



WHY YOU NEED BACKUP AND DISASTER RECOVERY

It's More Than Just Doom and Gloom

YOU'RE NOT GOING TO BELIEVE ME

Let's get this out right here at the beginning: at some point down the road, your data is going to be in danger

It could be a machine error. It could be a virus. It could be a tornado the size of Nebraska. But sooner or later, you're going to be in a situation where you're at risk of losing some or all of your data.

Intellectually, you probably believe me. You know that things just fall apart sometimes. And you've probably heard all the shock-and-awe, fear-mongering statistics, statistics like these:

- 90% of businesses losing data from a disaster are forced to shut down within two years.¹
- The survival rate for companies without a disaster recovery plan is less than 10%.²
- Only 44% [of businesses] successfully recovered information after a recent data recovery event.³
- 53% of claimants never recoup the losses incurred by a disaster.⁴

So like I said, intellectually you probably believe me. But you don't believe me.

It's not your fault.

WHY DON'T YOU BELIEVE ME?

Let's face it: nobody's ever motivated by a statistic. Nobody reads them and thinks "that's going to happen to me!"

And the truth is that statistics like these are clearly suspect. For one thing, they're vague: "90% of businesses losing data from a disaster are forced to shut down within two years." Does that mean any kind of data loss? What about a simple accidental deletion of a file or two? Isn't that data loss? Will ninety percent of businesses that delete simple files fail?

Also, if you take a minute to dig into most of them you'll find they usually have no useful attribution, are just thrown randomly on a page (sometimes even contradicting other statistics listed on the same list), or are ten years old. The IT industry has changed a lot in ten years, so you would be justified in questioning the value of a statistic about disaster recovery from 2002.

But there's more to your denial than that.

Human Nature, etc.

If Mother Nature isn't the primary cause of disasters in small and mid-sized businesses, what is? For their report, Aberdeen surveyed 173 businesses, ninety percent of which were small or mid-sized. According to their results, power outages were the biggest cause of data loss in both small and mid-sized businesses. Fully forty-eight percent of small business and forty-six percent of mid-sized businesses reported losing data due to power loss.

What were some other sources? According to Aberdeen, small/mid-sized businesses reported the following disasters:

- Accidental deletion (31%/28%)
- Employee caused (29%/24%)
- Virus/malware (25%/20%)
- Application failure (30%/33%)⁷

A Biological Imperative

According to one recent psychological study, you are biologically wired to ignore the implications of doom-and-gloom statistics like these.

Researchers Tali Sharot, Christoph W. Korn, and Raymond J. Dolan asked test subjects who were being monitored by an fMRI machine to describe how likely they thought they were to be the victims of a series of negative events (like getting cancer or being mugged). Then the researchers told the test subjects the actual statistical likelihood of those events. (Presumably their statistics were up to date.)

After some time had passed, they asked the test subjects again the likelihood of those negative events happening to them. Sure enough, the subjects struggled to change their expectations to match the statistics they'd been given. Additionally, the fMRI results showed that their brains actually failed to code the negative information. In other words, your brain is designed to be optimistic, sometimes unrealistically so.⁵

From an evolutionary perspective, this is probably a good thing, since it gets you out of bed in the morning, in spite of the impending zombie apocalypse. When it comes to disasters and your data, however, it may be a problem.

Cultivating a Positive Pessimism

In this paper, we'll look at what a backup and disaster recovery plan really is and why you really need it. The statistics are a part of it, but only so far as they're used as part of a larger, strategic analysis of the individual needs of your business.

In making that analysis, it's important to understand what a disaster really is, so let's start there.

Anatomy of a Disaster

It would be ridiculous to pretend that the main benefits of a disaster recovery solution didn't have to do with recovering from a disaster.

Certainly, there are some great ways that a disaster recovery plan can help your business whether or not you're suffering from a catastrophe, but obviously disaster recovery is about the disaster.

Disaster, however, is a loaded word.

Just saying it summons visions of hurricanes, floods,

and catastrophic lightning strikes. Common disaster recovery advertising often features dramatic images of high winds, gutted server rooms, and demolished buildings.

When we look at disasters like this, disaster recovery becomes overwhelming and hopeless. It will be vastly expensive. It will take massive amounts of time to restore even business critical processes to minimal working order. It's probably better to wait to see if it happens, then soak the cost if necessary, because chances are it will never happen to you.

And frankly, when it comes to natural disasters, you're probably right. According to a 2011 report by the Aberdeen Group, only five percent of small businesses and nine percent of mid-sized business reported data loss from a natural disaster.⁶ But that doesn't mean you're free and clear. In the world of disasters, things aren't so black and white.

Consider what a disaster really is: any event that disrupts your ability to run your business. Did you catch that? Any event.

Mother Nature is not alone in her disastrous hobby. Human nature joins in as well, along with good old entropy and random chance.

If you accept that a disaster is anything that interrupts the normal operation of your business, then suddenly you start to see the real value of a disaster recovery plan.

You're not necessarily planning for a tornado that wipes your business out (though you are planning for that too). You're preparing for every time one of your servers fails, or there's a power outage, or a virus hits your system, or a disgruntled employee decides to delete sensitive files.

You may not ever be the victim of the next Hurricane Katrina, but I'm willing to bet that you will suffer from some kind of event that interrupts your business, takes precious resources to resolve, and blocks customers from spending money on you. In fact, I'm willing to bet that you already have.

So what, then, is the value of backup and disaster recovery? Why do you need it? Let's find out.

Because Self Analysis is a Good Thing

You can probably guess some of the obvious benefits from a backup and disaster recovery solution, but

those benefits go much deeper than you might guess: all the way down to some fundamental, business planning.

Making a backup and disaster recovery plan calls on you to take a long, hard look at your business, at your processes, your software, and so on. And let's face it, taking the time to evaluate your business so you know how everything's working together, what's most important, and what's pulling you back is always a good thing.

If you want to backup your data and services and then be able to recover them quickly if there's a disaster, you need to know where that data is, what those services are, and you need to be able to prioritize them. Which data and services absolutely must be online first? How long can you really go without critical and noncritical data and services? How much does downtime really cost you?

Finding the answers to these and other related questions is at the heart of solid backup and disaster recovery. Doing so allows you to figure out how to protect all your data and services, the most efficient order in which to restore them, and so on.

But there's a broader benefit in going through this exercise.

We all know that over the course of time, our lives and businesses get cluttered. It's the natural result of focusing on getting things done. We accumulate stuff as we push forward and it builds up around us.

The problem with clutter, however, is that it's terribly inefficient. In a business setting, maybe you have a number of different servers you've acquired over the years for different reasons. None of them are being used as efficiently as they could be. Your data and applications have grown up in silos, isolated from each other both in physical location and in functional usefulness. Maybe different people in your organization are responsible for different types of data, or different processes.

In short, things can get to be a mess as you push forward, just trying to run your business.

But by taking the time to evaluate these things from the perspective of backup and disaster recovery, you can clean house, so to speak.

You can consolidate servers, prioritize and organize data and applications, and streamline your processes

and procedures.

These things are all great for your backup and disaster recovery, but they're great for your business as well. By taking backup and disaster recovery seriously, you can trim the fat, so to speak, and get your business running better and faster than ever before.

Because it Makes You More Efficient

Making a plan and streamlining your business opens the door for all kinds of disaster recovery goodness.

Having a plan in place that takes advantage of current technologies puts you in a position to save time not only during a disaster, but in the maintenance of your data and applications as well.

According to IDC,

Advanced processes and technologies can ease the backup process, introduce more automation into the data replication process, and enable IT staff to protect more applications with restart and recovery capabilities. IDC research found that IT staff time associated with backup and recovery procedures could be reduced by 85% to 90% when automation and new technologies were applied in midsize firms.⁸

So not only can you reduce the time your IT staff is spending on backup and disaster recovery, but you can protect more of your data and applications. And if you're outsourcing your IT, this will help you save money, but we'll talk more about saving money in a bit.

For some of IDC's recommendations, see the sidebar on this page. The ability to protect more data and applications is more crucial today than ever, since the distinction between what's critical and what's not is getting more and more complicated. As IDC puts it, Email messaging, desktop applications, and Web sites—usually not considered “mission-critical” aspects of IT infrastructure—often act as critical junctions for other, remote business-critical applications and servers. As a result, these seemingly less crucial IT assets could potentially become “single points of failure” for crucial applications if organizations do not provide backup systems or DR plans for them.⁹

If you're not taking backup and disaster recovery seriously these days, a small outage of a seemingly innocuous system might cause serious problems. Systems are just too intertwined for you to simply backup the stuff you think you'll need the most.

As you develop and implement a backup and disaster recovery solution, however, you'll find that when there is a disaster, whether it's a problem with your email or a downed powerline, you'll recover much more efficiently. And for the rest of the time, when you're disaster-free, you'll spend less time managing your data and applications and more time worrying about your business.

Recommendations

- Extend management technologies that automate the process of asset management, system configuration, and software distribution to reduce the number of steps that require hands-on intervention and to reduce IT staff time.
- Constrain your environment to a finite number of standard processors, operating systems, database products—making it easier to maintain and update.
- Consolidate servers over a long term road map, reducing your server “footprints” that must be maintained and updated.
- Standardize IT practices, especially management of settings and configurations.
- Provide protected storage space within the organization's storage resources and establish rules for the backup of mission critical data. (This ensures adequate capacity for backup and recovery procedures and for restarting of applications.)¹⁰

Because You Save Money

There's no doubt that efficient companies save money.

If you know what all your IT is doing and you've organized things so that you're making the best use of what you have, you're not going to waste money on worthless cycles.

As IT becomes more and more the framework on which successful businesses are built, that efficiency becomes increasingly important. According to the “State of SMB IT” report for the second half of 2011 by Spiceworks, 31% of respondents indicated they are adding IT staff

in the 2nd half of 2011. This figure represents a more than 50% increase in the proportion of companies planning to hire IT staff, relative to 2010 levels.¹¹

This should come as no surprise, since computers and their related periphery are critical to modern business plans and success.

But just because companies are throwing more money at their IT departments, doesn't mean they're throwing it around indiscriminately. They want that IT head count and those IT resources contributing to the forward motion of the company, not running around retrieving files, putting out fires, or cleaning after some other kind of disaster.

Having and implementing a solid backup and disaster recovery solution can help you make sure your IT spend is going where you want it. According to IDC,

Today, it is possible to put in place disaster recovery technology and practices that may cost less per user supported than older technology that did not support DR....Research shows these implementations can reduce costs by more than 35% compared with unprepared centers using older technology.¹²

In the current state of the world, reducing costs is more important than ever before, and a well-executed backup and disaster recovery plan can help you do that. But there's more to it than simply cutting costs and saving money.

It Helps You Make Money Too

How do you make money? You sell a product. You provide a service. You give the people what they want. But all of that relies on one crucial thing: your business actually being operational.

It seems obvious, but sometimes the truth gets lost in the scuffle. Every time you're hit by a disaster, whether large or small, catastrophic or simply annoying, your ability to operate your business is compromised. Even if it's not something that keeps you from interacting with your customers, it drains your resources, and that keeps you from making as much money as you could.

So when I say backup and disaster recovery helps you make money, I mean it.

Having and implementing a solid backup and disaster recovery plan can help you keep your business running 24/7 so that you can make money doing what you do.

With a good backup and disaster recovery solution in place, you'll not only get back on your feet quickly after a disaster, you'll cut down on the number of disasters period.

In May, 2010, the Aberdeen Group surveyed 125 businesses who already had disaster recovery plans in place in order to best learn about the result of a disaster recovery plan. Aberdeen divided their respondents into three groups, based on the success of their disaster recovery plans. For example, Best-in-Class companies were defined as those having disaster recovery programs that recorded fewer than 1 downtime event over the last 12 months, required less than 1 hour to recover 90% of their functionality after each event, and met 95% of their company's data availability Service Level Agreements (SLAs) over the last 12 months.¹³

What's the Cost?

Of course these Aberdeen averages are just that: averages. Your own business will have its own cost of downtime.

One of the first steps in getting your disaster recovery plan up to speed is figuring just how much a single hour of downtime will cost you.

For the businesses surveyed by Aberdeen, those costs ran from \$60,000 to \$110,000 per hour.

Remember that downtime doesn't just cost you customers and revenue, it also means you're potentially paying employees, even if they're just sitting around waiting for things to get fixed.

No matter what the problem is, if your business is down, you're not making money.

The figure makes it clear that a disaster recovery plan reduces downtime, prevents disasters themselves, and thus, makes you money. In fact, Aberdeen summarizes the results by pointing out that best-in-class organizations were losing forty times less revenue than those with an inadequate plan.¹⁴

If you're that business with an inadequate (or nonexistent) backup and disaster recovery plan, that's not money you've lost. It's money you should have made.

Because it Keeps You Out of Jail (or at Least From Paying a Fine)

Money. Time. These are the most obvious and flamboyant reasons to have or update your backup and disaster recovery solution. But there are other reasons, and they can be just as important, if not more so.

In fact, depending on your industry, backup and disaster recovery might be the law.

More and more, the government is interested in the protection of your data. For example, the Sarbanes-Oxley (SOX) Act of 2002 introduced a number of requirements that make it imperative for public companies to maintain backups of their data. Failure to live up to SOX requirements can mean fines or even jail time.

You may not be a public company, but that doesn't mean you're necessarily free from regulation. Many different industries are subject to laws and rules about how they should be handling their data.

For example, health care businesses must comply with the Health Insurance Portability and Accountability Act (HIPAA), which has strong implications for backing up data and making sure it is consistently available, even in a disaster.

You should take time to understand any regulatory requirements placed on your business. Chances are they require some kind of backup or disaster recovery. If you take this into account in your larger plan, however, you'll be able to tailor your solution to meet the government's needs, but also reap all these other benefits we've been talking about.

Because Natural Disasters Really do Happen

If by this point, you're not even considering a backup and disaster recovery solution, then you're most likely doomed to hemorrhage money from every disaster. And since we're talking about doom, it's probably time to bring up the inevitable.

Remember those pictures marketers love to use, the ones of lightning and hurricanes and fire? Depending on your point of view, the disasters those images depict may or may not alone justify a disaster recovery plan. For some executives, the statistical improbability of a catastrophic event makes backup and disaster recovery a difficult sell.

But improbable or not, natural disasters do happen

and they can destroy your business if you let them. If you've been proactive, however, if you've considered the health of your business at every stage, then you'll have a disaster recovery solution in place.

Tornados, hurricanes, and floods are the poster children for disaster recovery because they're so potentially destructive to your business and because the apparent complexity in recovering from them makes them flashy and compelling.

Keep in mind, however, that natural disasters are just one kind of disaster. You certainly should take them into account, but realize that the best backup and disaster recovery solutions give you the same reliability whether you're recovering a deleted file or restoring a demolished server room.

You want a backup and disaster recovery solution to protect you from any kind of disruption to your normal business operations. Sometimes that comes from failed hardware. Sometimes it's human error. Tragically, it's sometimes due to the whims of Mother Nature.

So of course you want a backup and disaster recovery solution to protect you from a natural disaster, but it should protect you from so much more as well.

The End of the World

When marketers talk about natural disasters, they like to use some statistic that goes like this: "x% of businesses that suffer y hours of downtime go out of business."

The problem with this statistic is that it

- is always different (I've personally seen at least ten different versions of it).
- is almost never sourced properly, and when it is, the source is always vague and unlinked.

The bigger problem with the statistic, which is by far the prevalent backup and disaster recovery statistic, is that it peddles disaster recovery from a position of fear.

Backup and disaster recovery are proactive, healthy, positive actions that you take not only to protect your business but to improve it. You do it not to keep from going out of business, but to make sure your business keeps getting better.

DO YOU BELIEVE ME YET?

Here we are, back where we began: at some point down the road, your data is going to be in danger.

It could be a machine error. It could be a virus. It could be a tornado the size of Nebraska. But sooner or later, you're going to be in a situation where you're at risk of losing some or all of your data.

Is this a reason for fear? No. It is, however, a reason to consider the health of your business, especially the IT part of your business.

If you haven't taken the time to figure out how much a single hour of downtime costs you, maybe you should ask yourself why not. By determining this one piece of data, you'll be in a position to start understanding how backup and disaster recovery can make your business better.

Earlier, I offered one average cost of downtime: \$60,000 to \$110,000. That survey was only conducted in 2010, but more recent research, in 2012, suggests those numbers may already be significantly higher.¹⁵

As IT becomes more and more a part of our businesses' essential nature, disaster recovery needs to become a part of it as well.

In the old days, it was probably okay to think of disaster recovery as a shield or a suit of armor, some external thing that you put on or took off as it made sense.

Today, we can't afford to think like that. Today, disaster recovery must be an integrated part of us, something that encourages us to know what's going on with our IT, that makes it possible to truly operate 24/7, and that allows us to take chances and to innovate because we know that everything our businesses are built on will just work.

So why do you need backup and disaster recovery? Confidence in your business? Efficiency in your operation? Money in the bank?

In a word, yes.

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