CELERANETWORKS
Making Technology Work For You

TECHMinutes
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Making Technology Work for You

This Issue:

4 Steps to Quickly Troubleshoot Your Internet Connection

There's a special kind of frustration that accompanies a dropped Internet connection. In such dire times, try these four troubleshooting tips beforehitting the panic button.

Determine How Widespread the Problem Is

If you're working at in office and sharing an Internet connection with others, then the first thing...

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About Celera Networks

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:
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How to Effectively Manage Your Business's Biggest Risk Factors

Every business has to deal with a certain amount of risk from various factors, from hackers, natural disasters, or user error. As a business owner, it's your responsibility to ensure that your organization can bounce back from a potentially dangerous situation with minimal casualties. We're here to help you understand the importance of a risk assessment, and what you need to look out for.

What Risk Management Is

Risk management is the act of understanding and remedying problems that could cause trouble for your business in the long run. Risk management includes, but is not limited to:

- **Business continuity:** This is a broad term for the act of planning for the future in terms of backup and disaster recovery, workforce retention, and other problems that can directly be attributed to a disastrous change in operations. Basically, it's making sure that your organization is prepared to handle a worst-case scenario.
- **Network security:** Network security protects your business's network from the many cyber threats that exist on the Internet, including viruses, malware, spyware, ransom-

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4 Options When Discarding Old Technology

So you've gotten yourself some new hardware. That's great, but what are you going to do with your old equipment? You need to make sure that you're handling your old technology properly, and there may be ways for your old hardware to find a second life. Before chucking it in the trash, first consider your options.

Be Sure to Take Care of Your Data

First off, no matter what you end up doing with your old hardware, if you're dealing with a hard drive previously used to store important files, then you need to take steps to ensure that this data won't be recovered and fall into the wrong hands. The common mistake made here is for users to think that just deleting the files by way of emptying the Recycle Bin is enough. This simply isn't the case, seeing as many of these deleted files can still be recovered.

Instead, before passing an old computer on to someone else, you'll first want to make sure that the hard drive gets wiped--a procedure that truly erases everything. Also, if you decide to throw your equipment in the trash, it's best practice to first physically destroy the hard drive so that it can't be found by a tech-savvy dumpster diver (which isn't as farfetched as it sounds). For example, this can be accomplished by putting the hard drive under a drill press or sledge hammer. To know for sure that you're properly taking care of your old hard drive, be sure to consult IT professionals.

Donate Your Old Hardware to a Good Cause

It feels good to give to charity (not to mention the tax incentives), and there are likely some

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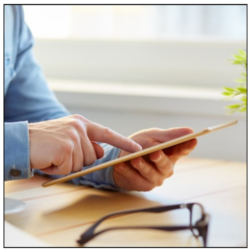
> *"Technology is the knack of so arranging the world that we do not experience it."*
> *- Rollo May*

How to Help Your Business Go Paperless



Businesses today want to save money and cut costs whenever possible, and technology has made it much easier to do so. Now, organizations can eliminate unnecessary hardware, clear the office space of file storage systems, and even eliminate clutter associated with paper documents.

The Benefits of Going Paperless

Your business can benefit greatly from eliminating paper consumption. The following are potential gains that will improve your business's operations and bottom line.

- **Cost savings:** How much does your business spend annually on ink and paper products? If your organization can cut down on the amount of printing that it does, you'll naturally spend less on paper and ink, increasing your bottom line and freeing up funds that can be spent elsewhere.
- **Clutter and wasted space:** You don't need us to tell you that filing cabinets are huge and bulky wastes of space. While they might help you keep paper clutter to a minimum, they're a pain to move and an even bigger pain to take with you if you relocate your office. Wouldn't it be nice to just store your files digitally and not worry about dragging unnecessary furniture with you?
- **Easily-searchable file archiving:** How much time do you waste digging through filing cabinets whenever you need a specific document? With electronic record storage, searching through files has never been easier.
- **Backup services:** In the event of a disaster, what's more likely to survive; your digital files that are safely stored in the cloud, or your physical documents that are vulnerable to water and fire damage? Not only does storing your files digitally make them more secure, but it also makes them much easier to back up and restore in case disaster strikes.

How it Helps the Environment

According to PaperlessProductivity, one tree produces, on average, 17 reams of paper. This same tree takes at least 100 years to grow. If you consider how much paper your business uses every day, and then multiply that for every business in the world, chances are that you'll come up with a number that well exceeds the amount of paper that a single tree can provide. That's not to mention other users of paper products, like universities, individual consumers, government agencies, and so on. Just think - it takes over 100 years to replace what modern businesses use for paper documents every day.

How We Can Help

If your business wants the opportunity to drastically eliminate paper waste and printing costs, Celera Networks can help. We can equip your business with an electronic record storage system that's designed to store your paper documents in a secure, compliant digital space. This helps to keep your documents safe and sound, while making them easy to find when they're needed.

Plus, if you're still (somehow) attached to your fax machine, we can help your business implement a fax server that...

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4 Options When Discarding Old Technology

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great non-profit organizations in your community that would find your old hardware to be useful. However, if your old equipment is on its last leg, then it would be better for you to dispose of it so that you're not burdening them with your junk. Be sure to talk with a representative from the charity before showing up with a truckload of old computers.

If you are passing on your old equipment, one way that you can both protect your data and make sure that they're getting working technology is to swap out the old hard drive for a new one. New hard drives are generally inexpensive, and seeing as the average hard disk drive has a lifespan of five years, you don't want to gift an old computer that could essentially crash at any time.

Reuse and Repurpose Your Old Hardware for Around the Office

If there's still some life in your old equipment, you may be able to find a use for it around the office. Here are some examples:

- Using an old computer for a print or fax server will take some stress off of your network, though it would require reconfigurations to be made.
- Keeping the computer on hand for spare parts.
- Keeping an operational workstation on hand as a spare PC, just in case an operational PC runs into an issue and needs to be swapped out temporarily.

Be Sure to Recycle

When it comes to disposing of old technology, we highly recommend that you recycle it. Computer components are made up of some highly toxic metals that can damage the environment if tossed into a landfill. Instead, old computer equipment needs to be disposed of properly and recycled in a special way. Celera Networks can take care of this for you. To arrange a time to drop off your old equipment at our office, feel free to contact us at (617) 375-9100.

Your technology is important, both in how you use it and how you dispose of it. To go over these technology disposal options with our knowledgeable IT technicians, contact us today.

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ware, trojans, and many others. As such, it's a pivotal aspect of ensuring that your business's future is secure.

- **Asset management:** Asset management basically consists of ensuring your technology, as well as your IT budget, is prepared to handle a worst-case scenario. When your server breaks down, will you have the funds to purchase new hardware, or invest in the repair of the broken-down unit?

What You Need to Watch For

As you can see, risk management is an all-encompassing part of managing a business. Thankfully, you don't have to go about risk management alone. With the help of Celera Networks, you can effectively manage risks to your business and ensure its continued prosperity. The following are services Celera Networks provides that are designed to alleviate the major pain points of handling risk management.

- Backup and disaster recovery
- Security solutions - firewall, antivirus, spam blocking, content filtering
- Penetration testing
- IT management
- Remote maintenance and workstation/server management

Celera Networks understands that a small business like yours can have trouble managing and maintaining critical IT systems. You already have your hands full, even without taking a cautious, preventative approach to your technology solutions. To find out how your organization can benefit from our managed IT services and our risk management expertise, contact us at (617) 375-9100.

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Having an All-Wireless Office is Totally Possible. Here's How!

You likely use several wireless devices and enjoy their many advantages, like not having to be wired to your desk. Yet, it's unlikely that you've transitioned your entire office to wireless technology. Thanks to the advancements and affordability of wireless technology, having an office that's completely wireless may be entirely within the realm of possibility.

What would an all-wireless office look like? For one, there wouldn't be any ethernet cables. Anyone who has ever worked with information technology, even on a basic level, should be picking their jaw off the floor right now at the thought of never having to touch an ethernet cable ever again. However, despite the all-wireless office sounding like something out of science fiction, having your office experience this wire-free utopia can be yours with enough planning and the implementation of the right wireless solutions.

Now, we know what your first perceived objection may be; the high cost of undergoing such a major transition to go wireless. Before you write off an all-wireless office as a frivolous expense, consider the results of Cisco's Connected Workspace project, where they implemented an all-wireless office by removing allocated desks and offices in favor of hot-desks and meeting spaces that support mobile devices. ITProPortal reports: "The result has been a 30 percent reduction in floor space per person, increased productivity and a savings of $2.5k saving per employee per year."

Spread this kind of savings around per worker, and the case to go wireless looks even more attractive if you have a large workforce.

Of course, transitioning to an all-wireless office is a big deal. It's a rather complex process with multiple pieces and components in play. Therefore, it shouldn't be attempted on a whim. Take for example these challenges of going wireless that you must first take into consideration.

- **The management of your network:** A wireless network will require the same oversight as a wired network, if not more due to the fact that a hacker will have more ways to access your data.
- **Deploying resource-heavy solutions that use voice and video:** Solutions like these are going to eat up a ton of bandwidth. You need to take into account how much traffic like this your network can handle at peak hours. Failure to do so will result in a slow network and downtime at the worst possible time.
- **Higher user density from having multiple employees with multiple devices gathered in one spot:** While it's advantageous to have a wireless network that allows your team to gather in one space and collaborate while using their mobile devices, not having your wireless network be able to handle extra traffic at a single location will be counterproductive to your meetings.
- **Meeting high user expectations:** When laying out your wireless network, you'll want to plan for your coverage to be as widespread as possible. For most end users, they expect a strong connection for their mobile devices wherever they may be in your office building, and even outside of it. Be warned, patchy wireless coverage will lead to employee grumblings.

For most businesses, the move to wireless will be slow as they upgrade their network piece-by-piece. Whether…

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Ransomware: A Hated Malware With an Intriguing Past

The short, yet devastating, history of ransomware is littered with what amounts to individual horror stories. As you may well know, ransomware, is a particularly devious and potentially devastating strain of malware that, when enacted, locks a computer's files down so that the user can't access them. In their stead, a message is relayed that instructs them to contact a third party to pay a ransom for access to the files. This is where the threat gets its name.

Initial Development

As with much of the malevolence in the world, ransomware was built for a benevolent purpose. In 1986, two Pakistani brothers, Basit and Amjad Alvi, wrote a piece of software that instructs users to call a phone number if they were inundated with a warning message. The goal was to use this program to identify piracy and protect the brothers' assets.

Early Ransomware

A few years later, this code was modified to lock down files. What is today known as the PC Cyborg/AIDS virus, was delivered on a floppy disk labeled, "AIDS Information Introductory Diskette." When installed on a system (via floppy disk), it would restrict and hide the files on the hard drive of the computer. It would then instruct the user to pay $189 to a P.O. Box in Panama if they wanted to renew the software license.

Return of Ransomware

It took almost two decades before ransomware, as we now think of it, returned. In 2006, GPCoder, or PGPCoder, was developed as a trojan horse that, when delivered, encrypted files with common extensions (like .doc, .html, .jpg, .xls, .zip, .rar, etc.), and completed the extortion of the user by dropping a simple text file into each folder stating that they had to pay to receive the instructions on how to decrypt the files.

About the same time, the software started to quickly evolve. New strains were developed that could produce more sophisticated types of encryption, making it easier for more hackers to use with less risk. This resulted in more frequent ransomware attacks, and more ways of deploying the malware.

Contemporary Ransomware

The first in a whole new trend of ransomware was unleashed on the Internet in September of 2013. CryptoLocker was typically delivered as an attachment to a seemingly benign email message, normally sent from what seemed to be a legitimate company. The ransomware itself was embedded in the email in the form a .zip file that contains an executable file, disguised as a .pdf file. When the file's contents were unpackaged, it would install in the user profile, and add a security key to that user's registry. This would allow the person or organization that sent the email to hijack the user profile, and thus lock down all the files on the system.

CryptoLocker has had several separate variants, all of which worked relatively the same way, and produced relatively the same results. They are all Trojan Horses that lock down files and demand ransom for access to them. People have begun to see more and more of this activity despite security companies' best efforts.

From an IT perspective, there are many things you can do to avoid coming into contact with a piece of ransomware. One is to have your organization invest in high-end cyber security solutions. Nowadays, antivirus and spam blocking solutions...

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We partner with businesses in many different vertical markets throughout the New England area. The Celera team is focused on customer service and we strive to eliminate IT issues before they cause expensive downtime.

Our goal is for our clients to continue to focus on what's most important - their business.

Our dedicated staff is known for going the extra mile and doing what it takes for our clients to be successful with their technology investments.

Your firm's success is our success.

Tech Fun Fact

When it was bought by Facebook, Instagram only had 13 employees.

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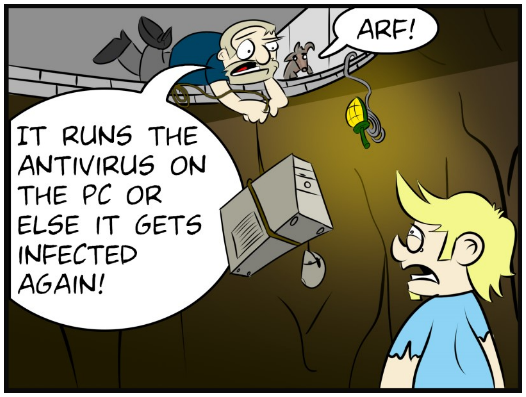
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