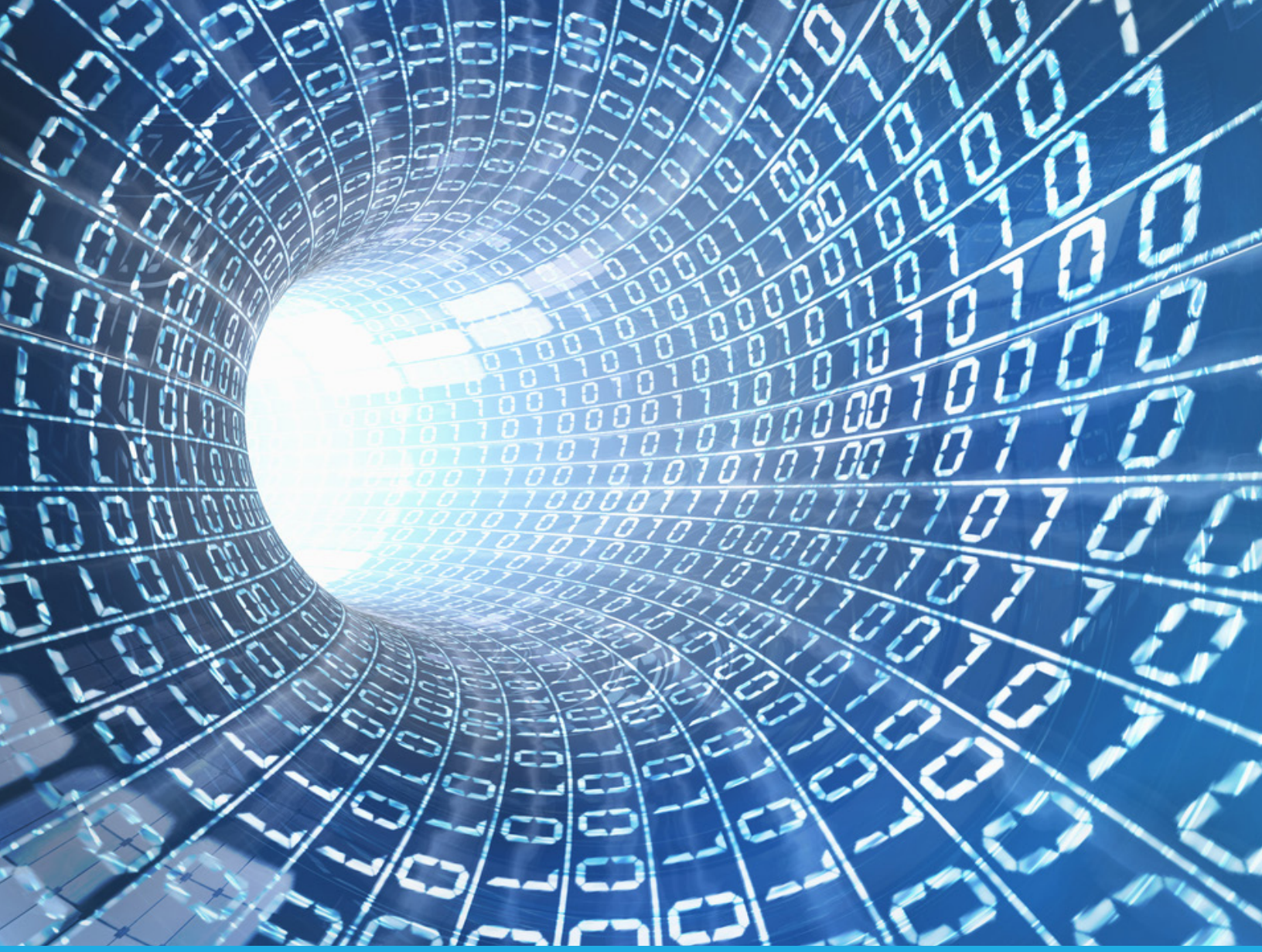

Top IT Pain Points:

Addressing the bandwidth issues with Ecessa solutions

ECESSA™

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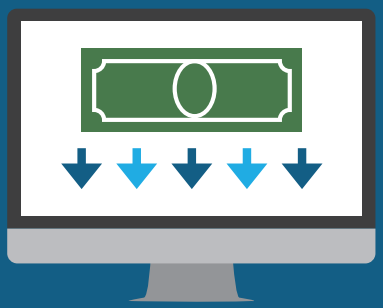


Amazon lost almost $31,000 per minute when their site went down in 2008.

Introduction

When it comes to technology within business settings, accessibility is key. Especially as companies move increasing amounts of applications and other systems off-site to cloud environments, administrators must ensure that there is adequate bandwidth to support all the online applications employees require in their day-to-day activities. A number of pain points surround the amount of bandwidth a company has available, as well as how activities take place on the network. When these issues arise, Ecessa is there with the perfect solution to address the myriad of problems that IT departments deal with.

Reliability:

Inbound and outbound Internet outages

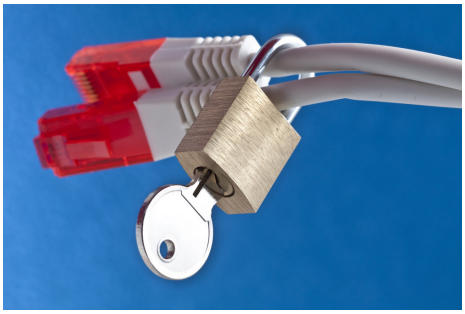
Today, Internet accessibility for businesses is critical.

"It's not so much anymore that if you lose your Internet connection you simply just can't get to the Internet," Rick Berens, Ecessa's Sales Engineering team leader pointed out. "There are things that businesses are doing these days that are extremely dependent on the Internet, both from a local perspective and from a publicly-facing perspective."

Inbound Internet access is particularly important when it comes to an internally hosted email platform, website or any customer accessible portal. When companies host these services themselves, reliable inbound Internet is essential. Within e-commerce organizations especially, this need becomes even more critical as a downed Internet connection could mean a loss in revenue.

"If they are down because their Internet connection is unavailable and they are offline, people cannot do business with them," Berens said. "Especially when it comes to an e-commerce type site, they can typically tell you how many thousands of dollars they would lose per hour if their Internet was down."

This particular pain point can be illustrated through a case involving e-commerce giant Amazon, which, according to Forbes, lost almost $31,000 per minute when their website was down in 2008. Another outage in late 2013 cost the company even more in downtime-related costs, equaling an estimated $66,240 per minute, or a total of $2 million in lost profits even though the website was down for less than an hour.



"PowerLink, ShieldLink and ClariLink systems provide an alternative solution to what companies traditionally leveraged in the past to solve these issues."

While most organizations do not come close to Amazon's revenue numbers, such a case demonstrates the high costs that can come from unreliable Internet connections, and shows just how much companies stand to lose when their internally hosted services are unavailable. Businesses have much at stake when it comes to inbound Internet access, and possibly even more to lose when issues crop up with outbound Internet reliability.

Even just a few years ago, when an outbound Internet connection was down within a company, employees could still complete their daily tasks, as much of the programs and systems they used were housed within on-premises infrastructures. Now that the cloud represents such an integral part of an organization's architecture, if an outbound Internet connection goes down, a vast number of business applications can be unavailable, and employees can be halted in their tracks.

"When you start moving some of your applications that you use out to the Internet [through SaaS, or within cloud environments], your ability to reach those services is now critical, and you need Internet to do that," Berens said.

Imagine this: Your company has placed a number of systems in the cloud: email, online documents and other office applications. However, if the business does not have reliable outbound Internet, your workers are unable to access these essential services. How can staff members expect to get their work done if they can't connect with the all-important resources that allow them to complete these tasks?

That's where Ecessa comes in, with its industry leading line of solutions. PowerLink, ShieldLink and ClariLink systems provide an alternative solution to what companies traditionally leveraged in the past to solve these issues. Previously, if an organization needed redundant Internet connections, they would contact their service providers and implement BGP, or border gateway protocol, on the network. However, this deployment is expensive and can be very difficult to manage, especially for smaller businesses with fewer IT resources.

> "Our solutions for outbound and inbound redundancy and reliability are much easier to work with, not as expensive, and not as difficult to deploy"

Ecessa's solutions, on the other hand, are specially designed to provide Internet load balancing, failover and certain security features for single-site organizations. PowerLink, for instance, is a pure Internet load balancing and failover appliance that works in conjunction with an existing firewall the company already has in place. ShieldLink is ideal for businesses looking to consolidate their hardware and provides Internet load balancing, failover capabilities as well as a built-in firewall and VPN termination. ClariLink allows companies to have the best of both solutions - load balancing, failover and security features—in addition to a Voice-over-IP (VoIP) proxy for a hosted voice solution through a third-party provider.

"Our solutions for outbound and inbound redundancy and reliability are much easier to work with, not as expensive, and not as difficult to deploy," Berens said.

Reliability:

Cloud Internet resources

To expand upon this, any type of application or service a company moves to the cloud – be it to a third-party data center or through a software-as-a-service model – must have reliable bandwidth to ensure on-demand access to these resources.

"Once we move those systems to the cloud, which provides many benefits, our ability to reach that is now critical. That connection cannot be down, hence why you would need a secondary redundant connection and something to manage those connections so that you always have a reliable access to those hosted service," Berens said.

When multi-site companies run into this type of issue, a WAN Virtualization solution comes into play. This system enables corporations to utilize a mix of different WAN connections (both public and private) at each of their various locations to establish a mesh between the sites. This ensures that users, even in remote offices, have multiple ways to connect with hosted services at a Corporate Datacenter, as well as in the cloud. WANworX provides an alternative to increasing the size of a company's current MPLS network, which can be cost prohibitive.

"Organizations can simply add another diverse WAN connection to provide multiple paths to reach centrally hosted services and cloud applications"

"So you get more bandwidth for the dollar, the cost is never as much as increasing the size of your MPLS, and our technology allows that traffic to flow from remote sites to data centers across any one of these paths in a seamless fashion and the remote sites really have no knowledge of what path the traffic took to get there," Berens said. "The traffic moves from one path to another, without disruption so if there is an outage on a line, the end users can continue to work. They don't get logged out, their sessions don't timeout, because we were controlling all the paths between the sites."

Performance: ✔

Slow applications spur user complaints

One of the top complaints that IT administrators deal with is slow application performance. This is a persistent issue today, and can cause a number of issues for organizations. Besides having a major impact on productivity, some businesses have noted that poor application performance – which comes as a result of network congestion or poor network architecture – can even impact employee retention.

"We occasionally hear stories of customers who have lost employees because it's just too hard to do your job when the network is inadequate, or performs so poorly," Berens said. "Nothing takes you away from being productive like slow performance, or not being able to access the applications you need to get to."

These situations, which are most often due to an increasing volume of data traversing over a network that simply doesn't have enough bandwidth to support this traffic, illustrate the importance of considering the amount of available bandwidth when moving applications to a central location, or the cloud. In such a case, organizations can simply add another diverse WAN connection to provide multiple paths to reach centrally hosted services and cloud applications, in addition to using Ecessa network intelligence to route traffic over the best performing path. This way, companies can implement a strategy where certain traffic is offloaded to higher bandwidth paths, while applications that are deemed critical run through a reliable connection and performance issues are mitigated.

"Additional WAN links and WAN Virtualization is more cost effective and provides more options for businesses looking to introduce new initiatives."

Another technique that can be implemented to address application performance is duplication. Especially for real-time applications like VoIP calls or Virtual Desktop platforms, which can be severely impacted by latency and packet loss, duplication can ensure improved quality of the delivery of these applications over the network. Within this strategy, a specific type of traffic is identified for duplication, and the data packets associated with this type are duplicated or multiplied. Then, the packets are sent over both WAN paths simultaneously, and the first to arrive is the one that is utilized and the other is simply discarded.

"So what you're really doing for real-time applications that are very sensitive to latency increases or packet loss, is you're basically eliminating the chance of those negative impacts," Berens explained. "The odds of both paths having packet loss at the exact same moment is very small and you're essentially using the very best performing path [with regard to latency] for every single packet."

Performance: ✔

Implementing new initiatives

Another pain point occurs when companies introduce a new applications and initiatives into their existing network. This is an instance when decision-makers must ask, "Do we have enough bandwidth to support this new service?"

Effective WAN management can address this type of issue while also providing flexibility by adding in WAN links and utilizing WAN Virtualization to tie the network together. Instead of using the services of an MPLS provider, which will typically bond several T1s together in a very costly configuration, additional WAN links and WAN Virtualization is more cost effective and provides more options for businesses looking to introduce new initiatives.

"The increased performance you get with WAN Virtualization lets you embrace new initiatives more freely and more confidently because you know you have the room to easily expand when needed," Berens said. "If, during the planning phase [of new initiatives], you realize you don't have enough bandwidth… you have those options now to add either larger WAN links at a cheaper price or just add more WAN links if needed."

"A WAN Virtualization solution enables a quicker onboarding process when businesses grow."

Scalability:

Company growth and new locations

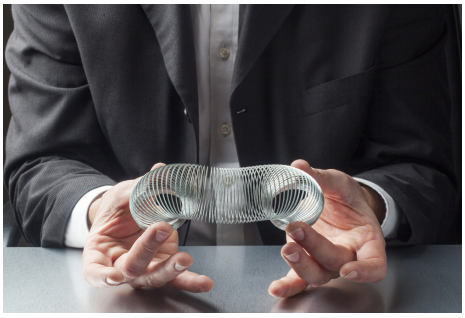
When businesses expand, either through organic growth or through acquisitions of other companies, a number of scalability pain points can come up. Particularly when organizations acquire another enterprise, the IT department is typically given a short window to bring these new employees into the existing enterprise infrastructure. In a traditional MPLS environment, this can leave IT teams handcuffed, as it could often take several months to build out the MPLS services to those sites and bring new locations into the fold.

A WAN Virtualization solution, on the other hand, enables a quicker onboarding process when businesses grow. Instead of waiting on an MPLS provider to deliver new circuits – a costly and time-consuming project – administrators can leverage the services of a local Internet service provider, which can usually install new circuits within about a week. This highlights a main advantage of WAN Virtualization in that it will function with any type of circuit, providing a range of options for businesses to select the connections that work best with their unique needs.

"It gives you that flexibility to scale quickly when you need to bring new sites on the network, you're not at the mercy of the carrier and you can bring in whatever you have available in the area," Berens said.

In fact, although not a main goal of WAN Virtualization, once the solution is in place, clients sometimes see an opportunity to cut ties with their MPLS provider altogether, and instead opt for a completely public Internet environment using WAN Virtualization. Such a system provides the look and feel of an MPLS, but at a much cheaper cost.

"Once [some customers] see the way that WAN Virtualization performs and the benefits that it gives them, they start going down this path in their own minds as far as, 'This would allow us, if we choose, to get off the MPLS,'" Berens explained. "Or, at a minimum, reduce the amount of sites that must have an MPLS connection. It can really reduce the costs associated with that provider."



"Reliability, performance, scalability and predictability issues can all be mitigated when an industry-best WAN management system is implemented."

Flexibility:

Limited carrier offerings

In some cases, depending upon the geographic location of a company's offices, the dedicated connectivity resources they require may not even be offered in the area by a single carrier. Or, if it is available, these carrier offerings may be too cost-prohibitive for the organization. This can pose significant issues, especially when it comes to businesses looking to scale up their service in response to growth.

This is another situation where WAN Virtualization is so beneficial. Because any type of circuits can be leveraged, companies can select the offerings that best suit them and ensure that they have enough network bandwidth for their expanding organization.

No matter the bandwidth pain point IT teams experience, there is an Ecessa solution to address the enterprise's needs. Reliability, performance, scalability and predictability issues can all be mitigated when an industry-best WAN management system is implemented.

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