DC BLOX

RE-IMAGINING NETWORK CONNECTIVITY IN HEALTHCARE IT

Children's of Alabama in Birmingham is ranked among the best children's hospitals in the nation by U.S. News and World Report. Children's is one of the largest pediatric medical providers in the U.S., serving patients from every county in Alabama to every state. Children's is a private, not-for-profit medical center that also serves as the teaching hospital for the University of Alabama at Birmingham (UAB) pediatric medicine, surgery, psychiatry, research, and residency programs.

Overview

Healthcare systems are focusing on delivering more personalized care, expanding their eco-system of providers, and adding connected medical devices and other IT tools to their digital environments. Connected medical IoT devices and health monitors, as well as smartphones and tablets used by clinicians to access electronic medical records (EMRs), are constantly communicating with the network. Reliable networks are needed for these devices to work and for clinicians, providers, and patients to interact with information quickly. In this increasingly complex environment, healthcare IT leaders are now faced with managing distributed IT systems efficiently and cost-effectively, all while ensuring data security and conforming to HIPAA requirements. The challenges of having to grow, scale and innovate has large medical facilities, like Children's of Alabama, re-imagining their future IT infrastructures.

"I have worked in several tier II cities and never had an option for colocation at this level. This was a perfect fit at the best time for Children's of Alabama."

Bob Sarnecki, CIO at Children's of Alabama

Challenges

Children's of Alabama first came to DC BLOX with a need for resilient Internet access. They sought a secondary provider with a geographically diverse route from its primary provider from the hospital. If an outage occurred, then having another Internet connection would allow critical communications to continue, and there would be no disruption to patient care.

Also, Children's was faced with how to best reach their new EMR provider, EPIC Systems. They needed a private network connection to EPIC's data center and once again, needed to provision new circuits back to the hospital. The IT leadership team was finding that connecting an increasing number of external services to a growing hospital campus was getting too complicated and expensive. Children's wanted to streamline the costs of direct and redundant network access to all the systems the hospital needed to externally connect to.

Another challenge being faced by Children's was that IT had to reserve scarce hospital space for their IT equipment while leaving room for future growth. IT space often stayed dormant, and securing space meant negotiating with different hospital departments who needed it for other important functions. The condition of having limited IT space applied to all of Children's facilities including over 20 pediatric and outpatient clinics across Alabama. Children's needed flexible space for their IT systems, both inside and outside the hospital, to meet specific immediate needs and to have the scale to grow over time. To start, Children's needed a place for equipment that was outgrowing its space at a nearby surgery center. Children's wanted a data center with impeccable security, networking, redundancy, and infrastructure resiliency.

Before talking with DC BLOX, Children's considered leveraging a nearby data center that was built for use by a local enterprise. Although the hospital Board approved the decision to use the building, the cost to bring it up to standard, and maintain it, was very expensive and out of budget. They still needed to connect to a multitude of partners, locations, applications, and devices which is always time-consuming and expensive especially when local providers don't have the direct connections needed. At the time, there wasn't a tier III data center provider nearby that could meet Children's needs.

"I don't have to worry about the last mile anymore. Are providers on our street? Is there enough space in the conduit? Where are the entry points?"

Bob Sarnecki

Ultimately, the real value of what DC BLOX delivered to Children's turned out to be much more than originally envisioned.

Solution

DC BLOX delivered the secondary Internet route that Children's of Alabama initially sought and more. A single fiber connection from the hospital to DC BLOX's tier III data center in Birmingham (BHM1) was planned until the IT leadership team discovered that DC BLOX had resilient Internet access within its own network environment. Children's decided to use DC BLOX for all Internet access.

Children's then planned to run dual fiber connections from the hospital to BHM1 for redundancy. To ensure diversity, one network connection runs from the main campus and terminates at one side of BHM1, while the other connection runs from a separate hospital building and terminates at the opposite side. DC BLOX delivers Dedicated Internet Access (DIA) using two separate Internet providers through its Nashville exchange, and at 56 Marietta Street in Atlanta. If one Internet route is unavailable, then traffic is automatically routed through the other.

Every secure, reliable tier III DC BLOX data center serves as an Exchange Point on DC BLOX's Connectivity eXchange (DCB-CX). By connecting to DC BLOX's network through the Birmingham data center, Children's gains access to a myriad of connectivity options through the DCB-CX. The DCB-CX enables carriers, ISPs, content delivery networks, hyperscale cloud providers, research institutions, local governments, rural broadband providers, and enterprises to peer with partners and providers to distribute data locally, regionally, and globally.

Bob Sarnecki, Chief Information Officer at Children's Hospital of Alabama, wanted to set up Children's for success for the long term. The DCB-CX would provide future IT advantages for the hospital and a new way to reach their EMR. DC BLOX arranged with EPIC to connect their networks, so over the same two redundant connections to BHM1, Children's can leverage the Connectivity eXchange for Internet access and to connect to EPIC. The complexity of having to bring in so many multiple circuits and digging new fiber back to the hospital campus is gone.

Also, Children's is no longer faced with the problem of having to build or maintain its own data center. They can move equipment from their hospital and any of their more than 20 associated clinics, surgery centers and physicians' offices into a nearby DC BLOX facility designed to Uptime Institute's Tier III Standards and reduce or eliminate the need to maintain valuable space in the hospital to house IT systems. Featuring N+1 power and cooling redundancy, DC BLOX's Birmingham data center ensures the resiliency of their systems. BHM1 is highly efficient,

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> "We designed our core network architecture around DC BLOX. It's the foundation for how we are planning to build out the rest of our environment. We are moving more things into a scalable, redundant environment that we couldn't do ourselves without tremendous expense."
>
> *Bob Sarnecki*

secure, and interconnected, providing an access point on the DC BLOX Connectivity Exchange so that Children's receives private network access to dozens of carriers built-in to DC BLOX data centers across its footprint, regional Internet Exchanges, public cloud providers, and any entity connected to DC BLOX's network. DC BLOX backs up its reliability with a 100% SLA on power and cooling and a 99.99% availability SLA for network services to ensure the hospital's infrastructure is always available to support its patients.

Ultimately, the real value of what DC BLOX delivered to Children's turned out to be much more than originally envisioned. Bob Sarnecki, CIO at Children's Hospital of Alabama, realized that DC BLOX's Connectivity eXchange could provide the agility and flexibility Children's needed to serve as the strategic platform for all future network connectivity. Instead of continuing to bring multiple network connections back to the main campus, BHM1 could become the new connectivity hub for Children's!

Children's of Alabama is now developing a plan to extend their network core with DC BLOX. As existing network contracts expire, Children's can move more network connections over to DC BLOX. Today, network security is managed from their premises. But in the future, Children's will leverage DC BLOX's colocation service in Birmingham to host their firewalls, other network equipment, and additional applications. Children's will no longer be constrained by their legacy network, limited local service provider options, or having to colocate in out-of-state Internet Exchanges. The IT team can easily manage their eco-system of providers while planning for a more agile IT infrastructure.

Children's now has access to all of DC BLOX's data center services. Children's runs their call centers from the hospital which keeps their telecom infrastructure on-premises and requires call agents to work on-site. However, their vision for the future is to digitize their telecom systems and distribute calls from call center infrastructure placed inside a DC BLOX facility.

As patient and hospital operating data grows, the need for large-scale off-site data storage will also grow. DC BLOX's Cloud Storage will enable Children's to move sensitive data off-premises into a HIPAA and HITRUST compliant data center.

"Without the proper disaster recovery plan, healthcare organizations put the care and well-being of their patients at risk, as well as their own credibility. The Birmingham data center interconnects with any DC BLOX data center or PoP on the Connectivity eXchange, ensuring IT resiliency and reliability to support doctors, staff, patients and their families."

Gil Keller, Director of IT Infrastructure at Children's of Alabama

Children's began with the need for resilient connectivity and found that DC BLOX could help them accomplish more. Prior to DC BLOX entering the Birmingham market, Children's didn't have a local option for reliable data center services along with the network infrastructure reach and resiliency they needed. The DC BLOX Birmingham data center was ideal, and it's located so close to Children's of Alabama that it's visible from the main campus. Not only can their IT staff access their equipment easily, but they can access it in a data center with the same quality, reliability and connectivity as data centers once found only in major NFL cities.

Today, healthcare providers are faced with tough decisions, and it's not always easy to choose the right path forward, especially when it comes to technology. But for Children's of Alabama, the answer was literally right in front of them. With DC BLOX, Children's made an initial upfront investment in dark fiber to move toward an infrastructure that will reduce future spending and improve the hospital's core mission of putting efficient and precise patient care first. DC BLOX's Birmingham data center and Connectivity eXchange will empower Children's to make business transformations faster while also freeing up time for IT to focus more on the hospital's core mission. The healthcare revolution has just begun. Through its strategic partnership with DC BLOX, Children's is well-positioned to achieve connectivity across their entire care eco-system.

Through its partnership with DC BLOX, Children's of Alabama will realize the following benefits:

- Increased freedom to house IT equipment and data outside of the confines of the hospital
- A "connectivity hub" to meet future networking requirements reducing the cost and complexity of adding network infrastructure and last mile connections
- Enhanced agility, resiliency, and reach with a multitude of connectivity options provisioned on-demand to move data anywhere it is needed
- A local, secure, and reliable tier III colocation data center providing practically unlimited space for scalability and growth
- Lower CAPEX and real estate costs required to house IT equipment and build last mile access to their campus

About DC BLOX

DC BLOX owns and operates interconnected multi-tenant data centers and dark fiber solutions that deliver the infrastructure and connectivity essential to power today's digital business. DC BLOX's private network fabric and robust connectivity ecosystem enable access to built-in carriers, Internet exchanges, public cloud providers, and DC BLOX data centers to businesses across the Southeast. DC BLOX's data centers are located in Atlanta, GA; Birmingham, AL; Huntsville, AL; Chattanooga, TN; Greenville, SC with High Point/Greensboro, NC and a new cable landing station in Myrtle Beach, SC under construction. For more information, please visit www.dcblox.com, call +1.877.590.1684, and connect with DC BLOX on Twitter, LinkedIn, and Facebook.

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