Hospital System Designs and Builds New Virtual Data Center

Hospital of Central Connecticut deploys Cisco Unified Computing Solution to reduce costs while increasing capabilities.

**EXECUTIVE SUMMARY**

**Hospital of Central Connecticut**
- Healthcare
- New Britain, Connecticut USA
- 3,000 Employees, 500 Physicians

**Business Challenge**
- Increase capacity while reducing costs and complexity
- Replace outdated infrastructure
- Discontinue outsourcing technology

**Network Solution**
- Designed and built new state-of-the-art virtual data center
- Reduced number of physical servers while increasing capacity

**Business Results**
- Improved network speed, fluidity, stability, and scalability
- Increased capacity for future applications
- Reduced number of data center-related incidents

**Business Challenge**

The Hospital of Central Connecticut (HCC) consists of two campuses: one in Southington and one in New Britain. HCC is also a member of the Central Connecticut Health Alliance, which is a system of healthcare affiliates that provide a wide array of services throughout the region, caring for patients from birth through end of life.

The Hospital of Central Connecticut is a 414-bed, acute-care teaching hospital with approximately 3,000 employees and 500 physicians. HCC strives to be the provider of choice and central access point for the healthcare needs of the community. “We are dedicated to fostering, sustaining, and improving the health status of the people in the communities we serve,” said Bob Schwarm, Director of Technology of the Information Technology Services (ITS) department. “The ultimate business mission of the hospital system is to provide quality patient care. This is the core focus of each and every department within our organization. The technology team strives to help our clinical colleagues deliver world-class quality care through the adoption of cutting-edge technology.”

In late 2009, Schwarm and his team began the discussion of building a new ITS department for the hospital system. “Our goal was to provide the hospital system with an IT infrastructure that would lead HCC into the future with a fluid environment and capacity-at-demand for a reasonable cost. We had to reduce cost and complexity while driving supportability and stability forward,” he said.

The process of meeting this goal consisted of: designing and building a new state-of-the-art data center; migrating services and applications from an off-site data center in Dearborn, Michigan, and a decaying on-site data center in New Britain, Connecticut and converging services from both into a new data center at the New Britain location; and providing a virtualized computing platform with an on-demand capacity for HCC’s current and future technology initiatives.
“It was important that HCC adopt a solution that would give us a rapid deployment away from outsourcers,” said Schwarm. “The legacy data center on-site was deteriorating, lacked cooling capacity and redundancy, and had an electrical demand that was beyond the survivable capacity of any major event. As we looked to start our in-sourcing process, our objective was to leverage existing staff in building and supporting a solution that allowed for the centralized management of a virtualized environment.”

**Network Solution**

Having worked with Cisco in the past, Schwarm looked into solutions that would help HCC achieve its data center missions quickly and efficiently. “I was confident in Cisco’s delivery method and saw the company as an industry leader in terms of technology and execution model,” he said. “They were able to provide a method of seamlessly migration services that resulted in applications transitioning from physical servers to the new virtual environment with minimal downtime.”

Schwarm saw an opportunity to save HCC several million dollars through the marriage of virtualization and technology. He championed the deployment of the Cisco Unified Computing System™ (UCS), a next-generation data center platform that unites computing, network, storage access, and virtualization into a cohesive platform. The UCS solution integrates a low-latency, lossless, 10 Gigabit Fibre Channel over Ethernet unified network fabric with enterprise-class, Intel-based, x86-architecture, and ties it all together with a single pane of glass management system. This approach decouples scale from complexity and is designed to reduce the total cost of ownership and increase business agility.

Instead of the traditional design where one application runs on one physical server, a single physical server can now host multiple virtualized servers (also called virtualized machines) and support multiple applications from a single device. The number of central processing units and memory can be easily modified on virtualized servers as applications grow. Additionally, HCC technicians can relocate virtualized servers between physical servers to accommodate an application’s changing demands for computing resources.

Cisco, EMC, and VMware recently partnered to create a Virtual Computing Environment (VCE) Vblock Infrastructure Platform. HCC was one of the first organizations in the country to leverage it. VCE’s Vblock represents a unique collaboration in development, services, and partner enablement designed to reduce risks when moving to the private cloud. This scalable, high-performance platform supports configurations that deliver a broad range of IT capabilities.

“Our timeline for building out the infrastructure and performing the migrations was aggressive,” said Schwarm. “Millions of dollars rested on timely execution and completion due to contract obligations. We were confident the VCE Vblock platform would deliver the solution on time and on budget.”

“**Our Cisco UCS infrastructure allows us to deliver quality, best-of-breed solutions in a timely and adaptive delivery model.”**

—Bob Schwarm, Director of Technology, ITS, The Hospital of Central Connecticut
Business Results
“HCC utilizes technology as a vital tool for supporting the clinical objectives of our organization and improving the safety, accuracy, and effectiveness of delivering exceptional care to our patients,” said Schwarm. “Our Cisco UCS infrastructure allows us to deliver quality, best-of-breed solutions in a timely and adaptive delivery model. The flexibility it provides is a significant asset, allowing us to be proactive and efficient in the way we deliver systems that complement and support patient care.”

The hospital system was able to transform its infrastructure from a purely physical backbone with 100 servers to a 90 percent virtualized estate with more than 200 servers. The virtualized data center and the Cisco® UCS blades allow HCC to take advantage of the speed, fluidity, and scalability of a large, stable virtualized environment. HCC is now able to provide a stable server computing environment with an 80 percent reduction in priority-one incidents. Additionally, the hospital system now has the capacity to build out its computing and storage resources as business demands increase. Utilizing the new virtual data center, the hospital IT team was able to move 90 percent of its Windows and Linux environment to run on the UCS estate in less than 10 months.

“As we moved each of the systems from Dearborn, Michigan to New Britain, Connecticut, we heard analysts and users ‘passing the word’ that their applications performed dramatically better on the UCS virtualized environment. We had end users specifically asking when their application was slated to be migrated due to the desire to experience the overall improved performance and productivity,” Schwarm said.

For more information:
To find out more about the Cisco Unified Computing System, go to: www.cisco.com/go/unifiedcomputing