individual, with special concern for the poor and underserved. The organization was finding it difficult to efficiently and affordably keep up with the demands of physicians and clinicians for timely patient information at the bedside.

Solutions at a glance

- [Dell EMC XtremIO X2 and X1 arrays](#)

Business results

- Offers better performance to improve patient care at the bedside
- Decreases the time to run reports from 12–14 hours to 2–3 hours
- Dramatically reduces space, power and cooling costs
- Provides metadata-aware replication to meet RPOs of as little as 60 seconds
- Simplifies management tasks to leave more time to deliver value

300%
increase in IOPS



4x
lower response times



CHRISTUS Health is one of the top 10 Catholic, faith-based healthcare systems in the U.S. The organization consists of more than 600 services and facilities, including over 60 hospitals and long-term care facilities that are staffed by more than 45,000 associates, including 15,000 physicians. Headquartered in Irving, Texas, CHRISTUS Health's facilities are located in a handful of U.S. states, Mexico, Chile and Colombia.

With workloads growing rapidly and response times as high as 6.5 milliseconds threatening to impact patient care, CHRISTUS Health wanted to significantly improve storage performance, increase efficiency and reduce costs through enhanced compression and deduplication, ensure reliability, and simplify the IT team's administrative tasks.

Healthy gains in performance and simplicity

In the past, CHRISTUS Health had a hodgepodge of legacy storage including HPE, NetApp and Pure that was added to the mix due to the acquisition of several hospitals. The organization chose Dell EMC XtremIO to achieve needed performance gains and simplify storage management.

CHRISTUS Health relies on five XtremIO X2 and four XtremIO X1 arrays with a total of 32 X-Bricks to accommodate approximately 2PB of storage in three data centers in San Antonio and Tyler, Texas. The XtremIO arrays are primarily used for production workloads, including the organization's MEDITECH electronic health records (EHR) system, SQL and Oracle databases, and other applications and workloads.

XtremIO allowed CHRISTUS Health to achieve 300 percent greater throughput, with a 4x reduction in response times. "XtremIO has made a profound difference in our performance," says Blake Smith, system director of enterprise infrastructure for CHRISTUS Health. "Reports that were taking 12 to 14 hours to run now finish in two to three hours. This has enabled us to deliver the speed and reliability that our physicians and clinicians are demanding in primary care and acute care facilities."

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Blake Smith
System Director of Enterprise Infrastructure,
CHRISTUS Health

5:1
data reduction ratio



Storage management has also become far easier for Smith and his team, enabling staff to focus on enhancing overall database performance, tuning workloads within the environment and handling projects that deliver more value to the organization. In the past, much of the team's time was spent just managing data and provisioning.

Reducing data center costs

As CHRISTUS Health migrates from XtremIO X1 to X2, the organization has seen its data compression ratio increase from a good 3:1 to an excellent 5:1.

Smith is also impressed with how the organization has been able to shrink its IT footprint by 80 percent as well as its costs. “We’ve removed four rows of storage and put everything we need in one cabinet,” Smith comments. “XtremIO X2 has significantly reduced our power and cooling costs. We now run half the number of AC units that we used to in our data centers.”

At the same time, the XtremIO array’s scalability has proven valuable, allowing CHRISTUS Health to stay ahead of growth. The organization started with X1s that weren’t even fully configured, and Smith’s team has been able to expand as needed with no disruption—and now migrate to XtremIO X2 with similar ease.

Metadata-aware replication provides unmatched efficiency

The metadata-aware replication in XtremIO X2 helps CHRISTUS Health efficiently meet its recovery point objectives (RPOs) for patient care. There’s significantly less complexity, no additional equipment is needed, and with X2, data blocks that already exist on the target site will never be sent. Metadata-aware replication is highly reliable and available to meet RPOs of as little as 60 seconds.

“There’s been no performance or latency drop-off at all,” says Roberto Hurtado, enterprise storage engineer with CHRISTUS Health. “We couldn’t even tell the XtremIO X2 metadata-aware replication was turned on. In addition, the configuration wizard was really intuitive.”

Smith concludes, “XtremIO has made a real difference in how we deliver patient care. The performance of our nurses and physicians is now even better. Dell EMC is helping us achieve our mission and operate efficiently at a reasonable cost.”

80%
smaller footprint



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