



CASE STUDY

HISTORIC SERVICE ORGANIZATION ADOPTS CISCO ACI TO MOVE INTO THE FUTURE—AND ITS NEXT 100 YEARS



THE CLIENT:

Boys Town
www.boystown.org

THE CHALLENGE:

Boys Town had two different core network infrastructures in their primary and secondary data centers. Incompatibilities between the two limited the functionality of their network, as well as the ability to extend services and grow the organization.

THE SOLUTION:

To overcome the limitations of its existing network, and to ensure a future-proof network that would provide the agility and flexibility to grow, Boys Town implemented a completely new network infrastructure based on Cisco ACI™ technology.



In 2017, national service organization Boys Town marks 100 years of supporting at-risk children across the United States. Since its beginnings in Omaha, Nebraska as Father Flanagan's Boys' Home, the organization has grown to provide services and support to boys, girls, families and parents in need across the country. The Boys Town network now includes two hospitals, six remote clinics and more than 60 national affiliate residential homes in 12 states, including at its original location in the incorporated village of Boys Town, a suburb of Omaha.

The Boys Town National Research Hospital in downtown Omaha is recognized internationally for its clinical and research programs related to childhood deafness. The organization also operates a credit union, school system, and the village's own police and fire departments. Additionally, Boys Town supports a number of state and local children and family service agencies around the country, effectively making it a service provider with a national reach.

Supporting all these is an IT and networking group that operates at a scale similar to many large corporations. Because of the diversity of the mission they serve, Boys Town's IT Department must pay particular attention to not just cost, but also the quality of service it provides both within and outside the organization.

In early 2016, Boys Town's core network infrastructure was in desperate need of transformation. The organization had mismatched core switch technologies in its primary and secondary data centers, located respectively in the headquarters building and the National Research Hospital. According to Matt Welna, Senior Director of IT operations who formerly ran the network, "Because of the mismatch, we weren't able to use the full feature set of either of the cores. Further, we couldn't meet our own technology goals."



Incorporated in 1936 and a National Historic Landmark since 1985, the Village of Boys Town has its own school system, police and fire departments, and credit union. It also serves as the national headquarters and technology hub for the entire Boys Town organization.

About Cisco ACI

There were many advantages that led Boys Town to choose Cisco ACI. According to Cisco, its Application Centric Infrastructure helps eliminate the IT silos between application deployment, security, network services and network configuration personnel by enabling all of them to collaborate through a common policy, management and operational framework. The Application Policy Infrastructure Controller (APIC) enables automatic framework provisioning, provides secure multitenancy with centralized compliance and auditing, and allows for anywhere workload placement and mobility, application health modeling, and open APIs.

By automating the provisioning of the complete application network, Cisco ACI helps lower IT costs, reduce errors, accelerate deployment, and make organizations more agile.



Boys Town has grown to provide services and support to boys, girls, families and parents in need across the country.

When Matt Welna started at Boys Town in 2013, there were two 60-Mbps links connecting the data centers, and those weren't meeting the needs of the organization. The links were then upgraded to two 1-Gbps connections, which met the needs for the organization for two years. Then the mismatched cores became the challenge. "We needed a platform that would take us into the future. We weren't looking for the same old, conventional architecture. We wanted functionality that would enable us to move toward enterprise hybrid cloud technologies. But we wouldn't have even been able to have that conversation without the SDN core infrastructure we now have in place."

That conversation started with building an accurate requirements list. The new infrastructure would need to be able to do Layer 2 over Layer 3 technologies, as well as logical data center extension to allow active-active replication. Importantly, it would also have to provide the flexibility to do everything needed for private cloud, automation and orchestration. Welna says, "We wanted to put the building blocks in place for private cloud. That's the kind of forward thinking we need to take Boys Town well into its second century, making sure it's poised to meet the needs of this organization for the foreseeable future. Staying where we were would have come to a head really fast."

Welna recalls that the easiest choice would have been simply to replace the mismatched core switches with current technologies such as Cisco Nexus 5000 or 7000 series. "That would have been our 'easy button,' but we saw this moment as an opportunity to step back and reevaluate where the organization is going. And we quickly realized that, while a Nexus solution would be fine for now, we would outgrow its features and capabilities within the lifespan of the equipment. Our senior leadership has a very bold vision for how technology should serve Boys Town's needs into the future, including software-defined systems, so we knew we had to take a similarly bold step and completely reimagine our network infrastructure."

"Sirius really stepped up as a true partner, and teamed with us to position Boys Town to meet the needs of our diverse organization for years to come."

–Matt Welna,
Senior Director of IT Operations

At around the same time, Rob Hernandez joined the organization as its new Director of Network Operations, bringing a fresh perspective and more than two decades of enterprise network experience. “From the moment I joined, the top priority was identifying an infrastructure that could take Boys Town well into its second century. We were evaluating two core technologies, and Cisco ACI was clearly head and shoulders above the other. But it’s a relatively new technology, and that made people nervous.”

Hernandez was confident that they had the right partner in Sirius. “I had worked with Sirius for more than 18 years at previous positions, and knew that I could depend on them to provide expert help from discovery through completion, line item by line item. They’re the kind of partner you need to find if you’re doing something on this scale. And because of their position as one of the nation’s top Cisco partners, they were instrumental in helping us engage directly with Cisco to ensure success.”

A visit to the Sirius Software-Defined Innovation Center (SDxIC) in Kansas City gave the team from Boys Town a chance to see Cisco ACI in action. That, along with Sirius’ deep bench in Cisco expertise — and the ability to have on-site conversations with Sirius’ experts — gave them the confidence to proceed with a complete conversion of their core network infrastructure to Cisco ACI.

Although he hadn’t worked with Sirius before, Welna found the experience and expertise reassuring. “Working with Cisco and Sirius, we all locked arms and moved forward together. The core solution is deployed, and it’s actively passing traffic. Everything went in absolutely smoothly. I have to give credit to Rob, his team and Sirius for getting this done on schedule and under budget. We’re now looking at migrating all our technologies over to the new ACI cores.”

“We are not limited in our technology decisions going forward from a network technology perspective. Our core network technology just opened the book for whatever we want to do going forward. And there’s a comfort in that.”

–Rob Hernandez,
Director of Network Operations



The headquarters of Boys Town, located in the Village of Boys Town, is also the location of the organization’s primary data center. The secondary data center is located at the Boys Town National Research Hospital in downtown Omaha.

READY FOR THE CLOUD AND THE FUTURE

With its two data centers both built out with Cisco ACI, as well as more than 30 developers who are using cloud-enabled tools more and more every day, Boys Town now has the infrastructure and IT talent in place to build and support a private cloud. The IT organization can fulfill application and capacity demands using its own resources, but has the flexibility to look to third-party cloud providers for any other tools the team might need.

Vice President of IT Jamie Pearson has to look at the big picture. "Boys Town is all about community outreach. But we're a non-profit, so we're extremely sensitive to cost. What is it going to cost? Can we get it done, and will we be able to run in an environment that allows us to have multiple tenants? This technology allows us to do all that. When we reach out to an organization in Michigan or Pennsylvania or Florida, a lot of time those partners don't have the IT resources that Boys Town has, so having a network that offers multi-tenancy and automation while allowing us to be rapidly elastic really helps us to reach out more confidently and more long-term."

Hernandez says the results have been immediate. "We're already seeing improvements just by virtue of the technologies that we're able to bring in the door. And the cost for the cores that we've put in place—and for the hyper-converged architecture and virtualized storage—are no more than if we had gone the conventional network infrastructure route. In fact, they're less in some cases."

Previous to the ACI cores, Boys Town really didn't have sufficient visibility into its internal network traffic. According to Welna, "Now we can see that traffic. And as we further segment parts of our organization, that visibility will help us get some significant security initiatives done."

Hernandez continued, "We support other entities from outside Boys Town on our network, but previously we didn't have the tools needed to be a service provider. We now not only have the technology to segment them properly without additional purchases of firewalls and so forth, but these switches will allow us visibility that will help us improve service and security."

Sirius was able to provide a highly experienced Cisco design engineer, a primary engineer responsible for the implementation, and a project manager. "Without that kind of team effort," said Hernandez, "I don't see how it would have been possible to engage the same services from Cisco directly. So we really appreciate their expertise and ability to give us the pricing that we got for the entire project."

Jamie Pearson summed up the nature of Boys Town's new relationship with Sirius: "When I talk with industry peers, I often hear the terms reseller and partner used interchangeably, but they're completely different things. Sirius is clearly in the latter category. They were actively engaged every step of the way, and we're already talking about our next projects, how Sirius can help, where they fit, and how they can ensure that we're getting the right information independent of manufacturers or other vendors. That's how I see Sirius going forward."

For more information about Cisco ACI or solutions to any of your organization's other technology challenges, speak to your Sirius representative, call us at 800-467-1237, or visit www.siriuscom.com.

"From my perspective, it's been seamless. My internal project team and Sirius gave detailed updates keeping me in the loop, and ensured that we had zero customer impact during the transition"

– Jamie Pearson,
Vice President of IT

