This Issue:

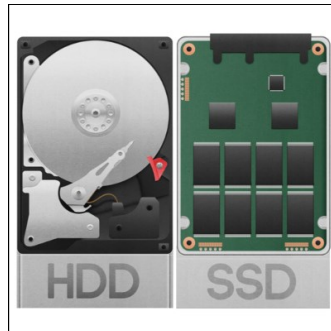### Android Makes it Easy to Block Telemarketers

Everyone gets unwanted calls from unsolicited numbers on their smartphone. It's a part of life. What matters, though, is how you deal with these callers. While a pretty comprehensive solution to this problem can be contacting your provider, some more recent models of Android smartphones have the ability to blacklist phone numbers built right into...

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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.

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newsletter.celeranetworks.com

What's the Benefit of Using Solid State Drives vs. Hard Disk Drives?

When it comes to storing data locally on your organization's workstations, you have a couple of options. There are solid state drives and hard disk drives, but the average user isn't tech-savvy enough to understand the difference between the two. Regardless of what kinds of devices you use for your business, you should be aware of how they work and what you can expect from them.

You might be surprised by how different solid state drives (SSD) and hard disk drives (HDD) are. Here's a quick rundown of how they both work, and what the primary differences for the business owner are.

Hard Disk Drives
First, we'll discuss how the hard drive works. It's called a hard disk drive because there's literally a disk inside the drive spinning while it functions. These disk drives are generally found inside computers, but can be purchased externally and plugged in via a USB port for extra data storage options. Unfortunately, due to the machinery operating within the hard disk

How Sloppy Security Practices Put Companies at Risk
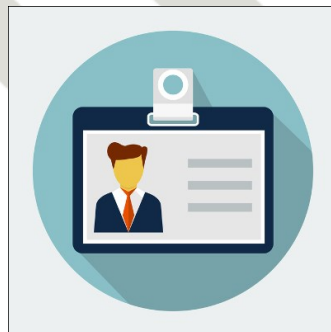
In today's online business environment, security is nothing to scoff at. Yet, there are many businesses that don't play by the rules when it comes to monitoring account security on a shared network. This puts both themselves, and their businesses, in danger.

According to a recent study by Dimensional Research, a grand total of 83 percent of respondents found difficulty with managing administrative passwords and accounts. This number is huge, especially considering how important administrative accounts and passwords are to maintaining the integrity of any business's critical systems. This can only mean one thing; businesses have the systems and practices put into place, but they're not being enforced as strongly as they should be.

Here are some other statistics to take a look at:

- 37 percent of all administrator passwords on mission-critical hardware and software aren't consistently changed.
- 37 percent of respondents claim that they use shared credentials with other administrators.
- 31 percent claimed that they were unable to consistently identify individuals responsible for administrator activity.
- 75 percent claim to have a default password changing process, but only 26 percent admit to changing passwords frequently.
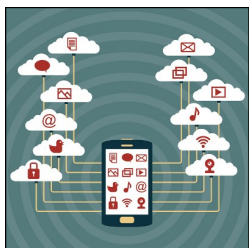
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Making **Technology** Work For You

"Just as war is too important to leave it to the generals, science and technology are too important to leave in the hands of the experts." - Sheldon Rampton

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In the Wireless Age, Your Wired Network Might Be Outdated

Business owners are taking great strides toward freeing themselves from the confines of the office environment once and for all. This means integrating wireless technology into every aspect of the way you handle operations. However, there are still some uses for wired technology that wireless cannot facilitate.

Should your business go completely wireless? Not necessarily; there are some advantages and disadvantages to going wireless, and you should be aware of all of them before rebuilding your infrastructure to facilitate only one of these.

The Case for Wireless

The primary benefit of wireless technology is the lack of wires that might restrict movement of both infrastructure components, and your workers. In this case, you don't have to run cables all over the office to add new workstations or access points. This eliminates the need for some sort of cable management system, and it essentially makes your network scalable and much easier to manage.

This isn't to say that wireless technology is perfect. Your wireless connection could be disrupted by something as commonplace as a microwave or other household appliances. Furthermore, it becomes even more necessary that your organization secures any and all access points for the network using some sort of encryption or password protocol. Anyone within range of your WiFi signal can be considered a threat, so it's important that you take a firm stance on wireless security, especially with Bring Your Own Device (BYOD) and the Internet of Things (IoT) gaining traction in the work environment.

The Benefits of Wired

While wireless technology is capable of making your business more mobile and flexible, a wired infrastructure is known to increase security and reliability. Since any devices being added to your network must be physically plugged into or connected to your network, you don't have to worry as much about the odd hacker randomly plugging into your network. Furthermore, a wired network connection isn't as affected by elements in the environment, like walls, floors, and so on, like a wireless connection would be.

As previously mentioned, wired technology makes for a more complex infrastructure, which makes it much more difficult to add new users and new equipment without carefully considering the cabling procedure. Furthermore, you're tied down to the location, which means that you'll need a wireless connection anyway if you want to fully leverage your business's technology.

Regardless of what kind of infrastructure you decide on, Celera Networks can help you optimize it to suit the needs of your business. You need to carefully consider how many devices, and for what purposes, will be connecting to your infrastructure. We can help your business maintain or expand your current infrastructure in ways which you can't even dream of.

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How Sloppy Security Practices Put Companies at Risk

- 12 percent of respondents claim that they only change passwords in the event of a potential security issue.
- 4 percent never change their admin passwords.

So, why is this the case? Why do businesses have trouble guaranteeing their account security? In some cases, they could be taking the wrong approach to security best practices. There have been horror stories of organizations using antiquated software to track who logs into accounts, like sign-in charts or even Microsoft Excel. Such methods are generally prone to user error and are frowned upon in today's tech-centric environment.

The solution to this predicament isn't a simple approach. It's a two-pronged offensive that requires the enforcement of proper username and password protection, and the monitoring of access logs by your business. For your passwords, no two users should have the same credentials at any given time. Everyone should have their own unique access credentials that follow password best practices. Users should make passwords long and complex, with both upper and lower-case letters, numbers, and symbols. Using an enterprise-level password manager can make remembering these long passwords much easier.

Another great way to ensure that your organization's employees stay accountable is through monitoring and maintaining access logs that dictate when and how users access your network. This is important for several reasons. For one, it makes sure that only authorized users are accessing the network. Second, you know that something is wrong if someone from the other side of the world accesses your network. By keeping a close watch on your access logs, you can effectively maintain maximum security while ensuring that your employees are held accountable for their actions while on the private network.

For more information about security best practices, Call us at (617) 375-9100.

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What's the Benefit of Using Solid State Drives vs. Hard Disk Drives?

(Continued from page 1)
drive, they often run into operational failure that solid state drives avoid. Because of the mechanical element, they are much more prone to shocks, bumps, and drops.

Solid State Drive
The solid state drive, in comparison to the hard disk drive, is much faster due to its tendency to function without requiring the reading or writing of data. It also doesn't have the rapidly spinning hardware that the hard disk drive must endure. Furthermore, solid state drives utilize the power of flash memory to provide superior data transfer rates and reliability, while offering a greater physical integrity than the typical hard disk drive.

The Difference
The greatest difference between SSDs and HDDs is easily the amount of data stored on both of them. Hard disk drives can generally hold more information than an equally-priced solid state drive while the SSD has a significant lead in efficiency. SSDs use less power, work at higher speeds, and are much less likely to experience untimely, hardware failure, making them a more reliable choice all around.

However, one of the largest differences between SSDs and HDDs is the immense difference in value per byte of data. According to PCmag.com:

"At one-sixth the storage capacity and three times the price of a hard drive, there is a huge discrepancy in cost per byte between the two storage media. However, in 2014, 500GB at USD $349.99 was considerably less expensive for an SSD than just a few years prior."

While it's significantly more expensive to run with solid state drives for your technology, you need to consider all of the benefits before deciding which kind of storage your business wants to commit to. Do you require a significant increase in the performance of your workstations, or are you more concerned with ensuring that they have the space required to store excessive amounts of data?

If you're ever unsure about how you should be storing your data, or if you could use a few pointers on how best to manage your infrastructure's information, give Celera Networks a call at (617) 375-9100. We can assess your current technology solutions and determine whether you need a more solid approach to your disk drive solutions.

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Give Your Business the Advantage of Managed IT Services
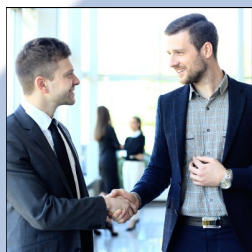
Businesses thrive on technology, and constantly use it to push their initiatives forward. However, the latest solutions and business technology can often be complex, and it usually requires the attention of skilled professionals in order to guarantee its optimal efficiency. The only problem is that small and medium-sized businesses often don't have funds to hire in-house IT technicians for their technology maintenance needs. Managed service providers offer a unique benefit for these budget-minded organizations.

We want to make the lives of small and medium-sized businesses easier by managing their IT. This includes the complete and total management of any technological assets that your company employs, including workstations, servers, cloud infrastructures, your network security, data backup and disaster recovery, and

so much more. All of these technology solutions are found in, more or less, every major enterprise, but smaller businesses often don't understand the importance of these solutions, or simply don't have the assets available to spend on integrating them. Managed service providers endeavor to bring the best technology to every organization at a reasonable price.

While there are countless benefits that come from taking advantage of managed service offerings, there are two that really stand out: 1) Proficient, hands-off technology management, and 2) Cost-effective technology solutions.

Outsourced IT is Better IT
Outsourcing responsibilities to an external party might not seem like a good idea right off the bat, but when you think about it, it makes more sense to outsource than it does to hire a full in-house team. If you don't have a dedicated in-house IT staff, you're likely taking on some responsibility for ensuring your technology functions properly. If not,

your technology isn't being given the maintenance it needs to continue operating at maximum efficiency.

It's much more efficient for your company's workload to outsource the responsibility to Celera Networks. Our skilled technicians are more than capable of performing the required maintenance on your business technology. More importantly, though, your team will be able to take back any time spent on maintaining technology, and instead use it for better purposes, like introducing new initiatives that are designed to increase profits.
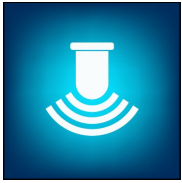
Outsourced IT is Cost-Effective
You don't need us to tell you that the latest technology solutions are expensive by nature. Enterprises invest in the latest technology to give themselves a competitive edge, but the average small or medium-sized business doesn't...

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In the Near Future, Light Bulbs Will Transmit Data

Your business's wireless Internet connection is one of its most valuable assets, and without it, your operations would surely suffer. Your wireless technology, like smartphones, tablets, laptops, and even your network depend on it in order to function properly. WiFi is known to be pretty inconvenient at times due to questionable connections and security, but a new technology wants to change all of that: Li-Fi, wireless Internet connections delivered by special light bulbs.

Li-Fi started out as being nothing more than a theory, but there has been steady progress made over the past few years. It's been tested in a real-world environment, and it's showing that it can definitely be a viable wireless Internet technology. When tested, Li-Fi transferred data at speeds of around 1GB/second. As explained by ScienceAlert:

"The technology uses Visible Light Communication (VLC), a medium that uses visible light between 400 and 800 terahertz (THz). It works basically like an incredibly advanced form of Morse code - just like switching a torch on and off according to a certain pattern can relay a secret message, flicking an LED on and off at extreme speeds can be used to write and transmit things in binary code."

Li-Fi was created by Professor Harald Haas, who claims that Li-Fi resolves four of the main problems that most businesses have with normal wireless communications:

- **Capacity:** The way that WiFi currently functions is through the use of electromagnetic waves, like radio waves, which are particularly limited in scope and range. When most of society needs access to wireless Internet, due to the limited amount of space on the spectrum, these restrictions will ultimately hold WiFi back. In comparison, the light used by **Li-Fi is capable of traveling at a much greater frequency, which makes it about 10,000 times faster than traditional WiFi.**
- **Efficiency:** Data transfer occurs via base stations as per the current deployment model, and these base stations aren't energy efficient. About five percent of the energy is used to transfer the data, while the rest is devoted to maintaining the temperature of the base station. In terms of overall financial efficiency, data transferred via light eliminates the cost of data transmission. Considering how necessary light bulbs are around the world, it would be a simple transition process. Since the infrastructure already exists, it could be as simple as replacing normal light bulbs with special Li-Fi LED bulbs.
- **Availability:** WiFi isn't available everywhere; at least, not yet. In other places, it can't be used, like hospitals and airplanes. Visible light surrounds all of us on a daily basis, so it's not really a question of "if" a Li-Fi connection will be available, but "how" it will be implemented.
- **Security:** Who can forget the major cause for concern that is security? Wireless signals delivered by radio waves can potentially breach walls and extend into the outside world. Light can be restricted...

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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
9 out of every 1,000 computers are infected with spam.

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