This Issue:

Monitoring is Essential to IT Success

More small businesses today depend on their IT. If that technology isn't working as intended, it can really stymie an organization's ability to be effective. Our strategy of managed IT support and services can do quite a bit towards keeping a business running efficiently. Today, we'll take a look at managed IT to see how proactive monitoring can deliver enhanced efficiency to businesses.

Managed IT

With technology playing a big**…**

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25TH ANNIVERSARY est. 1993

This holiday season, we are so grateful to have such great clients. We all hope you have a wonderful holiday celebration - whatever holiday you celebrate.

Emerging Business Technology Innovations for 2018

For those who don't know, the term information technology is an encompassment of the technology used in the facilitation of rendering, sharing, and storing data. Any piece of technology that is used to process, keep, send, and secure digital information, is considered IT. Today, we will look at some of the emerging technologies presenting solutions for businesses and individuals, alike, heading into 2019.

The IT Market

First, let's take a look at the IT market. IT continued its astronomic rise in development and utilization in 2018, growing somewhere around 2.5%, or by approximately $90 billion. In nearly every aspect of IT there has been precipitous growth. Enterprise software is seeing its largest growth in a decade. Security, device spending, and networking have all seen substantial growth despite not having many commercially-ready innovations of the technologies currently in use.

So, with the health of the IT market--and the immense amount of emerging technologies that need applications--more businesses are starting up in the technology sector since the day before the dot-com bubble burst in the 1990s. This has led to some very interesting

Which Cloud-Hosted Solutions Will Work for Your Business
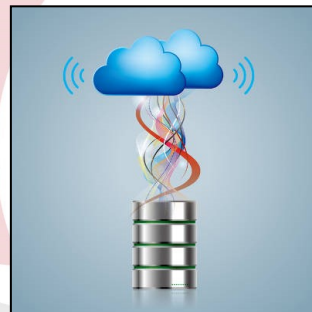
These days, many businesses turn to hosted solutions to take advantage of services that they haven't been able to use in the past. Whether it's because they don't have the staff to properly look after the services or they don't have the in-house infrastructure for it, organizations continue to take advantage of hosted solutions to varying degrees. We'll walk you through your options for whether you should build, rent, or buy your hosted solutions to best fit your business' needs.

Building Hosted Solutions

When you build a hosted solution, you're doing just that--building it to suit your organization's specific needs. Regardless of whether or not it's hosted on your infrastructure, it's still something that you put together based on your exact specifications. Be sure to consider exactly what kind of solution your business needs--whether it's an application, storage space, or connectivity with other applications. Either way, the end result is something that

Protect Your Business This Year with a BDR

There is a lot on the line for any business when disaster strikes. Is your business ready for a data loss incident? Every year people from all over the world make resolutions as the new year commences; and, this year will be no different. For the business owner hoping to mitigate their exposure to downtime and client backlash in the face of an event like this, having a plan in place is essential to seeing a positive resolution to a bad situation. We'll go through what constitutes a good backup solution, and what goals you need to prioritize to get your business in a position to succeed if it is put in a tight spot.

What Does a Good Backup Strategy Look Like?

The average small business owner may not understand just how much of an asset their business' data is, but it is extremely valuable. As a result, ensuring that you have it protected has to be a priority. The best way to do this is to find a backup solution that is both comprehensive and easy to restore from. Additionally, not all of your data is equal. Some is extremely valuable, and some isn't. Sorting out what data is es-

sential and what data is less useful will help you build a strategy that works to protect your organization from a detrimental data loss situation.

Then you have to take into account the

> **"There is a lot on the line for any business when disaster strikes. Is your business…"**

solution to use to accomplish this. Today there are plenty of options. At Directive, our solution is one that attaches to your network, which gives you a local copy, while pushing a copy of the data to an offsite data center. By utilizing the cloud as well as a local backup, we are able to provide a comprehensive backup solution that will protect your data no matter what your situation is.

Resolutions for 2019

A new year, a new beginning, right? A new year isn't really a new beginning, of course, but for the IT administrator or small business owner, challenging yourself and your staff to do better than they did last year is a solid practice. For the business owner who is scratching his/her head over what resolutions to make for 2019, we'd like to make a few suggestions as it pertains to data redundancy.

1. Purchase a backup platform that will allow you to back up necessary data without costing your organization in costly downtime.

2. Work with your IT administrator to plan and document a comprehensive recovery strategy that outlines a baseline recovery point objective (RPO) and a recovery time objective (RTO).
3. Test your backup regularly. By regularly testing your backup procedures and effectiveness, you'll know that if the time comes when you need to roll out data from a backup, that it will be ready to go when called upon.

The IT professionals at Directive have seen it time and again: a company is hit with a nasty malware attack, a natural disaster, or hindered by a simple user error and needs their data back immediately, only to be left holding the proverbial bag as antiquated backup solutions or poor procedure delays the process, resulting in significant downtime.

If you don't want to let the downtime exacerbate an already stressful situation call Directive's knowledgeable IT technicians who can put your organization with a backup and recovery solution that is sure to keep your business' data available even in the worst situations. Call us today at 607.433.2200 to get started.

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Which Cloud-Hosted Solutions Will Work for Your Business

you can expect to be just what you ordered.

Buying Hosted Solutions
Purchasing a hosted solution outright means that you're investing money into a solution, but it's not going to be customized to be exactly what you want it to be. Rather, you can think of it as a "template," built to work for the majority of users rather than any specific one. This is great for businesses that might not know specifically what they want, or if they just want to dabble with a solution before going all-in on building

something specific; but it's not recommended for organizations that know exactly what they want or expect from their hosted solution.

Renting Hosted Solutions
Once you have an idea of what kind of hosted solution you want to implement, you'll need to make the choice of how it's going to be hosted. In this case--renting--you're purchasing space on someone else's infrastructure to host your solution. While it's not on your infrastructure, it's worth mentioning that this type of hosting has its benefits. In particular, your organization won't

have to be responsible for managing or maintaining the solution, which adds in a whole new level of value for hosted solutions.

Ultimately, how you proceed with hosted solutions is up to you, but you don't have to make this decision alone. For more information, reach out to the technology professionals from Directive at 607.433.2200.

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Emerging Business Technology Innovations for 2018

(Continued from page 1)
and innovative ideas, processes, and products/services that could launch over the next several years.

Innovation of Emerging Technologies 2018 has seen a few big innovations in technology, and most of them have to do with finding practical, real-world applications to use with the technology that has been emerging for a long time. Technologies like artificial intelligence, quantum computing, and blockchain are just now starting to become viable for use by organizations. Let's take a look:

Blockchain
Everyone knows blockchain technology as the confusing construct behind cryptocurrency, but many innovators believe that the secure, distributed ledger technology has all types of uses. In fact, after raising $5 billion of venture capital in 2017, blockchain-related endeavors have blown past that in 2018. If nothing else, this tells us that people that invest in startups and other companies believe they will provide substantial returns and are heavily investing in blockchain.

That's not to say that the technology isn't already disrupting several industries. Many products are being developed using blockchain technology. One place you see this is in the manufacturing sector. In manufacturing, having an efficient supply chain is the only way for a manufacturer to turn a profit. Blockchain technology is well suited to this task as it not only provides real-time information, but also the security needed to keep this information safe.

In an example of this, the largest retailer in the world, Walmart, has partnered with IBM to work on what is called the Hyperledger Fabric blockchain. With it they can be more effective in tracking products of all types. It has already made a huge difference in their foot deliveries. By using the blockchain to track all perishable products (like produce), it makes it easier to ascertain just how to get their customers the freshest products possible.

This is just the beginning for this particular technology, too. There are plenty of organizations that could possibly have use for a smart ledger. One such

industry that could use this technology is the pharmaceutical industry. Today, law requires these organizations maintain a chain of custody over every pill, a mandate placed to try and stymie unauthorized use of drugs. If every pill had its own node of a blockchain, there would be more control over the distribution of their products.

Quantum Computing
Another emerging technology is quantum computing. If you've previously heard of quantum computing, you'd have to question how businesses would be able to utilize this technology at all, let alone have it be useful in the very near future. Rest assured, in five years, you'll wonder how you ever thought it wasn't so.

For those that don't know what a quantum computer is, it is a computer whose processing is done in what is known as the quantum realm--that is, at the atomic level. Quantum…

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Communications Are a Big Part of New Productivity Software

When people find new reasons to collaborate, it typically results in something positive. There is some new software that is now making collaboration easier, while still providing people the tools they need to stay productive. These collaboration tools are changing the face of business. Today, we take a look at them and how your organization can use these new collaboration tools to move business ahead faster.

Enhanced collaboration is important to every business as many organizations need people with different responsibilities to work in unison to meet the demands of their clientele. In no way is

this more evident than with communications. If your company depends on collaboration to meet its goals, having solutions in place that make it easy to communicate is essential. As a result, many organizations invest plenty of money into their telephone and email solutions.

These two mediums have been the standard for quite some time. A few years ago, many organizations started utilizing instant messaging in some capacity to move things along. Together they are the base of what is called a unified communications platform.

Since today's solutions tend to integrate with one another, it makes it easier to communicate (and more aptly--to get the answers users need to accomplish their tasks proficiently).

Innovation in Collaboration
These communications apps have significantly improved the way people interact, but to improve productivity, people needed to move on from a communications strategy centered around separate solutions and focus on one. There is software being developed that not only takes into account how people function in collaborative work, but also makes available shortcuts that help any group of people collaborate better.

These titles, called collaboration tools, provide users an email-like interface that is more dynamic and capable of delivering all the solutions needed by workers to get the most out of their workday. One example that…

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Tech Term: Zero-Day

You might hear the term "zero-day" when discussing security threats, but do you know what they actually are? A zero-day threat is arguably one of the most devastating and dangerous security issues your business could face, and if you're not prepared, they could be the end of it.

Before anything else, it's critical that you understand what makes the concept of a zero-day threat so terrifying. Vulnerabilities are flaws in software that can be used by hackers and cybercriminals to access important information or cause trouble. To do so, malware is used by the hacker, but they generally need an exploitable vulnerability to do so.

Defining Zero-Day Threats

Depending on how long a vulnerability is known by developers, they might have a timeline to resolve the issue by, provided that the attack isn't currently being used by hackers to cause trouble for businesses. However, a vulnerability that is being used in the wild without a patch or update to resolve the issue means that developers effectively have zero days to respond to the issue without the threat of it being used by hackers.

Zero-day threats are often found by black-hat hackers rather than white-hat cybersecurity researchers who generally report threats to developers, so they can be patched properly. Under the most ideal circumstances, an update can be issued before criminals start to use the vulnerability to their advantage. Unfortunately, this doesn't always happen, and hackers might be able to use these vulnerabilities.

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Protecting Against These Threats

It might seem impossible to keep your business secure from zero-day threats, and to an extent, you're right. The easiest and best way to keep your organization as secure as possible is to take proactive measures. This includes updating your business' technology solutions as frequently as possible whenever a new patch or update is available. This ensures that you are as protected as possible when the moment does come.

One of the most interesting and notable trends regarding zero-day threats is how they are still successful after they have been turned into an n-day vulnerability. An n-day vulnerability is one that has been discovered and fixed, but if they aren't resolved in time, a business can still be affected by them before long. The Equifax breach is a perfect example of this, as it was a vulnerability that had been discovered, reported, and patched earlier that year, yet Equifax failed to apply the patch on time.
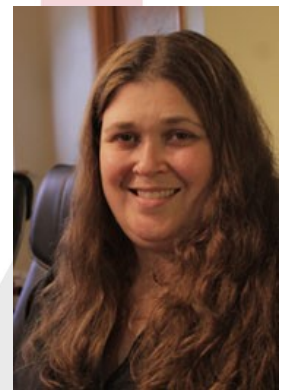

All businesses need to consider zero-day threats a major problem, and if you don't take proactive action against them now, you could be putting your business at risk. To learn more about how you can protect your business now, reach out to us at 607.433.2200.

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