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Diving Into the Differences Between Proactive and Reactive

When it boils down to it, there are really only two ways to operate a business: proactively, or reactively. While many businesses still rely on their reactivity to deal with their technology issues, the opposite approach is demonstrably more effective for the modern business. Let's explore some of the effects that a proactive and reactive strategy can each have on your operations.

To start, it is probably wise to establish how each approach...



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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.

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Each year, we gather and share what makes us thankful over a delicious meal. We're thankful that we get to work with our amazing clients.

Everything You Need to Know About Data Backup

You know the phrase, "Don't put all of your eggs in one basket?"

The idiom comes from the novel Don Quixote, and is used as a lesson to not put all of your efforts and success on a single thing. For computing, we say it like this:

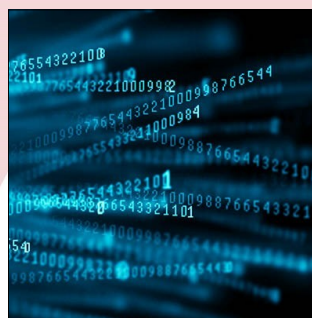
"Don't put all of your data in only one place... or else."

Data backup is seriously important. I feel like this isn't new to any of our readers. You know you need to keep your data safe. The costs of losing your company data are so high that a major data loss event is considered catastrophic.

There are a lot of ways to back up your data, but many of them are flawed and not considered to be compliant with a true business continuity plan (that's where you are prepared to face a disaster and come out swinging).

Let's talk about some wrong ways that we've seen organizations handle backup, and what they are missing, and how to stick the landing when it comes to your data backup. But first,

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You Have to Be Smarter About Your Data

You've heard it over and over for the past several years: data loss is a disaster. A data breach can ruin your business. Ransomware is a business' biggest enemy. Your reputation can never recover after a data breach. These statements may be redundant, but if you don't heed the message behind them, you will likely regret it.

The problem is that real businesses are having their networks breached and becoming victims of hackers losing data, revenue, and face in the process. What could they have done differently? Sometimes it was a lot, but often times organizations that are breached are vigilant about their cybersecurity, they just have one person make a mistake and it affects the entirety of the network. This month, we thought it would be good to remind you of three practices you can adhere to that will keep your organization's IT from being breached.

#1 Keep Sensitive Data Behind Your Firewall

This one seems like it is pretty self-explanatory, but with a lot of businesses wooed by the cost savings and scalability of cloud computing, you are beginning to see that organizations that spend a fair amount on their IT having data intercepted because they are sending it out unprotected.

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Disaster Recovery: RPO & RTO



For the modern business, ensuring that you have contingencies in place will go a long way toward keeping you in business if

disaster strikes. One of the contingencies many businesses choose to make as part of a business continuity strategy is a disaster recovery plan. Disaster recovery is more than restoring data, it can mean mobilizing people and capital against time. Let's take a look at two of the core components of a comprehensive disaster recovery strategy, Recovery Time Objective and Recovery Point Objective.

Recovery Time Objective (RTO)

The recovery time objective is measured in time and is used to determine how long your business can go without its core data, resources, and computing infrastructure before you completely lose the continuity of your business. When a disaster hits, you need to act fast, but you also have to be practical and honest with yourself. If your business is hit by flood waters, how long do you have to get operations up and running again before you lose your contracts, and your business is irreparably harmed? RTO measures this.

You Have to Be Smarter About Your Data

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Sure, your typical cloud platform will provide passable data security, but what happens when one of your employees decide that they are going to use an unsecured Wi-Fi connection to send and receive data from your cloud servers? Transferring data over these connections is always risky, and doing so without a virtual private network or some type of encryption is just asking for problems.

If you want to keep your business' data secure, one of the best things you can do is to ascertain which data absolutely needs to be protected and then store that data on locally hosted systems. This

Recovery Point Objective (RPO)

The recovery point objective is a tad bit simpler to explain. It is also measured in time, but deals with an organization's data. The RPO dictates how much data a business is prepared to lose before it ceases to be a business any longer. Some businesses could lose everything and be just fine, but most businesses need to back up their data regularly in order to maintain continuity if something terrible does happen.

RTO vs RPO

RTO and RPO are both widely used in disaster recovery situations. Let's take a brief look at how they work in concert with each other:

Calculation

The calculation of these metrics is more about sustainability in the aftermath of a disaster rather than for simple continuity. To calculate the RPO, you'll need an intimate knowledge of what data you absolutely need to get back in the swing of things quickly. That way you can identify what data needs to be replaced and how long your business can go without it before it becomes more than just extended downtime.

Conversely, in calculating RTO, you need to understand how many moving parts your business has and how fast they can

be replaced. There is plenty of technology available today that can help make your business' RTO smaller, but an RTO that is set too aggressively can be problematic and put your business in jeopardy.

Assessment and Cost

Simply put, the costs associated with maintaining a strict RTO will likely be greater than those for RPO. The reason is that, when considering the RTO, you need to look at your business' complete computing infrastructure, while putting together a logistically possible RPO, you only have to consider data recovery.

Automation

To meet your organizational RPO standard, you will need to have a comprehensive backup platform in place that backs up both locally and to the cloud. That extra redundancy will come in handy as there are several different data disasters that can befall a business. You will just want to configure your backup solution with your RPO-specified backup intervals, and you will be protected. Obviously, automating RTO is less likely. While procuring resources can be automated, it comes with...



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way you can control access, security, and the overall management of the data system.

#2 Keep Continuous Backups

This suggestion is more about protecting your data in lieu of disaster, but the smart business will dedicate resources to the redundancy of their data. This is where cloud services really are worth their money. Most cloud services will come with built-in redundancy, which means any data saved on these platforms will come with a working backup platform. For local environments, a BDR makes sense. Not only does it give you control over your backup system, it

ensures that if something were to happen--and, there are certainly a lot of situations that can happen where your organizational data could be compromised, lost, or corrupted--that you have a recent copy of that data to restore.

One additional suggestion is to frequently test your backup. It would be a shame if you set up and pay for a comprehensive backup platform only to have it malfunction. By testing the backup system, you will know that your data is, in fact...



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Everything You Need to Know About Data Backup

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let's define what makes a good backup:

- Your data is on multiple devices.
- Your data is in multiple physical locations.
- Your data is in multiple geographic locations.
- User error or forgetfulness can't hinder the backup process.
- Your backed-up data can't be stolen.
- Your backed-up data needs to be complete and recent.
- Your backed-up data needs to be easy to access and quick to restore.
- Your backed-up data can be tested.
- In a worst-case scenario, you can survive off just your backup.

USB Flash Drives/Thumb Sticks

Okay, to be honest, I haven't seen anyone try to pull this off in a long time, but who knows. If you are doing this, I'm sorry if this comes off as rude, but please, PLEASE, get it together!

USB Flash Drives are cheap little devices you plug into a computer. They pop up as an external hard drive and you can drop files onto them as such. They are great for carrying that PowerPoint

presentation from your hotel room to the convention center where the Wi-Fi is crappy, or for transferring photos of your last vacation to show your in-laws during the holidays.

These devices aren't guaranteed to work forever. They offer little to no protection for your data, and they can easily be lost or stolen. That, and you shouldn't wager the survival of your business on something that they hand out at trade shows for free.

External Hard Drives and Consumer-based Backup

Typically ranging from \$50-to-\$200, you can purchase high-capacity external hard drives that connect to your computer and, just like a thumb drive, show up as an extra hard drive on the device. Some of these come with software that lets you schedule backups, some of them are now wireless, and some even come with a trial subscription to store your data online in the cloud.

These are great for home users who need a low-cost, simple solution to

redundantly store their data. If your kid hops on the family computer and infects it with a virus, at least everything is backed up on this other device (provided that the virus doesn't infect files on the backup).

Unfortunately, this solution has the same flaws as thumb drives. They aren't hard to steal, and they typically don't offer any kind of protection to your data if they are stolen.

The automated backup capabilities are nice, and the cloud hosting is nice, but if your data isn't getting encrypted when being sent to the cloud, your sensitive data is being broadcast for anyone to intercept.

Plus, these devices are small and fragile. They aren't designed to last forever.

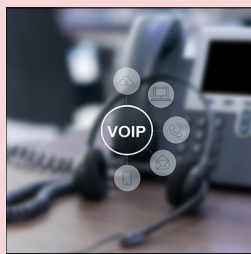
Server-based RAID

This isn't exactly a backup solution, but we've talked to business owners who...



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VoIP Gets You Where You Need to Go



Do you run into a scenario like this in your work?

You are out of the office and you are made aware of a situation that has

resulted in an irritated client. You call the client to make things right, and you successfully smooth the situation over. A while later the client wants to discuss something with you and he calls your personal phone directly. You try to politely direct him to use your business line, but over time, he makes your personal line his business' support number.

Now imagine a handful of customers making this their practice. Not great. There's a way to prevent this.

Enforcement Policy

While it is a problem when work keeps interrupting you at home, these days it may not be unexpected. What is a problem is that you may want to record customer service phone calls so that you can review them if there are questions about what was said. We do this in our day-to-day operations.

I don't want one of our best people interrupted in the middle of some serious task because some worker's iPhone won't turn on. If it was a client's iPhone that wasn't turning on and he was interrupted, I don't mind as much, but I would still prefer that things go through the proper channels.

Calling someone on their personal phone number for tech support is not the proper channel. I want to maintain

accountability. If calls go through our phone system where I can pull up logs and recordings if I need to later, it makes it easier to manage.

Moreover, if anyone is going to call my guys when they are off the clock or on vacation, it's going to be me, not a client trying to use them as a direct tech support line.

A Better Way to Communicate

There is an option that works both ways: VoIP. With a hosted Voice over Internet Protocol platform, my staff can still give personalized and tremendous technical support and customer service from their personal phones...



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Does Tech in School Fill Up the Honor Roll or Seats in Detention?



We typically use this blog to share information about the technology that a business should be leveraging - but in this blog, we've decided to focus on a different group that is increasingly reliant on technology: students. As these pupils will someday make up the workforce and almost certainly utilize technology on a daily basis, it is important that their education reflects this increase in their curriculums. Here, we'll consider some of the effects (good and bad) that this has had.

How Has Education Benefited from Technology Use?

Frankly, it would take too long to really get into all of the different ways that technology has given the classroom a boost. From those devices that have replaced (if you'll pardon the expression) old-school solutions to the near-ubiquitous access that students have to tools that could be used for learning thanks to their mobile devices, technology has taken a leading role in education. Smart displays are replacing chalkboards, and students are more and more frequently supplied with laptops to support their learning.

Teachers have used their access to this technology to enrich their students' learning experience, connecting with classrooms around the world to allow their students some time to interact with other cultures. These students have been shown to overcome language barriers to share what makes them similar to one another. This is just one way that cooperation and collaboration have helped to generate educational breakthroughs.

More examples of technology's benefits to the educational process were shared on an episode of the EdSurge on Air Podcast, delivered through anecdotes and classroom stories. Mimi Kasner was one educator who shared a few stories. One was about a young girl who was having a considerably difficult time learning to read and write through the traditional approach. However, when she was introduced to a website that taught the alphabet, she excelled - much to her delight. When Kasner was made a principal of a school, she experienced another inspirational moment. During a fire drill, a few teachers approached her and informed her that the students wanted the time that the fire drill took up back, so they could

continue to work on their self-managed projects that the drill interrupted.

The 'overcoming language barriers' example we referenced earlier wasn't hypothetical! According to education technology coordinator Sam Jordan of the Alaska Department of Education and Early Development, Skype was used in the classroom to connect Alaskan students with Sri Lankan students, where the two groups were able to communicate and teach one another about themselves and how they were similar - again, with nothing to remedy the language barrier between them.

By nurturing a thirst for knowledge and an openness to educational experiences, a school can live up to businessman Richard Livingstone's criteria for educational success:

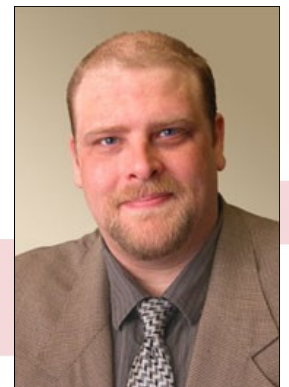
"If the school sends out children with a desire for knowledge and some idea of how to acquire and use it, it will have done its work."

Another benefit that technology offers is how...



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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.



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