CASE STUDY

Revolutionizing Healthcare Infrastructure

CLIENT BACKGROUND

A Catholic, not-for-profit health organization serves the South-Central region community with a mission to extend the healing ministry of Christ to all who seek care.

- Anchored by a 1,112-bed hospital.
- Home to the region's only children's hospital and a level IV neonatal intensive care unit.
- Features a 168-bed heart hospital and the South-Central region's leading trauma and emergency center.
- Operates multiple clinics with over 600 providers at more than 110 locations.
- Employs over 11,000 individuals, including 1,000 physicians and 700 volunteers.
- Largest private employer in the county.

THE CHALLENGE

The healthcare system needed to add power to support additional workloads planned for its data center. Initially, the experts were brought in by a partner to assess the data center and determine how to achieve these requirements. However, during the initial walkthrough, they identified numerous significant issues that required immediate attention:

- Tier I Design Limitation: The data center was only a Tier I level due to a single chilled water loop and one generator.
- Aging Chilled Water System: At 36 years old, the system's emergency shut-off valves were non-functional, and pump isolation valves were seized. This left the system at its mathematical cooling load limit, posing a significant risk of downtime.
- Insufficient UPS Capacity: The Uninterruptible Power Supply (UPS) units had only 12kW of capacity remaining, endangering failover load capability.
- Outdated and Malfunctioning PDUs: All Power Distribution Units (PDUs) were 36 years old, with malfunctioning displays and unexplained warning lights.
- Compromised Raised Flooring: Structural concerns arose from materially compromised raised flooring.
- Cooling Challenges: A cold aisle containment pod created inefficiencies for equipment outside the pod.

THE SOLUTION

After the assessment, the experts recommended pursuing an alternative data center solution. The options presented included:

1. Building a New Facility: Starting from the ground up.
2. Retrofitting an Existing Space: Modifying an already available structure.
3. Moving to a Colocation Services Provider: Leveraging third-party facilities.

Ultimately, the healthcare system chose to retrofit an existing space to meet their data center needs. The experts assisted in identifying a suitable facility and guided the negotiation process. They located a nearby site with 4,000 square feet available, conveniently close to the main campus. Negotiations are currently underway to finalize the deal and initiate the buildout of the new data center.

RESULTS AND IMPACT

By partnering with the experts, the healthcare system was empowered to:

- Avoid the disruptions and risks of an extended data center outage.
- Opt for a cost-effective solution that ensures capacity needs are met.
- Maintain continuity of critical healthcare services.

The new data center initiative will provide the healthcare system with a reliable infrastructure to support growing operations and sustain its commitment to exceptional healthcare for the Tulsa community.

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