



Case Study

# A leading healthcare provider transforms their data center ecosystem

## The client

The client is an esteemed, university healthcare enterprise worth more than \$10 billion that provides nationally-ranked care. The provider operates five disparate medical centers that serve hundreds of thousands of patients with routine and complex medical care, including Level 1 trauma, psychiatric, pediatric, and cancer.

## The challenge: Consolidate mission-critical healthcare data centers

The client's five medical centers launched an initiative to transform more than a dozen data centers located across the state in which they operate. The project was intended to reduce the costs of running multiple data centers, avoid the expense of natural-disaster proofing mandated by the state, modernize data center infrastructure, simplify IT management, and set the stage for future integration of data from all of the client's medical centers for easy access to patient information across the university system. The effort also laid the foundation for future IT transformation efforts to support continuous improvement of patient care delivery.

The first step identified by Cloud + Data Center Transformation (CDCT) was to consolidate two data centers into a single colocation facility based in a nearby region. The relocation would slash power costs by two-thirds, free up 15,500 square feet of costly local real estate for reuse, avoid a \$30 million expenditure to bring the two sites into compliance with building code requirements, and migrate critical healthcare delivery systems away from disaster-prone areas. In addition, this initiative would simplify IT management. The challenge was to move 550+ applications — from admission, registration, telephone, X-ray, and lab systems to research and education systems — without disrupting mission-supporting services.

"The fact that our migration went so smoothly is a credit to CDCT's processes," said the client project lead. "When you're dealing with healthcare delivery systems like we are, having that kind of control and assurance is imperative for keeping medical services up and running."

Industry:  
Healthcare

CDCT provided:  
Data center transformation including consolidation, migration, and relocation services

CDCT services:

- Transformation strategy
- Project discovery
- Application mapping
- Migration planning
- Logistics planning
- Project management and execution

## The solution: Leverage CDCT transformation expertise for strategy, methodology, and project management

The medical center's IT staff recognized the need to engage a data center transformation specialist given the magnitude and risk involved. "We were dealing with patient care delivery systems, so we had to do everything we could to mitigate risk," said the client's technology director. "That meant bringing in a partner that specializes in data center consolidation and relocation."

After a rigorous RFP process, the technology director and his committee selected CDCT based on factors ranging from a cost/benefit analysis and the company's long history of successful project execution to its specific experience with academic medical centers and HIPAA requirements. We then assembled a team that included a program manager, several project managers/workstream owners, system architects, consultants, and analysts, and went to work.

First, we performed a comprehensive application inventory at the client's two data centers. Next, they worked with client staff to identify computing servers that were no longer needed and could be decommissioned. Then they used our proprietary mapping methodology to determine which applications could be safely moved together without affecting other systems, and built a strategy for moving those application bundles in a specific sequence that would minimize risk.

With that roadmap in place, CDCT orchestrated a complex series of overlapping migration events utilizing our personnel, the medical center's IT infrastructure and application teams, and application subject matter experts who were brought in to test the systems. Physical hardware moves to the new colocation facility and to a disaster-proof site used for high-bandwidth and latency-intolerant applications took place on weekends. Physical-to-virtual migrations designed to reduce rack space and power needs were timed to prepare for application moves. Migration events were carried out with an intricate combination of logical and physical workload relocations and were completed within the medical center's specified downtime windows, in some cases as short as two to four hours.

"CDCT had solid processes, not only in planning and executing the project, but also in helping us communicate our plans to our clinicians, researchers, academic staff, and faculty," the client's technology director said. "They have done this kind of project many times before, and it showed."

## The benefits: Smooth data center transformation saving \$7.5 million over 5 years

Thanks to our meticulous planning and methodology, the project met the CIO's goal of moving 93% of systems within specified downtime windows. The consolidated data center immediately began to deliver the expected cost advantages. A \$7.5 million savings is projected over five years through lower energy and real estate costs, as well as more efficient rack space and facilities management.

In addition, by shifting the two data centers away from disaster-prone areas, the project not only improved the safety of critical data and systems, but also eliminated the \$30 million capital investment that would have been required to meet local building codes. Other benefits include IT modernization, resulting in better performance for some applications.

### Benefits:

- 93% of systems moved in allotted downtime
- Unneeded applications identified and decommissioned
- IT modernization
- Simplified IT management
- Foundation for future IT transformations

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## \$7.5M

savings projected  
over 5 years

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## 550+

applications  
moved  
successfully

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## ZERO

disruption to  
patient care

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2  
data centers merged  
for cost efficiencies

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