This Issue:

Tech Term: Network

It sure does seem that the term "network" is tossed around an awful lot. Network security, network maintenance, social networking, network switch… but what is a network, really? That is precisely what we shall dive into here.

Defining a Network

In essence, a network is simply a group of computers and other hardware devices that are connected and able to communicate with one another, also enabling resources to be shared between them. Networks have many different uses that are likely very familiar to anyone who works in a...

Read the Rest Online!
https://dti.io/network

Security Threats and Defensive Measures You Can Take

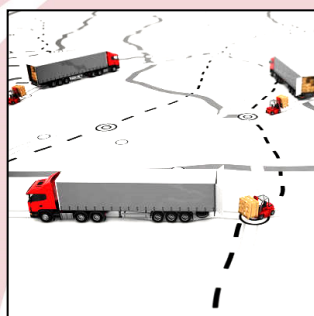Network security for small businesses is far from simple. There are countless threats out there that want to see your business fall, and it only takes one to see this come to fruition. Unless you take action now to protect your organization, you risk the future of your business. But what is it that businesses need to protect from, and what measures are out there that can accomplish this feat?

We'll start by going over some of the most common security threats out there, as well as some of the best measures that your organization can take to keep itself safe.

Common Security Threats

Security threats come in many shapes, sizes, and degrees of danger. We've listed the most common here, but keep in mind that this list is by no means comprehensive. New threats are developed every day, and security companies and agencies have their work cut out for them in keeping them in check.

- **Viruses:** Viruses are little bits of code that can cause countless troubles for your organization. They can range in severity from annoying to terribly dangerous. Either way, the result is the same--they get in the way of your productivity and organizational security.
- **Malware:** Similarly, malware--malicious software--range in scope from being irritating at best to dangerous for your business, both in the present and future. Malware can even be found on websites or in browser extensions.
- **Spam:** Spam is the preferred medium for hackers to spread threats as it allows them to send out countless messages to hundreds of thousands of unsuspecting users. Spam can

Are Higher Gas Prices Costing Your Business?

The price of fuel per gallon is one of the many ways individuals are affected by the constantly shifting industry costs, and for those who commute to the office, it can become a considerable expense. For distributors, the changes in gas prices can be the difference between sitting on a gold mine or losing valuable resources. For the small distributor, changes in gas prices can make all the difference in determining how much it costs to truck goods across the area. How can smaller businesses take advantage of IT solutions to keep costs down while gas prices increase?

Many distributors fall into one of two categories: those who are tied to a larger organization, and those who are contracted by one. Smaller manufacturers rely on an efficient distribution of their product, which ultimately means that shipping costs will ideally be as low as possible--otherwise, the consumer feels this in the price. In 2018, the fuel supply is actually outpacing demand for the first time since the gas price spike of 2014, meaning that gas prices are up, but they aren't really impacting consumers as much as you might think.

This is actually due to the distributor, or the manufacturer that deals with the distribution, analyzes the costs of doing business in this sector. However, when gas prices rise (as seen with the almost 30% increase in cost since last May), the cost is inevitably transferred to

25TH ANNIVERSARY
est. 1993

Proactive IT Monitoring Pays for Itself
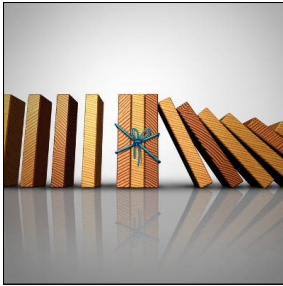
Every business has some sort of management tasks that requires foresight, and staying up on them can keep headache-inducing situations from constantly causing downtime and costing you time; and, make no mistake, time is money. Being more proactive not only provides sound strategies, it can really mitigate the amount of problems you have to deal with. As we describe what it means to be proactive, and how that strategy will almost always help you save money, consider how you are implementing a proactive approach to your business.

When your business' profitability is tied to its efficient and effective use of technology, it's critically important to keep those systems running properly. The best way to achieve this is to be as proactive as possible in the management of your central information systems, networks, and end points. With all this technology that needs to be constantly maintained, reacting to every problem becomes very costly in terms of time and materials.

Think about it this way: You are still going to be paying for everything you normally would be paying for when your IT is down, which essentially means you are paying for nothing. Say your router stops working. You don't have a spare. You have to get another router immediately, but it takes an hour or longer to get the new router, change it out, and begin to configure it. That's hours of downtime for an integral, but inexpensive, part of your business' computing network. Imagine if your server becomes corrupted or fails? That's a complete game changer.

Proactive Monitoring

With Directive's proactive monitoring service, every machine connected to your network, and your network itself is constantly monitored both by our state-of-the-art automated monitoring software and our certified technicians. If there is an inconsistency on your network, or a piece of hardware that is not running as intended, we will see it well before it can affect the day-to-day operations, significantly reducing or eliminating downtime. Many times the issues can be remedied without any further investment. Imagine what you can accomplish with reliable-functioning technology from bell-to-bell every day? More than struggling with broken or malfunctioning technology, that's certain. The more uptime your business' IT has, the more productivity you'll see, period.

When you compare the money saved, and the revenue earned by having professional IT technicians constantly monitoring your network and infrastructure, you are looking at a substantial value, and an almost immediate return on investment. Get out in front of your organization's IT troubles by calling Directive today at 607.433.2200.

Share this Article!
https://dti.io/activeit

Security Threats and Defensive Measures You Can Take

be anything unwanted in your email inbox, but the threatening kinds generally have files or suspicious links attached to them. More targeted spam messages called phishing attacks can be used to target specific users or organizations as well.

- **Ransomware:** Ransomware is still a hot topic in today's business industry. Ransomware encrypts your organization's files and locks them down until you pay a fine to the hacker. This can be used in cyber-extortion attempts in order to fund further attacks against unsuspecting users. Ransomware can spread in various ways, but spam is one of the major movers of these threats.
- **Trojan/Backdoor:** Trojan malware is the kind that sneaks into your infrastructure and hides for a time before creating a backdoor to your network. This provides an avenue for attack in the future at the hacker's convenience. These can be difficult to identify because they tend to remain hidden until they are uprooted by an antivirus scan or security professional.

Security Technology for Your Organization

Proper network security depends on a multifaceted approach that takes into account user best practices and technology solutions. We've listed some of the best solutions to augment your business' security.

- **Unified Threat Management:** A UTM is a great way to provide blanket network security for your organization, as it leverages the most popular and effective solutions on the market to secure your data. Included is a firewall to protect from incoming threats, antivirus software to remove threats from your infrastructure, spam protection to keep dangerous messages from making it to your inbox in the first place, and content filtering to keep your employees from time-wasting or malicious websites.
- **Virtual Private Network:** A VPN is practically required in today's business world, as more employees are taking their business on the go than ever before. The issue with this is that data can be seen by outside viewers if the connection isn't private--which is often the case out in the wild. A virtual private network can encrypt data while it's in transit, making doing business on the go less risky and more secure...

Read the Rest Online!
https://dti.io/defense

Are Higher Gas Prices Costing Your Business?

(Continued from page 1)
the distributor. This happens for any organization that utilizes fleets of vehicles to transport goods. Gas prices have a huge impact on the economy in ways that you might not immediately think of, thus making it a good idea to look for strategies to decrease the costs of running an organization reliant on this expensive asset. Information technology provides a great opportunity for businesses in all industries to cut unnecessary costs and streamline operations.

Fleet and Asset Tracking
Thanks to tracking solutions, these organizations can significantly cut down on the price of distribution by taking only the best routes. A company is able to reduce the amount they spend on fuel costs while also cutting down the

amount of maintenance needed to keep the vehicles on the road. Furthermore, a fleet tracking solution can reduce fleet insurance, making it more affordable than ever before.

For example, each vehicle in the fleet can be equipped with GPS devices that are tracked by web-connected endpoints. GPS technology can calculate the best, most efficient route for the purposes of saving fuel. Other variables that can influence the best route include hassles like construction and bottlenecks in traffic, all of which can be avoided, ultimately cutting downtime and optimizing resources to make the most efficient service possible.

Similarly, this technology can be utilized to better track just about any assets your organization uses to maintain

operations. By using this to your advantage, you can ensure that you have a full grasp on all of your shipping costs, procurement processes, distribution, and so much more. Just imagine the success your organization can achieve just by cutting out a tiny fraction of your business' expenditures.

> *"The price of fuel per gallon is one of the many ways individuals are affected by…"*

If you like the idea of saving money, your business could benefit from fleet and asset-tracking software. To learn more about how your business can take full advantage of its technology assets, reach out to Directive at 607.433.2200.

Share this Article!
https://dti.io/gasprice

WPA3 is Boosting Network Security
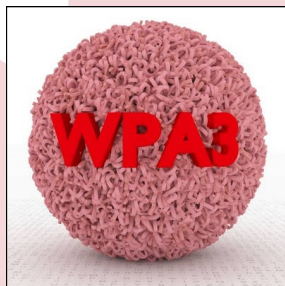
Did you know that prior to this past January, the last big update to Wi-Fi occurred in 2004, when WPA2 was released? The Wi-Fi alliance has introduced a new type of wireless connection called WPA3--one that can dramatically improve security. In reality, it was created with the intention of shoring up weaknesses found as a result of the KRACK vulnerability, which exposed serious issues with WPA2 that needed to be addressed.

As is the case with WPA2, WPA3 offers what is called both Personal and Enterprise configurations. Both of these versions include ways to keep connections secure even if the user fails to use a complex password, while only the Enterprise version can boast having a 192-bit encrypted connection. WPA3 also takes full advantage of what's called Simultaneous Authentication of Equals, which basically protects from password guessing algorithms that made the

KRACK vulnerability such an issue in the first place. These brute force attacks no longer work against WPA3 connections.

> *"The Wi-Fi alliance has introduced a new type of wireless connection called WPA3 — one that can…"*

Of course, just because something exists doesn't mean that it's being implemented yet. The initial certification for WPA3 has started, but devices certainly aren't required to adhere to the standards as of yet. So, what can your business expect when WPA3 becomes mainstream enough to be found on devices? For starters, one of two things will happen: either manufacturers provide patches and updates to routers to allow for WPA3 connections on older devices, or they will create new devices that exclusively come with this functionality. Their choices will ultimately fuel your organization's decision making regarding this new technology. The good news is that this new functionality doesn't limit which devices can be connected to them, meaning that a WPA3 device can connect to a WPA2 device, and vice versa.

Using the most up-to-date network security connections is incredibly important, as new threats are discovered every day that can harm your organization in unforeseen ways. Let's use the jump to WPA3 as an example. If you can prevent a data breach or network connection issue by upgrading to more recent hardware or software, shouldn't it be worth investing in? We know that small businesses often have trouble affording the latest and greatest technology solutions, but this is something that we can help you with.

Thanks to services like hardware management and maintenance, we can help your organization ensure network security without letting your organization's devices grow out-of-date. We can help you either upgrade your devices to the latest configurations or help you procure devices that can, all from the most reputable vendors out there. To learn more about how we can help your business stay secure, reach out to us at 607.433.2200.

Share this Article!
https://dti.io/wpa3

directive

How Technology Could Change the Classroom

Children are the future, as the saying goes, so do we really want the future to be taught using tools from the past? While some schools are still using technology that better belongs in the 20th century, others are embracing innovation and teaching in ways that better translate to the "real world." Let's take a look at how our evolving technology is transforming the classroom and explore some ways to get it to more students.

The Classroom Today

Not unlike today's workplace, classrooms are becoming increasingly technology-centric. This shift has made it so that teachers have had to adjust their teaching methods the most they've had to in decades. Fortunately, today's students are optimally prepared for their role as guinea pigs for this new approach, thanks to their upbringing surrounded by social media and ubiquitous technology utilization. While many have called out social media and similar platforms as detrimental to a student, it cannot be denied that leveraging technology in the classroom now only makes sense.

One strategy that teachers are experimenting with is known as 'flipped learning,' because the way time has been traditionally spent is reversed. Rather than learning the material in school and practicing individually at home, students are tasked with reviewing materials at home (including online lectures) before coming into the classroom to collaborate with their classmates to complete what would have once been homework. This enables students to cultivate skills that will prove invaluable as an adult, skills like group problem solving, communication, and other practical abilities. Another benefit is how this approach also allows teachers to better assist their students in learning challenging subjects, as the students have access to their teacher's help as they work, rather than trying to figure things out at home without assistance and ultimately frustrating themselves.

Of course, this can be a pretty big jump for a school to take. Fortunately, there is another option called 'blended learning,' in which face-to-face teaching and learning is augmented with supplemental technology-based assignments. This means that students can get more value out of in-class lectures and solo assignments by using the resources they have to find answers and discover new concepts. As a result, they will be more used to the technology that is being used in an increasing number of industries.

New Technologies for Students to Leverage

There is no shortage of technologies that the modern classroom could potentially leverage as the students within are being taught to make use of the technology at their disposal. For example, the typical whiteboard has been rendered ineffective with the advent and spread of the smartboard. If you aren't familiar, a smartboard can effectively be summed up as a computer-connected whiteboard with improved and immersive multi-touch capabilities. This allows the teacher to deliver a lecture with more dynamics than the typical projector can, and this lecture can be saved for future reference. Furthermore, the smartboard can also be mirrored to any computer with an Internet connection, giving students another opportunity to follow along, regardless of where...

Read the Rest Online!
https://dti.io/classroom
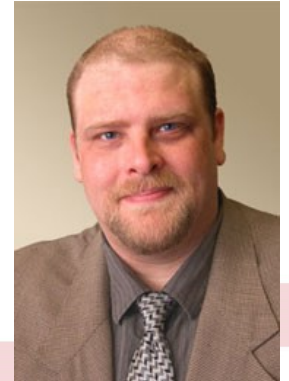
Chris Chase
Solutions Integrator
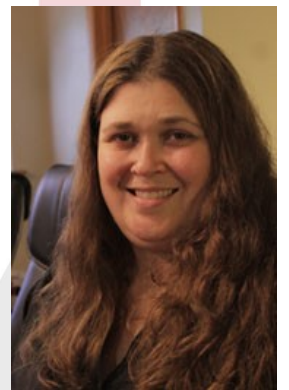
Charlotte Chase
Solutions Integrator

Directive

330 Pony Farm Road
Suite #3
Oneonta, NY 13820
Toll-Free 888-546-4384
Voice: 607-433-2200

Visit us **online** at:
newsletter.directive.com

newsletter@directive.com

facebook.directive.com

linkedin.directive.com

twitter.directive.com

blog.directive.com

instagram.directive.com

WHAT ARE YOU DOING?
MY COMPUTER FORGOT MY PASSWORD SO I'M GIVING IT MORE MEMORY.