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760.757.7660
www.svahaconcepts.com

Creating a Backup and Disaster Recovery Plan

Congratulations on taking this first step towards making your own backup and disaster recovery plan! Once you've completed this process and put your plans into action, you will feel a sense of relief from a worry and stress you probably didn't even realize was present in the back of your mind.

Before we start, there are a few useful definitions you'll need to understand.

Backup: A backup is a copy of what's stored on your computer.

System Backup: A system backup is a copy of the operating system and all the software you have installed on your computer. It generally does not include your data (the documents and other material, such as photographs, that you create with the software).

Data Backup: This is a copy of your documents and other material; it does *not* include the software or the operating system.

Off-site Backup: This is the backup that you use to recover from a disaster – such as a fire, a flood, or anything that destroys not only your computer, but your regular backup as well. For further details about disaster recovery, see the final section of this document. Off-site backups are generally both *system* and *data* backups, in order to be able to restore the full working state of your computer. However, off-site backups are usually *not* done as often as your regular backups.

Step One: Evaluate Your Needs

If you use your computer for business, or if you have significant amounts of personal, financial, or medical information stored on your computer, you will have very different backup needs from someone who is only a casual computer user. Therefore, the first step in deciding what your backup strategy should look like is evaluating what you actually need.

Don't forget that "data" includes things such as email addresses that you may have no way of easily recovering!

In the following three question-sets, select the response (a, b, or c) that most closely describes your reaction or situation.

1. If you lost all the data on your computer, you would probably say:
   a. Oh, well. I didn't know half of what was on there, anyway!
   b. I could recreate the really important stuff from other sources.
   c. I would be personally devastated and/or I would lose money and/or customers.
2. Over the course of the last six months, your computer use has included:
   a. I only use one or two applications on my computer – email and perhaps a word processor to write letters, or a spreadsheet program to create financial reports for myself from information I have in my checkbook register or bank statements.
   b. I use email plus at least three or four other applications such as word processing, spreadsheets, digital camera software, and perhaps a photograph cataloguing tool or a photo editing tool.
   c. I use lots of software applications, including financial planning software like Quicken or Money, as well as tracking medical or other personal and financial data; I may run a business

with the help of my computer, or I often bring work home and use my home computer to complete it; I pay my bills online and track the results through reports on my computer.

3. Storing email and physical addresses and phone numbers:
   a. I have a paper-based address book where I track addresses, phone numbers, and email addresses for all my relatives, friends, and acquaintances.
   b. Although I have some email addresses, phone numbers, and physical addresses that exist only on my computer (not written on paper anywhere), I can easily get any lost information from other family members or from friends. I know which ones I'd need to retrieve if necessary.
   c. There are many people who are important to me, either personally or professionally, whose contact information is stored only in my computer; I may run a business from my computer and track my customers, potential customers, and sales electronically.

If you selected all (a) responses:

Backing up your computer is not a priority, although you might want to take another look to see if you truly don't have anything on your machine that is irreplaceable. (It's amazing how – just like in the depths of our filing cabinets or closets – there are often things tucked away that we have forgotten, but that we do consider treasures!)

However, you should seriously consider making copies of some of your paper records. If you lost your address book, for instance, you would be in just as difficult a position as someone with extensive electronic records who had a computer crash!

If you selected all (b) responses, or a mix of (a) and (b) responses:

While you probably do not need an intensive schedule of daily, weekly, and monthly backups, you do need to seriously consider putting some type of backup plan in place. Now that you've considered the type of important data you have, you can review the topics that follow and pick your best options.

If you selected all (c) responses, or a mix of (b) and (c) responses:

By now, you almost certainly recognize the importance of creating a backup habit! The following sections will show you how to do so with relative ease; yes, there's some work to do, but it doesn't have to be overwhelming.

STEP TWO: PICK A BACKUP METHOD

There are *many* possible ways to back up your computer; this is only an overview of the most-commonly-used solutions. If you are technically inclined, you may already have a favored method, or you may want to talk to your computer person – whether that's someone you have worked with in the past, someone in the IT department at work, or someone in the local computer shop.

Before you pick your backup method, there are a couple of things to remember:

√ Be sure you understand the backup software you use. It will do you no good to have the best backup plan in the world unless you know how to restore your computer! If, for instance, your only copy of the backup software's user manual is on your computer, you will be out of luck if you need that manual in order to recover from a hard disk crash. Print out a hardcopy of the manual – and if you also implement an off-site backup plan, make sure you include the manual hardcopy in your off-site storage.

√ Backup software generally differentiates between *system* and *data* backups. Both are necessary for a full recovery.

√ Backups generally require your documents and email programs to be closed (not running) before they can take a copy. Make sure your plan takes this into consideration.

1. External hard drive

   This is one of the most common ways to back up your data. An external hard drive is exactly that: a separate hard drive that isn't mounted inside your computer, but instead connects to it with a cable, just like (for instance) your printer. The ones on the market today are generally about the size of a fat paperback book, and usually come with their own backup and recovery software. With this, you can often define your backup schedule and then let the computer take care of it all on its own.

   If you use an external hard drive for your backups, you'll need either *two* drives, or an alternate method for your off-site backup.

2. Internet

   There are a number of internet backup services, which for a fee allow you to upload your data to their secure site. The drawback to backing up via the internet, aside from the monthly cost, is that even with a broadband internet connection (such as cable or T1 access), you are likely to have very long transmission times. Don't even think about internet backups if you are using a dial-up connection to the internet!

   On the other hand, with an internet backup service you have no need for a separate off-site backup.

3. DVD Disks

   Many computers today include DVD-write drives, or you can purchase an external DVD writer. External DVD writers have become surprisingly affordable, and it's the backup method I recommend over the others listed here.

4. CD-ROM Disks

   CD-ROM backups are not a good choice for the simple reason that most people have far more data, never mind software, than will fit on a CD. However, they *can* be a good choice for off-site backups, where you will usually back up only your data – and not as often as your regular backup.

5. Tape backup

   With the advent of reliable, relatively inexpensive external hard drives and DVD writers, tape backups have pretty much gone the way of the dinosaur!

Recommendation:

A DVD solution is by far the most flexible and reliable. Or you can use an external hard drive for your regular backups, and your computer's internal CD-ROM writer for off-site backups.

If your choice does not include software specifically intended for creating backups, there are several reasonably-priced options available, either from your local computer software store or through the Internet. Googling "backup software" brings up a host of software tools that address a wide variety of needs. When you review the tools available, remember the limitations of the hardware you have chosen. For instance, if you are backing up to CD-ROM disks, you'll need software that supports disk spanning (writing your backup to multiple CD-ROM disks without your having to package the backup into "chunks" that fit on a single CD).

Although they are becoming available in larger and larger storage capacities, I do *not* recommend using "memory sticks" – the small storage units also known as "thumb drives" for their shape and size. They are wonderful tools for transferring documents of all types between machines, but in my experience they can be unreliable, and so are not good choices for backup storage.

STEP THREE: PICK YOUR BACKUP SCHEDULE

Your backup schedule will depend on two things:

1. The value of your data to you personally, or to your business, and
2. The frequency with which your data changes.

If your answers to the questions in Step One were mostly (b) and (a), you will probably be fine with a backup schedule measured over weeks and months rather than days. However, if your answers included

any (c)s, you should weigh the effort of backing up more frequently against the impact of losing some of your data.

Recommendation:

For those whose data doesn't change often, or where changes are typically fairly minor, I recommend the following schedule:

1. Weekly backups of those data files that have changed since the last backup.
2. Monthly full data backups.
3. Yearly or twice-yearly system backups (this depends on how often you install new software or change your system configuration).
4. Twice-yearly off-site data backups.
5. Copies of all software, including system install disks (see *More About Disaster Recovery and Off-Site Backups*, below).

For those who run businesses from their computers or who are heavy computer users with frequent software updates and/or changes to data, I recommend the following schedule:

1. Daily backups of those data files that have changed since the last backup.
2. Weekly full backups of all data.
3. Weekly off-site data backups of files that have changed since the last off-site backup.
4. Monthly off-site full data backups.
5. Quarterly or monthly system backups (this depends on how often you install new software or change your system configuration)
6. Copies of all software, including system install disks (see *More About Disaster Recovery and Off-Site Backups*, below).

Remember that your backup software almost certainly includes an automatic scheduling feature. Making decisions about when to back up is the most difficult part of this process; then just set up your schedule and let it run without you!

MORE ABOUT DISASTER RECOVERY AND OFF-SITE BACKUPS

All the backups in the world won't help you if something happens to your backups. This doesn't have to be a fire or flood – perhaps your toddler decides that your external hard drive is just the thing to play soccer with, or perhaps you (yes, you!) knock your stack of backup DVDs off the desk and then roll your chair over them. That, of course, will inevitably be the day that your computer suffers a hard disk crash. An off-site backup is the only way to recover from this type of disaster.

Off-site backups include:

1. Duplicate copies of all your software install CDs.

   Software licenses, without exception (that I know of), include permission for licensed users to make one copy of the software install CD for backup purposes. Those backups should be part of your off-site storage.

   Do you even know all the software you have loaded? What about software that you downloaded from the Internet, that didn't come with an install CD? Make a backup disk!

   Needless to say, this includes the system re-install disks that came with your computer. You typically won't create a *system backup* for your off-site storage, so you need to be sure to have all the necessary install disks in order to rebuild your system.
2. The *license keys* for all your installed software, so that you can re-install your software in the event of a fire, flood, or other destructive event that causes you to rely on those off-site backups!

3. Your *system recovery manuals*, including the backup software manual that explains how to recover using a system and/or data backup. Your backups are only as good as your ability to use them to restore your system!
4. Data backups.

   The value of your data, and the impact of losing it, will determine the frequency of your off-site data backups.

Many people wonder where to store their off-site backups. One easy answer is to have lunch with a friend each week, and exchange backup material with him or her. If you commute to work (versus working from your home office), take your backups to work with you. Ask your day care provider if they'd mind tucking your backup disks into a cabinet somewhere. There are many options – just find the one that works best for you.

It's not just the electronic stuff!

Bear in mind that there are other things to think about aside from your computer data. For instance:

√ If your computer hard drive crashes, but the computer itself is still fine, you will probably want to replace the hard drive rather than purchase another machine. If your computer is a critical piece of equipment for your business or your life, what will you do while it's being repaired? Look into local or even internet-based suppliers of rental equipment – but remember: without your computer you *will not be able to visit web sites!* Do your research and planning ahead of time, and write down the information on paper – which you keep with your offsite backups as well as in your desk!

√ What paper documents are of critical importance to you? Many of them may already be stored in your safe deposit box, but you should keep certain things with your offsite backups. This includes:

- Business licenses.
- Insurance policy numbers, and perhaps the declarations pages.
- Contractual agreements between you and your clients and you and your vendors or suppliers.
- Any other critical information about your personal life (key financial information, for instance) or business.

What about your equipment?

Especially if you run a business from a home office, but also for insurance purposes in the event of a disaster (or in the event of theft!), you should track your equipment, including model numbers and serial numbers. This includes fax machine, scanner, printer, modem, router, the computer itself, any external hard drive or DVD writer, peripherals such as mouse, keyboard, and so forth.

But don't stop there. What about your telephone? Do you know how to access your phone line's features, such as automatic call routing, from outside your office? If your office burns down, for instance, you will still want your clients to be able to reach you; most business phone lines offer a call-routing feature that you can use to direct incoming calls to a cell phone or other land line.

A FINAL WORD

Even though I have a backup and disaster recovery plan in place, I know this may seem like a huge task to take on. Just work at it step by step, with the most important step being defining your backup schedule and then *putting it in place*. The rest of the plan can happen over time.

Once you've completed it you'll feel much more secure, especially as a business-owner!

If any part of this process is unclear, or if you have questions about my recommendations or the backup process, please email me at gljudson@svahaconcepts.com, or call me at 760.757.7660.