

The battle for bandwidth

Not too many years ago managing bandwidth meant knowing how many desktops were connected to the Internet, and security integration meant one or two monitors that showed multiple camera views of areas that may also have been patrolled by night watchmen on foot. Today, bandwidth and security technology go hand in hand, making integration as much about the architecture of the network as the devices it supports.

“The biggest challenge we face is old networks that are being asked to support new technology,” says Clifton Dorsey, Manager of Support and Technical Services at M3T Corporation, based in Mechanicsburg, PA. “New systems are getting 10 gig backbones, but when we’re dealing with an old network, bandwidth is our biggest problem.”

Dorsey likens managing an old network with new technology to buying a Ferrari and racing it on a dirt road: you wouldn’t invest in a top-of-the-line sports car only to drive it down a rough country road. And you wouldn’t be happy with your investment in 30 new surveillance cameras only to find that your people can’t effectively use the Internet on their laptops because the cameras take up too much data. Add to the mix a whole host of other devices—phones, tablets, printers, wearable technology like watches and fitness bands, and the connected routers, switches, cameras, monitors and even locks that are on your network—and you’ve got a jam-packed road with no one going anywhere very fast.

“Every minute of a slow network can mean 10-15 minutes of lost productivity because someone steps away from their computer to get a cup of coffee while they wait for an upload,” says Dorsey.

These issues are solvable, but there is no out-of-the-box solution. It starts with identifying what each stakeholder is looking for from the security technology solution. This typically breaks down into three categories and their accompanying challenges:

- 1 Security**—the system needs more network to support the cameras and other technologies or it is not effective
- 2 Network**—IT often feels security is using too much of “their” network to support the security system
- 3 Physical security**—stakeholders must identify where and how the technology will be protected, stored and maintained, and the response plan when an event occurs.

Dorsey points out that it’s common for customers to overlook the physical security piece of the puzzle, but it’s a critical component to the system’s health and operation. And support for addressing this need is coming from an unlikely place – the payment card industry (PCI) and its stringent rules and requirements. For example, PCI requires every cash terminal to have a designated camera, which feeds to a server, which has to sit somewhere and be physically secured. This brings the discussion back around to the network and its bandwidth – how does a system support a designated camera for each cash terminal and still give the CEO enough power to run multiple web-enabled devices, and give the office pool the bandwidth to seamlessly connect to wireless printers and other devices without lost productivity?





Bringing the budgets together

Helping customers understand the importance of effective bandwidth management is the key to designing a system that truly supports their needs and priorities. And it takes budget commitments from every stakeholder, as well as a realistic understanding of bandwidth challenges, to bring everyone to the table.

One way to create this is through a demo. This can mean installing a camera on a current network for 30 days so the customer can experience and track its impact on data. Or it can be as simple as pulling the main Internet line to see which devices work and which don't. For many customers, these can be eye-opening experiences that show just what's coming across their Internet feed and how it's spread across the enterprise.

According to Dorsey, this type of demo helps shift the conversation about the budget, and bring all departments together. "People realize that the Internet is a company expense, not just an IT expense. You have to treat it like a utility because everyone uses it across the business."

Guiding the budget conversation between four or five departments puts integrators back into the role of consultant. The budget and goals conversation can also create a platform for helping customers solve their problems with flexible solutions that address all three parts of the system. For example, a discussion with customers might include a solution like this:

- 1 Security**—installing surveillance cameras for each cash terminal
- 2 Network**—using cameras with local high-definition SD cards that deliver a lower quality feed in real-time and hold seven days worth of data
- 3 Physical security**—store the servers in an access-controlled location and transfer data from the SD cards in the cameras onto the server every seven days

This kind of solution can help enterprises allocate bandwidth appropriately, maintaining effective security without reducing performance and production in areas of the business. In addition, the customer can establish an effective security solution within a workable budget—spending on cameras with flexible data storage rather than rebuilding or installing a completely new network that may be out of their budget reach.

Segmenting networks through V-LAN is another effective technique that can support the network's architecture and the business's data use goals, with one V-LAN for laptops and printers, another for the C-suite, and another for security. Adding QOS to your network will allow you to make sure not one thing is taking up too much of the network flow.

"Separated networks have gone from being a nicety to being a necessity," says Dorsey.

Opening the door to a long-term relationship

Most customers have seen the grainy security videos and jiggly cell phone-camera footage shown on the nightly news. And virtually no customer wants to be that organization—the one whose security system offers no usable information, visually or otherwise. Stepping back from equipment needs and focusing on bandwidth early in the conversation not only ensures you can implement an effective system, it opens the door to a strong and long-term client relationships built on supporting the needs of the business over time.

"Bandwidth is a bigger issue than ever before," says Dorsey. "But once we show customers how it can be managed then the technology and hardware fall into place and we've built a lasting relationship."

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