

CASE STUDY



Sanford Health Easily Scales Citrix XenApp with Fusion ioMemory™ Solutions

Solution Focus

- Healthcare
- EpicERP
- · Citrix Server
- · Microsoft SQL Server

The SanDisk® Solution

Accelerated virtualized EMR (Electronic Medical Record) application on EpicERP by moving Citrix XenApp image off SAN and onto Fusion ioMemory $^{\text{TM}}$ ioDrive $^{\text{S}}$ cards in provisioning servers.

6x faster ERP reporting

At least 3x faster boot times

Consistent, scalable performance for 135 Citrix Receivers servicing over 1,300 physicians and 26,000 employees

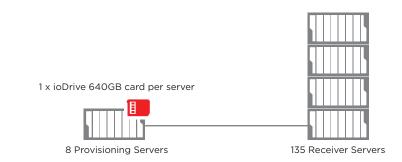
Improved availability by ensuring all 135 receivers boot within the timeout window after maintenance

Eliminated maintenance work restarting stalled boots after upgrades and patches

SanDisk Powered ERP System

Physicians, Nurses, Staff EPIC Hyperspace 2012 (EMR App) Microsoft SQL Server 2008 R2 Citrix Provisioning Server 6.5 NTFS Windows 2008 R2 SE VSL Fusion ioMemory™ - ioDrive® 640GB

SanDisk Powered Software Stack



ERP System Overview Provisioning Servers

- 8 x blade servers, dual 12-core processors @2.1GHz processors, 32GB RAM
- Application: Epic Hyperspace 2012
- Database: Microsoft SQL Server 2008 R2
- OS: Windows 2008 R2 SE
- Hard disks: 2 x 15K SAS disks

- SanDisk products: ioDrive 640GB card
- Moved vDisk image for XenApp servers off SAN and onto ioDrive card in provisioning servers

Citrix Receiver Servers

- 135 x blade servers, dual 12-core processors @2.1GHz processors, 96GB
- Application: Epic Hyperspace 2012
- OS: Windows 2008 R2 SE



"We now deliver the consistent performance that our physicians and nurses need. Reports that used to take an hour to run now complete in about 10 minutes."

"I have gone from hearing complaints about performance almost daily, to not hearing them at all anymore."

Steven Connell, Server Support Manager Sanford Health

The Bottom Line

Sanford Health scaled from 40 to 135 Citrix Receivers, while improving service levels and eliminating timeout management headaches.

- Increased quality of service to physicians, nurses, and staff using Epic-based EMR system
- Saved 20 man-hours per week that IT used to spend on inefficienty patch and upgrade process
- Scaled the system, more than tripling the Citrix servers on the same hardware

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At SanDisk, we're expanding the possibilities of data storage. For more than 25 years, SanDisk's ideas have helped transform the industry, delivering next generation storage solutions for consumers and businesses around the globe.

The performance results discussed herein are based on internal Sanford health testing and use of Fusion ioMemory products. Results and performance may vary according to configurations and systems, including drive capacity, system architecture and applications.

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