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We Love Halloween, and Our Staff Enjoys It Too. What Did You Do?



This Halloween, we planned a fun-filled afternoon for our staff. We had lots of ghoulish snacks along with some funny Halloween-themed games. As Halloween fell on our Crock-Pot Thursday, we had Mummy Dogs, Ham and Cheese Mummies, Zombie Gut Mac and Cheese, Spider Bean Dip, Pumpkin Bars, and Ghost S'mores. Not one staff member walked away as a skeleton (it was filling)!

This year, our winners were: 1st Place - Plague Doctor, 2nd Place - Quail Man, 3rd Place - Gumball Machine. Take a look at all of the costumes and festivities!



Check Out the Pictures!
<https://dti.io/partytime>

About Directive

We are a technology consulting firm specializing in technology implementation and management for businesses. We're known for providing big-business, Enterprise-Level IT services to small and medium-sized businesses.

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



During the holiday season, our thoughts turn gratefully to those who have made our success possible. It is in this spirit that we say thank you and best wishes for the holidays and New Year.

Directive Offers Student Loan Assistance as an Employee Benefit



Directive has added another perk for its employees as it continues its efforts to enrich the area's workforce. Beyond health insurance, retirement plans, and other benefits already in place, Directive has begun to offer student loan assistance for its employees to help pay off their student loans.

Offering assistance with educational loan repayments has become a more tantalizing perk for many new entries to the workforce, with the average graduate of the class of 2017 owing almost \$40,000. Total student loan debt in the United States is around \$1.53 trillion dollars, with New York alone seeing a student loan balance of \$73.5 billion among 2.2 million borrowers.

Most companies have not yet adopted this benefit - according to a survey by the Society for Human Resource Management, only 4 percent of employers offer it - although this number is growing due to the mutual benefits that can be seen from such a program. Another study, conducted by Cornell University, the Stanford Center on Longevity, and Fidelity

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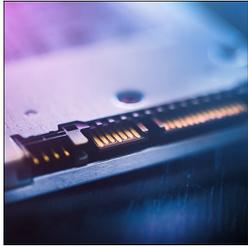
It's fair to say that most business owners aren't cybersecurity experts. That's why there is such a large investment in cybersecurity solutions. That outlay is justified, sure, but is it effective? Today, we'll talk a little bit about network and cybersecurity, and how all the capital investment in the world may not actually keep your network secure.

Always Manage Risk

I'd like to start by saying that it would be good for all of us if we didn't put blind faith in something that our business relies on. For example, if you go buy a new car, you expect that the car will operate well enough, until it doesn't. According to Consumer Reports, the average life expectancy of a modern vehicle is around eight years or 150,000 miles. When you purchase it, your expectations are that the car you buy (with proper maintenance), will last you at least that long, if not longer. You expect it to be your daily driver until you finish paying off the car, and enough time as where you feel as if you've got a value for your car.

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Is Your Computer Slow? This Simple Upgrade Makes a World of Difference



Few things are more frustrating and annoying than a slow computer. There are a lot of things that can slow a computer down,

too: viruses and malware, excess applications running in the background, even time can seem to turn a relatively fast computer into a slow-as-molasses impediment to productivity.

If your computer is overall healthy but starting to slow down, there is one simple upgrade that can make a whole world of difference.

Update the HDD to an SSD

Computers use hard drives to store data. There are a few types of drives, but the most common ones are Hard Disk Drives (HDD) and Solid State Drives (SSD). HDD are the traditional, heavy, mechanical-based drives that we've used in computers for over 40 years. SSDs are a little more modern. HDDs and SSDs work in drastically different ways.

Traditional hard disk drives work by storing data on tiny, thin magnetic platters.

Armored Car Cybersecurity

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Business owners can think this exact way about their cybersecurity investments. If you invest in a backup, a firewall, a security suite, and you are diligently auditing your IT infrastructure with your IT company in the hope of locking down your network, you may think that your efforts will be repaid with a threat-free IT infrastructure. You may even institute more structured tools like multi-factor authentication just to make sure. The problem is that we are fighting an uphill battle against cybercriminals. It's not that these solutions don't work. It's not like our techs aren't complete professionals and are ultra-vigilant in their monitoring and maintenance tasks, it's just that the threat landscape is filled with craters. Going back to the car analogy, sometimes buying cybersecurity tools, is like

These platters are stacked on top of each other and spin like a record at around 7200 rpm. A magnetic head reads and writes the data sort of like the needle on a record player. It takes a little time for the hard drives to spin up, for the head to find the data, and then read the data. This is why these drives are typically slower than their more modern alternative.

Solid state drives have no moving parts. They store the data electronically, and are extremely efficient. In fact, not only do they consume less power, but they are faster, AND will tend to outlive an HDD if used the same way.

What's the Catch?

The only downside is that SSDs are slightly more expensive, and they don't quite support the massive capacity that HDDs can.

I say slightly more expensive, because it was only a few years ago where the price difference was much more significant. A typical SSD that would fit the needs of your average user was once a couple hundred dollars, where at the time an HDD was less than a hundred dollars. If you were buying a dozen

buying an armored car and realizing there are people on every street corner with bazookas.

Look, I have confidence in my people, I have confidence that when we work with a client and set them up with all of our security solutions and our business continuity device that it is the right thing to do. I have confidence that these tools will work to keep the massive array of cyberthreats out of your network and off of your infrastructure. I just can't guarantee it.

The Tools Are Being Targeted

You can't go a day without a software provider disclosing an attack that exposes thousands (or millions) of records. Do you think that most of these companies don't take care like you and I take care?

computers for your office, that added up pretty quickly.

Today though, the difference in price is negligible, and the performance that an SSD brings is well worth it. The only caveat is that the higher capacity SSDs are still more expensive than high capacity HDDs, but that only starts to affect users who need to store a massive amount of data on their PC, like video editors and gamers.

How Much of a Difference Do SSD Drives Make?

Results are going to vary based on the device and what it's running, and what the rest of the hardware profile is, but we can give you a real-world example.

A PC that was bought 4 years ago with a traditional HDD took about 48 seconds to get to the login screen when booting up. It then took an additional 80 seconds before the user could get to their email.

Our technicians migrated all of the data to a new SSD, and the boot time (to...



Read the Rest Online!
<https://dti.io/slowercomp>

Just recently, the popular antivirus company **Avast** and virtual private network service **NordVPN** were **targets of data breaches**. Fortunately, in both breaches it seems as if no end users were harmed, but these attacks are complicated.

Another security firm, **Comodo**, was **recently attacked by hackers** who exploited a vulnerability on its user forums. The breach resulted in the theft of 245 thousand users' personal data.

Back in August, **Imperva**, who provides high-end cybersecurity protection solutions, **informed customers that it...**



Read the Rest Online!
<https://dti.io/armored>

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Investments, revealed that 98 percent of 9,000 working individuals surveyed had felt stress in the past three months. For 33 percent of these respondents, that stress came from paying off debt.

Directive employee Courtenay Chambers echoed these findings. When asked about Directive's new program, Chambers said, "I think it is a huge weight they are lifting off of us."

By reaching this milestone, there is the hope that Directive will be able to better entice and retain the talents of those graduating from the local colleges and keep them in the area, helping to improve the Oneonta community for the long term.

Chambers went on to say, "I think it will encourage young professionals to seek a career here. I personally feel like I am valuable to this company because there's a willingness to help us out in a more personal way."

Another employee, Ken Echard, added that the program is extremely helpful. As Echard put it, "It allows me to focus less on being in debt for the rest of my life and more on the other wants and needs in life that also cost money - a car, your family, a house someday."

CEO Chris Chase had this to say about the new program: "The student loan assistance program is a real milestone for us and something we have wanted to implement for a long time. We are

always striving to make our workplace an inviting place to be employed, with this new program we are now able to make an additional impact on our team members' personal lives and financial wellbeing."

Directive has been operating in the area for over 26 years, ensuring that businesses remain productive, protected and growing through their business solutions.

Those interested in working there can visit jobs.directive.com to apply.



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Windows 7's Time Has Come



Chances are if you are still using Windows 7, you've begun to see warning messages about its imminent end-of-support date.

Microsoft is retiring support for one of its best tools on January 14, 2020 and if you are still running Windows 7 after that date, it could put your whole IT infrastructure at risk. Let's take a look at the particulars of Windows 7's retirement and what your options are.

January 14, 2020

We are now just a month away from Windows 7 End of Life event. After January 14th, any computer still running Windows 7 will not be receiving technical assistance from Microsoft. First released in late October 2009, Windows 7 was one of Microsoft's most effective and popular operating systems, but the time has come to upgrade.

Why Shouldn't You Run Unsupported Software?

Simply put, by running unsupported software your business becomes much more vulnerable to cyberattack. Supported software is routinely patched to keep

potential vulnerabilities from becoming disasters for your company. A data breach can flatten any forward momentum a business has, and today, with ransomware being a consideration, making sure all of the software you depend on is supported keeps your business secure. Besides the security issues, there are other considerations to contend with, like a loss in functionality



What are Your Options?

Since you have around a month left to upgrade away from Windows 7, you still have time to switch your Windows 7 workstations over to Windows 10. Windows 10 is the current standard and has been for nearly five years. To upgrade to Windows 10 requires at least a 1 GHz processor, 2 GB of RAM, and 20 GB available on a hard drive. Since these specs aren't much over what Windows 7 required, it may not be necessary to

overhaul the hardware on each workstation.

Extended Support

For organizations that simply won't have time to upgrade their machines there are a couple of options that you should know about. Microsoft is offering a cost-ly extended support package that will be available for all Windows 7 Pro and Windows 7 Enterprise customers with volume licensing through January 2023. Most businesses will not qualify, but if yours does, the costs for Enterprise will be \$25 per device from 2020-2021, \$50 per device from 2021-2022, and \$100 per device from 2022-2023. The cost of support for Pro versions will be double that.

There are, at this moment no plans to support this software after 2023.

Microsoft 365

If your business is looking for an option that will move you on from Windows 7, Microsoft now offers the Microsoft 365 Bundle. Available in enterprise, business, and education platforms, the...



Read the Rest Online!
<https://dti.io/win7end>

What Does It Mean to Plan for the Worst?



You don't need to be repeatedly told just how important risk management is. If you did, you probably wouldn't have made it this far. One problem you see from business owners today is that while they understand just how many problems there are--and which ones they need to find solutions for first--they want to grow their company so fast that they overlook potential problems and end up hurting their business as a result.

This month, we thought we would talk a little bit about contingency planning and how, if it is done right, it can have a marked effect on your business' ability to carry-on after a problematic event.

A Little Background

One of the biggest risks a business owner needs to address is what needs to happen if there is a situation where their business is disrupted. There has to be a series of actions taken that will allow for a thorough assessment of the situation and a return to productivity. These tasks don't just solve the problems surrounding an issue, they are a strategy to ensure operational resilience.

Business as Usual

Your whole business often has small interruptions, but when there are significant delays, it can

start to cost your business a lot of money. A lack of revenue generating action--any bout of lengthy downtime--is very detrimental to the sustainability of your business, regardless of what it is that you do. This is because the costs don't just disappear the minute the work stops, and typically your biggest expenses are tied to production.

Continuity, In the Information Age

Business continuity planning hasn't changed all that much, it just has to take into account the numerous moving parts your business has. Of course, the more technology your business uses, the more it needs to be considered, especially if its failure puts a stoppage to your business' forward momentum. That's why it is important for your plan not to be some half-baked shell, but a complete, step-by-step and tested plan.

You will want to start by making a list of people that need to be in the loop if there were to be some major continuity problem with your business. This list should have the names, addresses, and contact information of all parties that would be responsible for any section of your business. It is going to be important to actively verify that the contact information is up to date, as well as train those employees on their roles if your business continuity plan is to succeed.

Take Action

A business continuity recovery action plan is a plan that incrementally works to recover your business practices. If your organization's continuity plan extends to off-site locations, your action plan should extend to all processes and procedures that will help set-up and move your business' operations to the new location. Most tasks should be assigned a specific timeline for completion, with the highest priority tasks coming first.

Customer Care

Effective customer relations are a critical process in normal business conditions. When you are dealing with a critical failure, it can keep you in business. You will want to contact your suppliers and vendors. Keeping your supply chain from failing has to be a major point of emphasis, no matter what type of business you run. This goes double if your business is a key vendor for other business' supply chains. Making sure that your business' relationships remain solid, and that you help your partners restore "business as usual", is essential for your business' return to form.

Technology and Data

You will want to have identified what hardware and software are essential, as well as have a good...



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We partner with many types of businesses in the area, and strive to eliminate IT issues before they cause expensive downtime, so you can continue to drive your business forward. Our dedicated staff loves seeing our clients succeed. Your success is our success, and as you grow, we grow.



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



newsletter@directive.com



facebook.directive.com



linkedin.directive.com



twitter.directive.com



blog.directive.com



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newsletter.directive.com

