

TECH TACTICS



SOLVING IT STAFFING CHALLENGES WITH MANAGED SERVICES

If your institution has found it harder and harder to retain network specialists and other skilled IT workers, managed services can help fill the gap while providing scalable and secure infrastructure at a more predictable cost.

HISTORICALLY, colleges and universities have taken a “do-it-yourself” approach to deploying and managing their network infrastructure. This DIY model has served institutions well for many years. However, campus leaders are starting to rethink this method as they look for ways to solve for a shortage of IT talent.

An emerging approach that is becoming more popular within higher education is managed network services. In this approach, colleges and universities outsource the operation of their network to an experienced service provider. Rather than owning and maintaining network equipment themselves, they pay a monthly fee for network equipment and services as if these were a utility.

Managed services effectively enable institutions to augment their IT staff by leveraging a pool of talented professionals with years of experience across a broad range of technology domains. This eliminates the burden of attracting and retaining network specialists. Managed services also come with a fixed cost, making budgeting much easier and eliminating the unforeseen expenses associated with hardware failures and the need to replace outdated technology.

Managed services involve a significant shift in mindset for campus leaders. Here are five “dos” and five “don’ts” to help leaders understand whether this model makes sense for their institution and to ensure a successful implementation.

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DO be realistic about the challenges of IT hiring.

Finding and recruiting skilled IT workers poses a challenge for organizations of all sizes, even during periods of economic

uncertainty. While a number of U.S. companies have announced hiring freezes or layoffs in recent months, the demand for IT talent remains strong. During the first quarter of 2022 alone, U.S. employers **reportedly posted 1.1 million tech job openings** – a 43% increase over the prior year.

Employers say there aren't enough skilled IT workers to fill the demand. **According to Gartner**, IT executives see the talent shortage as the biggest adoption barrier for 64% of emerging technologies. A lack of available talent was cited far more often than other barriers, Gartner said, such as implementation costs (29%) or security risks (7%).

By offloading hardware installation, system configuration, network administration, maintenance, and support to an experienced provider, school district IT departments don't have to worry about whether they have the expertise on staff to handle these tasks for themselves.

The shortage of IT talent is a problem for all organizations, but it places a particularly large burden on colleges and universities. **With IT salaries on the rise**, colleges often struggle to match the compensation packages that private-sector employers can offer.

Managed network services solve this problem. By offloading hardware installation, system configuration, network administration, maintenance, and support to an experienced provider, campus IT departments don't have to worry about whether they have the expertise

on staff to handle these tasks for themselves. Instead, they can focus their time and effort on supporting students and faculty more effectively.



DON'T be averse to trying new IT approaches.

Technology is constantly changing, and nobody knows that better than IT leaders. Yet, IT departments aren't immune from becoming trapped

in the same TTWWADI ("that's the way we've always done it") mindset that tends to stymie progress within education. To serve the needs of stakeholders, IT executives need to be highly agile and open to changing course when it makes sense to do so.

Twenty years ago, students and staff were still accessing software from campus servers – and the idea that we would log into most applications from the cloud seemed like a foreign concept. Managed network services represent a similar paradigm shift, and leaders must be willing to let go of the idea that colleges should own and operate their own network infrastructure if a managed approach can save them time and money and improve their network services.



DO think about how managed services can help IT staff be more strategic.

When you own your IT infrastructure, you're responsible for all maintenance and repairs.

With a managed solution, you don't have to worry about these responsibilities. IT staff who normally would be deployed for network maintenance and support can be reassigned to focus on higher-level tasks that align more closely with the core mission of your institution, such as implementing new instructional technologies and training users.

This is a key benefit of a managed services

approach. Surveys suggest that many campus IT departments are spread too thin to support the use of technology for instruction effectively.

In a **2022 survey of campus IT leaders** by the higher education technology association Educause, nearly half of respondents (48%) reported that the pandemic has had an effect on the size of their IT workforce. Many IT positions were eliminated as a result of budget cuts or early retirement, while other positions remained vacant for extended periods. One respondent reported an “increased load and not enough people ... to effectively deliver services.” “We are really feeling the loss,” another said. “The service backlog is growing.”

Freeing campus IT staff from having to manage the network allows them to focus on critical tasks such as supporting ed tech use instead, reducing the likelihood that these strategic priorities become neglected.



DON'T overlook how managed services can help with network security.

Colleges and universities have become targets for a growing number of cyberattacks in recent years, and campus IT

leaders are under enormous pressure to prevent a network security breach at their institution.

A managed services approach helps campus IT leaders successfully predict and manage their network expenses, including the cost of routine maintenance. There are no more costly surprises when a piece of equipment goes down, and leaders don't have to scramble to find the money to replace aging routers or wireless access points.

According to a **2022 survey** that included more than 400 technology professionals within higher education, more than half of campus IT

leaders (53%) said they have seen an increase in the volume of cyberattacks targeting their institution in the last year. Fifty percent reported an increase in the complexity and impact of cyberattacks on their institution.

A managed approach to network services can help mitigate the risk of a successful attack.

What's more, when you own your network infrastructure, you're also responsible for implementing security patches and upgrades to keep these systems fully protected. With managed services, security patches and firmware changes are installed for you, keeping your network continually up to date.



DO consider the benefits of having a fixed monthly cost for network services.

Budgeting for new technologies has often been a key hurdle for many colleges and universities. In fact, a

2021 survey from Educause indicated that the cost of making ongoing IT investments as digital technologies advance is a “major” challenge to digital transformation for 41% of higher education institutions.

Taking a managed approach to network services can help campus leaders budget for technology more effectively by replacing unpredictable expenses with fixed monthly costs that are much simpler to plan around.

Traditionally, campus IT departments have purchased and installed network infrastructure through large capital expenditures. The problem with this approach is that strategic IT planning may depend on the availability of new funding. As a result, institutions might be stuck with outdated equipment until they can raise the money required for a network refresh cycle.

A managed services approach can lead to more stable and consistent IT budgeting. This helps campus IT leaders successfully predict and manage their network expenses, including the cost of routine maintenance. There are no more costly surprises when a piece of equipment goes down, and leaders don't have to scramble to find

the money to replace aging routers or wireless access points. What's more, many institutions find it easier to pay a smaller fixed amount every month than to make large, up-front capital expenditures.



DON'T ignore the value of having an easily scalable network infrastructure.

Besides making it easier to budget for network technology, a managed approach gives colleges and universities greater

flexibility, allowing them to scale their network capacity up or down as necessary.

When you purchase your own network equipment, you're investing in a specific infrastructure with a fixed capacity. If your needs change more quickly than you anticipated, or if you underestimated the demands on your network, you're out of luck until you have the additional capital required for enhancements. In contrast, a managed solution lets you easily add more capacity whenever you need to — such as if your student population surges unexpectedly. Plus, it gives you the assurance that as technology evolves, you'll always have access to the latest innovations.

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A managed approach also lets you scale down your capacity. For instance, if you don't need as much bandwidth during the summer months, you can temporarily reduce your capacity — *and* your costs.



DO carefully evaluate potential network providers.

Choosing an effective provider is critical for success. Contracting with the wrong network provider could result in poor communication,

slow response times, unexpected network outages and disappointing service. The resulting administrative headaches could end up costing your IT staff valuable time to sort out — which defeats the purpose of opting for a managed approach in the first place.

When evaluating managed service providers, look for a company with cutting-edge technology and proven industry leadership. Some key questions to ask include:

- Does the provider use the latest network standards and technologies?
- Do the company's products reflect the latest industry developments?
- Does the provider have the size, capacity, and expertise to serve your needs effectively?
- Is the company stable and reliable, with a strong reputation in the industry?

Complex IT challenges call for a partner who can build a network that matches your specific goals, timelines, and performance demands. Think carefully about your network infrastructure needs and choose an experienced and highly regarded network provider who can deliver on these technical requirements.



DON'T worry about giving up control of your network.

IT leaders might have concerns about relinquishing control of their network infrastructure to an outside company.

But partnering with a managed services provider doesn't have to mean giving up total control.

While providers offer a wide range of fully managed services, many also let customers assume control of some operations with co-management capabilities. If they desire, a college or university's IT staff can still maintain control with real-time visibility into what's happening on the network and the ability to make changes via an intuitive portal.

Managed services don't necessarily replace a campus's IT resources. Instead, these services allow IT staff to focus their time and attention on the priorities that make the most sense for their institution. Universities and their network partners can decide together how they'll share the responsibilities of managing the network infrastructure.



DO choose a reliable partner with extensive education experience.

Technical expertise is essential, but so is a knowledge of the education sector and its requirements.

Colleges and universities have their own unique culture, operate on a different calendar and schedule than other organizations, and have a broad range of stakeholder groups with different needs and network privileges. As a result, the network requirements of higher education institutions are very different from those of businesses.

Technical expertise is essential, but so is a knowledge of the education sector and its requirements.

When choosing a managed network provider, institutions should select a company that will be not just another technology vendor, but a reliable partner that understands the unique needs of higher education and is fully invested in their success. Look for a service provider with a proven record in serving other campuses effectively, one that will value you as a customer and will respond quickly whenever you have questions.



DON'T forget to negotiate SLAs.

A managed solution gives campus leaders peace of mind with service-level agreements (SLAs) that guarantee network uptime and a fast

resolution to any problems that might occur.

SLAs set well-defined expectations from the beginning of the relationship between a college or university and a managed services provider. When negotiating SLAs, ask for estimates of the provider's response times to various situations, so you have clear sense of the time it will take to fix any problems that might arise. Make sure you understand the provider's process for keeping network systems up to date and its approach to network security, and make sure someone is available at all hours in the event of an emergency.

ENSURING AVAILABILITY OF IT RESOURCES

If higher education institutions have skilled and experienced network technicians on staff who can maintain and troubleshoot the network, then it might make sense for them to purchase and manage their own network infrastructure. However, if they struggle to recruit and retain qualified network technicians or if they find their IT departments stretched thin, then a managed solution could be an attractive option.

Network maintenance and management involves constant tweaking and firmware updates to optimize the experience for users. With a managed approach to network management, this process doesn't have to place a burden on campus IT staff. Support teams are available to troubleshoot problems and deploy technicians if there are any problems with the network 24 hours a day, 365 days a year.

A managed services approach can improve an institution's security profile. It makes budgeting for technology easier. It helps campus IT employees be more strategic. And it ensures that critical IT resources will always be available for students and staff when needed.

WHY CHOOSE SPECTRUM ENTERPRISE?

Spectrum Enterprise is an industry-leading provider of managed network services with extensive experience in serving colleges and universities nationwide. Its technical teams work closely with campus leaders to plan, design, and implement network solutions that meet their specific needs.

Colleges and universities can transition from their own private networks to a managed SD-WAN solution at a pace of their choosing. Campus leaders can decide whether Spectrum Enterprise fully manages the solution, or whether the institution will co-manage it along with Spectrum Enterprise. Either way, a managed services approach allows campus IT teams to focus on higher priorities.

THE SERVICES THAT SPECTRUM ENTERPRISE OFFERS INCLUDE...

Enterprise Network Edge

Gives large-scale organizations the ability to transition to a hybrid network architecture built around advanced SD-WAN technologies. Powered by Fortinet, Enterprise Network Edge offers protected access to multiple cloud instances and industry-leading network security with throughput speeds of up to 100 Gbps, while also supporting distributed workforces.

Managed Network Edge

Offers a modular, all-in-one solution that simplifies the deployment and management of your organization's network. Delivered with the Cisco Meraki platform, Managed Network Edge provides security, flexibility, and scalability by bringing together connectivity, equipment, and network management.

Managed Router Services

Enables network managers to more efficiently manage traffic flow and bandwidth utilization across their WAN. The service includes end-user equipment, network design, installation, configuration, and updates with 24/7/365 support.

DDOS Protection

Applies cloud-based intelligence to quickly evaluate your expected network activity and identify threats attacking your Fiber Internet Access service. Attack mitigation and traffic rerouting begin automatically to help keep your resources available.

Managed WiFi

Provides a turnkey solution that provides design, installation, and operation of wireless infrastructure, ensuring high-quality connectivity with reduced IT burden and no equipment to buy.



EACH SERVICE INCLUDES UNIQUE PROPERTIES, BUT ALL SERVICES PROVIDE...

Network continuity

Improve reliability and uptime of WAN connections by ensuring routing network equipment is up to date.

Reliable connections

Ensure your network is running at top performance with updated equipment that identifies and corrects both issues and bottlenecks, with the ability to gain easy insight into network performance.

Minimized disruptions

Offer failover to a second router or connection to ensure continued network access.

Expert support

Focus on more strategic initiatives knowing you have dedicated access to certified technicians as well as local account teams, plus 24/7/365 phone and online support.

Managed efficiency

Offload network support requirements to focus IT on more strategic initiatives with a fully managed solution, including design, implementation, and router monitoring — or utilize Spectrum Enterprise for co-managed services.



Certified network experts, a national reach, and multiple connectivity options make Spectrum Enterprise uniquely qualified to be an institution's single networking partner. We can customize a complete solution to meet any needs. Managed Services from Spectrum Enterprise can strengthen a college or university's security posture with automated updates that make it easy to keep pace with changing networking requirements and emerging security risks.

Firewall service, unified threat management (UTM), advanced malware and intrusion protection can be added to all Spectrum Enterprise network services. In addition, site-to-site VPN integration can automatically establish encrypted tunnels for traffic between campus locations and to the cloud, ensuring that network connections are more secure. An institution's most critical applications can receive priority via intelligent routing, and this same intelligent routing plays a crucial role in protecting campus networks.

About Spectrum Enterprise

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving many of America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes **networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions**. The Spectrum Enterprise team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. For more information, visit enterprise.spectrum.com.