



# Memorial Hermann Health System delivers outstanding patient care

*With fast access to medical records provided by  
IBM FlashSystem and IBM Flex System*

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## Overview

### The need

To make the best treatment decisions, doctors at Memorial Hermann require rapid, reliable access to patients' medical records and fast insight into changing health indicators.

### The solution

The organization deployed extremely high-performance IBM® FlashSystem™ storage and IBM Flex System®, which provide fast access to patient records and support real-time analysis of medical data.

### The benefit

Cut average response times for its medical records database by more than 99 percent for fast treatment decisions; real-time data analysis helps doctors identify previously unknown signs of illness.

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Memorial Hermann Health System is the largest not-for-profit health care system in South East Texas, managing a total of 12 hospitals, over 100 outpatient locations, and supporting a network of 5,000 affiliated physicians.

## Providing top-quality care

Memorial Hermann must deliver effective, high-quality medical services that support its patients' needs. Equally, the organization is under constant pressure to boost efficiency—a key concern for not-for-profit bodies.

As part of this drive for efficiency, Memorial Hermann deployed Cerner software to provide electronic medical records, which can be shared faster and more economically than physical files. Sharing data quickly is critical, as delays in identifying and treating illnesses can mean the difference between life and death.

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*Memorial Hermann relies on IBM technology to stay at the forefront of medical research. "Deploying high-performance flash storage has taken our analytics capabilities to a new level, so we can now spot signs indicative of certain ailments before they are published," says Dr. Robert Murphy, Chief Medical Informatics Officer.*

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## Solution components

### Hardware

- IBM® FlashSystem™ 820
- IBM Flex System® x240
- IBM Storwize® V7000
- IBM System Storage® DS8800

### Software

- IBM System Storage SAN Volume Controller

### Applications

- Oracle Database

### IBM Business Partner

- Mark III Systems
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Dr. Robert Murphy, Chief Medical Informatics Officer at Memorial Hermann, explains: “Switching to electronic medical records means that we have huge amounts of healthcare data in one place. We wanted to analyze this data to spot signs indicative of certain ailments and diagnose diseases early to help us provide the best possible care for our patients.”

Strong organizational growth and rising volumes of more detailed medical data at the organization have quadrupled storage requirements in recent years. The IT team knew that expanding its existing heterogeneous storage environment was not efficient or sustainable. It needed instead a solution that could provide ultra-fast data access, rock-solid reliability and excellent value for money.

## Ultra-fast storage

Memorial Hermann deployed two high-performance IBM FlashSystem arrays, which provide the high throughput required for mission-critical applications, including the Oracle database that stores patients’ electronic medical records. Mark III Systems, an IBM Premier Business Partner, helped Memorial Hermann deploy the solution quickly and without downtime—a key factor, given that doctors require access to patient data 24/7.

Additional storage is provided by IBM System Storage® DS8800 and DS8700 devices, plus highly-efficient IBM Storwize® V7000 devices. Memorial Hermann virtualized its storage environment using IBM System Storage SAN Volume Controller, which creates a flexible pool of storage and provides a single point of control for all devices.

## Easy-to-manage server infrastructure

The organization also standardized on IBM Flex System x240 nodes running VMware clusters and Citrix Servers. Users control the chassis with the IBM Flex System Manager™.

Ty Hall, Infrastructure Manager at Memorial Hermann, says “Being able to just use one interface has significantly reduced the time our engineers spend on system administration.”

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*“Teaming up with IBM enables us to leverage the big data analytics and fast storage we need to help us achieve our goals and improve patient care.”*

— Ty Hall, Infrastructure Manager at Memorial  
Hermann Health System

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As a result, engineers can spend more time on other projects that deliver value and improve patient care.

### **Rapid access to critical medical information**

Migrating to IBM FlashSystem has cut average response times for its Oracle electronic medical records database by more than 99 percent, providing doctors with faster access to the data they need to make the best treatment decisions.

“The speed and reliability provided by IBM FlashSystem play a key role in helping us look after patients,” remarks Dr. Murphy. “For example, a condition called sepsis causes the body’s immune system to go into overdrive so that a basic infection can cause organ dysfunction or even death. By analyzing the medical records of all patients across our 12 hospitals in real-time, we can detect patterns that indicate sepsis and take action in minutes instead of hours—that can be the difference between life and death.”

### **Cutting energy bills**

IBM FlashSystem features outstanding energy efficiency, helping Memorial Hermann cut power consumption by 96 percent, cooling requirements by 95 percent and rack space usage by 98 percent.

Hall comments: “We are reducing our energy costs, so we can invest more funds in providing top-notch healthcare services.”

Dr. Murphy concludes: “We are investing heavily in population health and teaming up with IBM enables us to leverage the big data analytics and fast storage we need to help us achieve our goals and improve patient care.”

### **For more information**

To learn more about IBM FlashSystem, please contact your IBM representative or IBM Business Partner, or visit the following website: [ibm.com/storage/flash](http://ibm.com/storage/flash)



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