TECHMinutes

December 2014

Your Small Business Technology Information Source!

This Issue:

Happy Holidays!

From everyone at Directive, we would like to extend season's greetings to you and yours. We couldn't do it without your dedication and support and look forward to enhancing our partnership going forward. We hope everyone has a happy and healthy holiday season.

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

Seasons Greetings

People are the X Factor for a Successful Technology Strategy

Businesses look to technology to solve their problems and make operations more efficient, and rightfully so, after all, technology is synonymous with "solution." Although, just purchasing new technology isn't enough to automatically see the desired results. New technology must be accompanied by intentional implementation efforts, which includes adapting it to your company's culture. In other words, working with people.

You Can't Have One Without the Other

After studying new research about digital transformation among companies investing in the digital customer experience, Brian Solis, principal analyst for the Altimeter Group, made this observation to *CIO.com*:

> That's the irony about digital transformation, it doesn't work when in and of itself technology is the solution. Technology has to be an enabler and that enabler needs to be aligned with a bigger mission. We already found that companies that lead digital transformation from a more human center actually bring people together in the organization faster and with greater results.
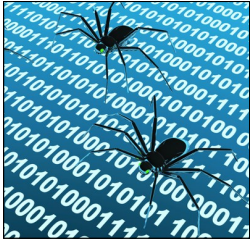
How Secure Are Your Virtual Servers?

In today's technology world, a lot of businesses are opting to take advantage of virtualized servers. These offer various benefits, including the ability to consolidate your servers into a neat, controlled package. But according to a recent study by Symantec, virtual servers might not be as secure as once thought. In fact, they might not be any more secure than a physical server.

The well-known security company stated in its most recent report, entitled "Threats to Virtual Environments," that "virtual machine hosting servers are not any [more] secure than any other type of server. They are just as vulnerable to malware and targeted attacks." Additionally, there are a number of cloud-based threats that are exclusive to virtual servers. While some security companies beg to differ, hypervisor attacks can potentially occur. The hypervisor is what creates and runs the virtual machine. While it is certainly pos-

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"Science and technology revolutionize our lives, but memory, tradition, and myth frame our responses." -Arthur M. Schlesinger

Page 2

4 Reasons Why Your System is Bugged

As long as computer software has existed, it's been plagued by bugs. Like real bugs, software bugs are an infestation and can cause major problems for businesses. When assessing software bugs, one question comes to mind; "After decades of dealing with bugs, why are they still an issue?"

It's a fair question because it's the nature of technology to improve over time. With every version of tech that's released, problems with the previous version are addressed and the latest version markets these improvements. This is why "state of the art technology" is so valuable. It assumes that the latest version will have the least problem-causing bugs. Although, sometimes there's an exception to this rule--we're looking at you, Windows Vista!

Therefore, it's only natural to assume that, by now, software developers would have perfected their craft and bugs wouldn't be a problem. Sigh. Unfortunately, due to a range of reasons, this isn't the case now, and may never be.

Imperfect Creatures Make Imperfect Creations

When it comes down to it, computer software is made by people, and people are flawed. The term "nobody's perfect" means that it's impossible for a person, much less a team of people, to make software that's perfect. Programmers are the people that make software by creating code--thousands, if not millions of lines of complex code. That's a lot of room for error. Making it harder to achieve coding perfection, is the fact that programmers use imperfect software to write code for new imperfect software--so they're at a disadvantage from the get-go.

Deadlines Create a Rushed Product

If you were able to give a programmer all the time they needed in order to create a perfect product, they might be able to come up with an offering that's bug free, but time and deadlines are another factor that adds to the bug problem. Essentially, most software used is made for the purpose of profits. This means that programmers have to meet the deadlines of software manufacturers, which may translate to a few cut corners. Bugs brought about by cut corners are one reason why software manufacturers continue to provide support and updates for their product well after it's released.

New Software is Designed to Do More

In a perfect world, we would keep improving a single version of a software until every bug is worked out and the code is perfect. Instead, a software is completely overhauled after a few years with new and more complex features. More complicated software means even more lines of code.

InfoWorld puts the increasing complexity of error-prone software into perspective:

> People who count such items say that if you only have one mistake per every 50 lines of code, you're doing pretty well. Most programmers veer closer to a mistake for every five to 15 lines of code. Consider, say, that the Linux kernel has more than 15 million of lines of code ... you do the math.
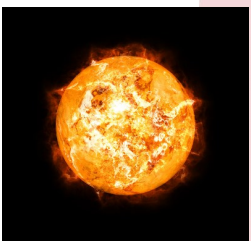
We Can't Forget about Hackers

You are well aware of hackers and all the damage they can do to your system. If a software bug is like a wound, then hackers make it worse by pouring salt on it. They have a specialty for finding and exploiting software bugs to make them worse. As long as hackers are actively trying to exploit lapses in network security and software bugs, it will always be an uphill battle to have error-free software.

Software bugs are bad. They can't be totally eliminated from the technology picture, but their effects can be managed. Like a virtual exterminator, Directive can remotely manage and maintain your company's IT infrastructure to prevent software bugs from causing your business downtime. Call us at 607.433.2200 and stop bugging out over computer errors.

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Unlike Lightning, Solar Flares Can Strike the Same Place Twice

In 1859, our planet was hit with the largest recorded solar flare. This particular flare was known as the Carrington Event and it produced auroras that could be seen all around the world, even as far south as the Caribbean. The 1859 solar flare caused minimal damage and was seen mainly as an oddity. If such a flare struck today, however, the world would erupt into chaos.

What makes a solar flare like this so dangerous for our modern society is that, when the massive geomagnetic storm collides with the Earth's magnetosphere, an electromagnetic pulse (EMP) is created, which effectively disables all of the Earth's electronics.

Electricity-based technology was in its infancy back in 1859. Therefore, the only negative effect that society experienced from the flare was the downing of its telegraph systems, as reported throughout both Europe and North America. In some cases, telegraph operators

People are the X Factor for a Successful Technology Strategy

(Continued from page 1)

The Need for CIOs to Work on Their People Skills

Solis goes on to say that whoever's job it is to implement the new technology within a company (typically it's the CIO), has their work cut out for them. "The CIO is more important than ever before. Instead of working against a technology roadmap, CIOs are now focusing on organizational processes and objectives that matter more to different types of customers and employees." In other words, "CIO" should now include a "P" for "Chief Information and Personnel Officer."

This shift may be a challenge for many long-term CIOs. Chances are, they got into IT because of their love for technology, not because they enjoyed working with people. Technology has reached a level where it needs to find a supportive cultural environment for proper implementation. This means talking with and organizing people. Many of us are well aware that working with technology is much easier than working with people. Technology is predictable and its solutions are straightforward, whereas humans are highly unpredictable and often have attitudes that are difficult to manage.

How a Technology Person can Motivate the Team

Getting people on board with the new solution being implemented is absolutely the key to its success. For example, if users prefer the older technology, and they don't want to invest the time into learning a new system, then they may give the new tech a half-hearted go at it, intending that their negative feedback will get the CIO to revert back to the old ways; or an employee may simply dislike the CIO for a petty reason and choose to make the implementation of the new tech difficult out of spite. A poor attitude like this would make the entire endeavor a huge waste of company time and money.

As the cultural curator for your company, it's your responsibility to get employees motivated to appreciate new technology, or at least understand the value of it so they will use it without too much whining…

Read the Rest Online!
http://bit.ly/1v4rPcR

How Secure Are Your Virtual Servers?

(Continued from page 1)

sible, the payoff for hackers isn't the best incentive, considering the level of expertise it takes to perform such a feat.

Other threats, however, are very real. Malware and targeted attacks against virtual servers are just as effective as they are against physical servers. Malware can potentially attack virtual server snapshots during the data backup process, and the infection can spread through a virtual network. To make matters worse, these attacks have happened and can continue to occur. One example is the Crisis malware, which can steal information from a system in a variety of ways (it was initially thought to be created for law enforcement and espionage).

In order to keep your virtual servers as secure as possible, Symantec offers some tips. Directive has picked the ones we feel are most important:

- **Crack down on security**. Only allow trusted applications access to your network and systems. Directive can help your business put together a blacklist and whitelist of apps that can or cannot access your network. This keeps untrusted entities from accessing your precious data.
- **Use advanced security tactics**. Against particularly nasty threats, you need particularly strong antivirus and malware protection. You need an advanced solution that can protect you from most variants of threats out there. A powerful solution like a Unified Threat Management device (UTM) from Directive is a comprehensive combination of firewalls, antivirus, web filtering, and much more, that keeps your network as safe as can be.
- **Take control**. Administrators need to take proper measures to keep unauthorized users from accessing the virtual server interface. Integrate two-factor authentication and log both successful and failed attempts to access the system. Ask Directive for further details on how to integrate more powerful security solutions into your business technology.
- **Have a disaster recovery plan**

intact. This goes without saying, but every business should have a solid backup and recovery solution in case the worst happens. You don't want to be caught unprepared in the face of disaster. Directive offers a powerful Backup and Disaster Recovery (BDR) solution which keeps your information backed up safe and secure off-site. In the event of a disaster, you can recover your data quickly and efficiently with minimum downtime.

Directive offers managed IT services for those who want to concentrate on what's most important to your business - the business itself, and the clients who keep your company alive. We provide a number of technology solutions that make doing business easier than ever before. If you want to keep your virtual servers and your entire company safe, give us a call at 607.433.2200.

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![directive logo]

Unlike Lightning, Solar Flares Can Strike the Same Place Twice

(Continued from page 2)
received electric shocks and telegraph pylons threw sparks.

A first-hand account of the phenomenon from the *Baltimore American and Commercial Advertiser* provides us with some unique insight into the event, which lasted multiple days:

> Those who happened to be out late on Thursday night had an opportunity of witnessing another magnificent display of the auroral lights. The phenomenon was very similar to the display on Sunday night, though at times the light was, if possible, more brilliant, and the prismatic hues more varied and gorgeous. The light appeared to cover the whole firmament, apparently like a luminous cloud, through which the stars of the larger magnitude indistinctly shone. The light was greater than that of the moon at its full, but had an indescribable softness and delicacy that seemed to envelop everything upon which it rested. Between 12 and 1 o'clock, when the display was at its full brilliancy, the quiet streets of the city resting under this strange light, presented a beautiful as well as singular appearance.

If a solar flare of this magnitude happened today, the newspapers would be reporting a much different story…

Read the Rest Online!
http://bit.ly/1ud41l1

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.
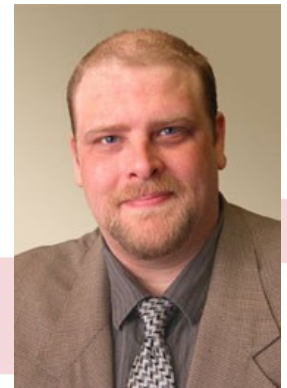
Chris Chase
Solutions Integrator
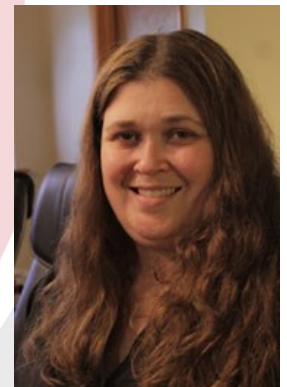
Charlotte Chase
Solutions Integrator

Aerial View of Fall in Oneonta, NY!

Our CEO, Chris Chase, filmed this beautiful video of Oneonta, our base of operations. There's nothing like fall in Upstate NY, and this video is a beautiful showcase of our home.

View it Here!
http://bit.ly/1oQI5LN

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YOU MADE A LIST, YOU CHECKED IT TWICE, BUT IF YOU WANT TO FIND OUT WHO'S NAUGHTY OR NICE, CHECK THEIR BROWSER HISTORY.