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There's an intrusive malware on the Internet that locks a user out of their PC

and directs them to a fake IT support phone number...

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## About Total Networks

Locally owned and operated since 1986, Total Networks is the only firm in Arizona to receive CompTIA's Security Trustmark validating the firm's adherence to best practices for information security. Services include IT support, security & compliance assessments, document management, backup & disaster recovery and IT planning/CIO services.

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## Bo has Joined the Total Networks Team!



Bo Brown joined the Total Networks team in November as the Business Development Manager, helping clients uncover better ways to leverage technology in their business. Bo works with businesses in the local community to help them reduce their IT spending, increase employee productivity and understand how they can utilize the latest technology to help them grow.

Bo is the latest addition to the Total Networks customer experience team, led by Bill Fox, and is part of our never-ending efforts to focus on doing what's best for our highly valued clients.

Bo has a Bachelor of Science in Marketing from the University of Phoenix and comes to us from another IT company where he had a lot of success in a similar role. Bo lives in Gilbert with his two boys and enjoys playing all sports and anything outdoors with them.

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## The Advantages of Image-Based Data Backup Over Traditional Backup



There's no question that data backup is absolutely critical for the success of any modern-day business, but how does your organization go about it? Just like how we rely on quick snapshots to capture moments with our smartphones or digital cameras, most backup solutions take advantage of image-based backup technology. How does this kind of data backup work, and what are the benefits it provides your business with?

### How Image-Based Backups Work

Image-based backups are widely considered the best choice for any small business's data backup needs. Just

like taking a picture of something with a camera, an image of your hard drive is like a snapshot of it as it appears in that moment. Image-based backups offer great flexibility when it comes time to recover the data, like if your business experiences a data loss disaster like a fire or hardware failure. The massive benefit of images are that they can track changes that are made to a file over a period of time, and they are capable of applying changes to these

(Continued on page 2)

## Reevaluate Your Network Switches Due to Increased Demand of Wireless Technology



Your computer network is only as strong as its weakest link. One of the most overlooked

links is your network switch, and if your IT infrastructure is becoming more dependent upon wireless technology, then you're going to want to perhaps upgrade your network switches.

One of the most significant developments in IT networking comes from BYOD. By now, you've likely heard of BYOD (Bring Your Own Device); it's a rapidly-growing IT trend where employees are bringing their personal devices to the office and using them for work purposes. Due to the influx of BYOD devices flooding office networks in recent years, a network switch predating BYOD probably isn't up to BYOD's increased demands. Consider these common examples from NetworkComputing of how mobile devices connected to your network can increase the strain placed on your switches:

More devices mean more bandwidth requirements, and it's hard to figure out what the BYOD devices are going to be doing, whether it's just plain download bandwidth, something time critical like VoIP, or a sudden surge like Apple iOS version updates. And once end users are tied to a new way of using devices, network teams are often forced to adapt. BYOD not only means bring your own devices but "because you're overly demanding."...



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## The Advantages of Image-Based Data Backup Over Traditional Backup

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files to recreate them as they were at a specific moment. Keep in mind that these changes vary by solution, so it's tricky to identify a set method.

### The Benefits of Image-Based Backup

The primary benefit that snapshot backup has over other types of backup solutions is that snapshots are far less resource-intensive than tape backup processes that have to take full copies of every single file on the network. Furthermore, taking multiple tape backups of your data can lead to significant downtime, since you usually can't access the files while the backup is being processed. Additionally, tape backups require manual restoration, meaning that they must be initiated and restored manually. Due to the immense strain backups put on your server, tape backups are generally performed after hours to avoid expensive downtime.

Think of it this way; traditional backup solutions look at your files. Every time the backup is run, it copies all of your files and stores them on the backup media (typically another hard drive or a tape). Image-based backups don't look at the files specifically; rather, it looks at the actual physical hard drive and copies over the 1s and 0s. This process is much faster and more effective, and the back-

up device can quickly determine what's new and only focus on backing up the differences.

When it comes to restoring the data, you see an even greater improvement to performance. Where restoring from traditional backup devices usually means you need to restore everything all at once, slowly transferring each and every file over and writing them onto the hard drive, image-based restores allow for very rapid deployment from your backup media. The time difference could be several hours. On top of that, this gives your business the capability to virtualize from your backup solution if your main server is down, reducing downtime even more. In a worst-case scenario, a server malfunction could lead to days of downtime, but with properly implemented and managed image-based backups, the downtime could be reduced to minutes.

In comparison, image-based backups aren't nearly as large or time-consuming as the typical tape backup solution, allowing you to take multiple backups of files throughout the day that have changed since the last backup session. Naturally, this allows your business to take multiple backups daily due to your backup solution only affecting files that have changed. Plus, image-based backups are automatic, so you can take full

advantage of them without worrying to remember setting up the tape backup before leaving the office in the evening.

### A Backup and Disaster Recovery Solution

By now, it should be apparent that image-based backup technology should be the preferred method of data backup whenever possible. Not only is it superior to other modes of data backup, but it's also vastly more versatile and less resource and labor-intensive than the alternatives, like tape. However, image-based backup will only get your business so far if you have no way to quickly deploy your backups.

This is why Total Networks offers a comprehensive data backup and disaster recovery solution. Our BDR device takes multiple "snapshots" of your data throughout the workday, which are stored both in an off-site data center and in the cloud for easy access. In the event of a data loss disaster, the BDR recovers your data, restoring it in minutes so you can get back to work with minimal downtime. In fact, the BDR can even replace your server in the event of a hardware failure, giving you ample time to find a suitable replacement without hampering operations.



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## Your Business Must Think Long-term and Short-term When it Comes to IT



For your business's IT, it's important to consider both the short-term and long-term benefits of new

technology solutions. However, which of these offers the greatest return-on-investment in terms of profitability and workplace efficiency? Some might argue that short-term IT (think break-fix IT) is more in line with a business's immediate needs, while long-term IT (i.e. managed IT) considers longevity and proactive thought.

A recent study performed by Tech Pro Research suggests that short-term IT is vastly more agile than long-term IT, but doesn't suggest that either are superior over the other. According to the study, 60 percent of respondents feel that short-term IT can be beneficial to their business strategy, but only 47 percent are currently taking advantage of short-term IT solutions. We suggest that short-term and long-term IT deployment are both necessary, and have different purposes and practicalities.

### Benefits of Short-Term IT Investment

In a sense, short-term IT deployment can be seen as impulsive. It's designed to help your business resolve a current issue as efficiently as possible. In fact, 81

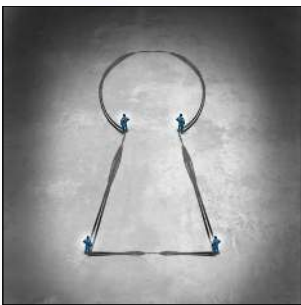
percent of respondents to Tech Pro Research's survey claim that the quicker deployment of solutions was the primary reason to be trusting in short-term IT. Other benefits include the ability to leverage IT staff more effectively, and better alignment with business objectives. These solutions are often more in line with what a business needs, as they are implemented on an as-needed basis. There is no guesswork as to whether or not they will benefit your IT infrastructure down the road.

Contrary to short-term IT deployment, long-term solutions are designed to...



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## It's Quite Possible for Managed IT to Coexist With Your In-House IT Service



Technology can be a fickle thing for small and medium-sized businesses, especially if they don't have a ded-

icated staff whose sole responsibility is handling the maintenance and management of IT. It becomes much easier to simply outsource the responsibility to a managed service provider, but even choosing this has implications that should be considered before making such an important decision.

Especially today, when the latest technology solutions can make or break your business plan, it's important to maintain a competitive advantage with your business's technology. Your infrastructure should effectively leverage its technology to improve operations and communications, and managed IT is important for this core necessity of any technology solution your business implements. Here's why outsourced IT is a commonly chosen method of technology management, as

well as some potential complications that come with the territory.

### Why a Business Outsources IT

One of the key reasons that a business outsources their IT management and maintenance is to save valuable time and assets that in-house employees would spend managing their technology. If your organization doesn't have dedicated IT personnel, the responsibility of maintaining technology falls on the shoulders of your staff, who likely don't have the time and skills necessary to perform the maintenance your network needs in order to remain at the top of its game. This is why remote maintenance and management services are such valuable solutions for business owners.

These days, businesses are capable of outsourcing much more than just tech maintenance and support. With new technologies like the cloud taking hold of the business world, the need for professional, business-orientated tech consultants grows every day. Organizations need companies that have the technical know-how to implement new solutions for all aspects of running a business, like managing a network, maintaining data

backups, hosting email clients, and so much more. Basically, any aspect of your organization's technology infrastructure, from your IT maintenance to the full management and hosting of virtual infrastructures, can be outsourced to improve operations.

### The Primary Challenge: Coexistence

The big issue at hand is that outsourcing IT responsibilities can potentially create a conflict with your current in-house IT services. For example, your old technology solutions that have been around since your business was founded may not be compatible with your more recent operating systems or other aspects of your technology infrastructure. This is a common problem for organizations that typically use legacy technology for many of their mission-critical systems, in which the slightest malfunction could have a drastic effect on operations.

Thus, the importance of ensuring your new technology solutions are compatible with your current IT infrastructure is a major challenge that cannot be...



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## Malvertising: Hackers are Paying For Ad Space on Popular Websites



A good business practices extreme caution when using the

Internet, thanks to hackers using any means possible to unleash threats against organizations of all sizes. You teach your employees how to avoid threats and to avoid suspicious websites, but what if that's not enough to keep hackers out of your network infrastructure?

Some businesses are finding it increasingly difficult to separate the bad from the good when it comes to online security. This is thanks to a number of new and emerging threats, with the latest one being "malvertising." This potential threat focuses on using advertising space on websites to inject malicious code into unwary users. This malware often takes advantage of zero-day exploits (problems that haven't been patched), which means that these threats are difficult to defend against, even under the best circumstances. Take, for instance, a threat described by ComputerWorld:

[...] the source of the infection was a malicious advertisement, one that was running on a mainstream news service!

The news website sells ad space served up by an advertising company, which in turn sells that ad space to anybody willing to pay for it. In this case, the bad guys were paying for it. They signed up for ad space just like any other customer, but the advertisement they created — known as "malvertising" — exploited a zero-day (unpatched) vulnerability in Adobe Flash to run commands through the browser to the victim computers' operating systems, without any knowledge or intervention by the end users.

While taking advantage of multiple avenues of cyber security can be an effective means to combat threats that can compromise your organization's network, what happens when threats are capable of making themselves invisible to your efforts? This is essentially what happened in the above scenario. Because the malvertisement literally needed no user interaction whatsoever, it was capable of infiltrating the system without being detected, simply because any and all training that employees might have can simply be ignored. Something like this wouldn't be blocked by a web content filtering system because it's on a legitimate site.

Thankfully, with the latest cybersecurity tools at your disposal, we can identify and resolve problems like these relatively quickly, should they infiltrate your defenses and set up malware on your network. The important thing to remember about cyber threats is that they will almost always leave some sort of sign that they were there. Be it a virus or piece of malware that's detected by a firewall, or a phishing email that's blocked by a spam filter, you'll know that you're getting attacked. Even in cases where administrator credentials are used for remote access to your network, you can use your access logs to determine whether or not the account activity is legitimate or not.

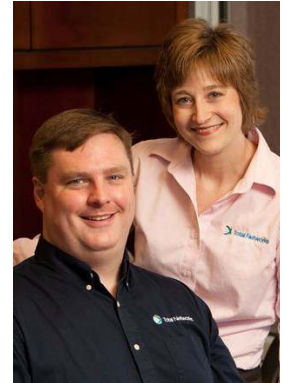
Malvertising is a concerning trend to watch out for, to be sure, but in the face of powerful security solutions designed to take proactive measures against online threats, you can bet that it will have some significant difficulty running amok for your business. By taking full advantage of enterprise-level security solutions, your business can detect and eliminate threats in the most secure way possible.



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We work together with our IT Managed Services clients to jointly create and maintain an up-to-date, effective written technology plan and budget.

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