
Is Data Backup Worth the Hassle?

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Computers, notebooks, palmtops and other devices such as filmless cameras are digital machines. They use a processor and operating system to do different tasks. The data they process and their output have to be stored somewhere. For this, a variety of devices exist to suit all needs.

Hard drives exist in every computer, notebook and even digital video cameras, DVD players and mobile phones. They are quite reliable data storage media with huge capacities that easily go up to 240 GB. Other prominent data storage devices include CDs, DVDs, USB drives, flash memory cards, tape drives, floppy disks and portable hard disks. Their capacity ranges from 1.44 MB for a floppy drive to 160 GB for a portable hard disk.

Most of these devices hold data in a volatile form as magnetic patterns or electric charge. The problem is that, though it is very easy to manipulate or make copies of volatile data, the latter is highly susceptible to damage from a variety of causes that relate to hardware or software errors. Then there are disasters that may strike an office premises and destroy all data.

Hardware Causes: These relate to damage of the components or to the surface of the storage device, thus compromising the data it holds. In a hard drive, the read / write head may crash on the spinning platters and scratch the data-holding magnetic surface. This is a very serious situation and it is very difficult to recover data in such cases. Other components that usually develop a malfunction in a hard drive include the spindle motor, the circuit board that supplies power and the controller card. In optical disks, scratches to the surface are the biggest cause of data loss.

Software or Logical Causes: These may be induced by the user. A file may get accidentally deleted and the recycle bin emptied. The storage device may be reformatted, thus wiping it clean of all data. Then there are other causes such as a power surge, software damage or corruption and virus attack.

Disasters: Apart from hardware or software errors, one of the most serious causes of data loss – though not frequent – is man-made or natural disasters. The former may include arson, terrorist attack and employee sabotage. Natural disasters strike frequently in the world and include storms, floods, fire, cyclones, tsunamis, lightning strike and so on. These wipe out the entire office premises and cause massive damage to computers.

Data loss is a very serious occurrence. Many companies have been known to go belly up after a serious case of data loss. Repercussions of data loss on research institutions, banks, financial firms, airlines and govt. agencies can well be imagined. It results in massive financial losses as all business comes to a halt and employees sit idle.

In addition, expense is involved in getting the data recovered from a data recovery professional firm, which usually charges per MB of data recovered. If the data loss is massive, this can add to hundreds of thousands of dollars. All this, however, can be avoided by the simple solution of keeping a backup of all data. Ideally, the data backup should be taken every day and stored in a safe location away from the premises.

Taking data backup is tedious work but it is well worth the effort considering that it can save you from the fatal consequences of data loss. For individuals, there is a variety of portable data storage media that make an excellent

choice for data backup purposes. CDs and DVDs are quite durable and can last for years. They are also rewritable, thus allowing you to use them as tiny hard disks. Their data capacity is not small either, with DVDs carrying as much as 4.7 GB of data. For smaller data requirements, there are USB drives and floppy disks.

These measures, however, are inadequate for large organisations which may process several hundred gigabytes of data in a single day. For them, the ideal backup media include magnetic tape drives and portable hard drives. However, it can still be a painstaking backup from dozens of computers every evening. That is why there are professional data backup companies that offer automatic remote data backup. Everything is automated and the backup is taken every night without any user intervention. The data is then sent across wires to the backup company's remote servers for storage. This is also a fool-proof way to guard your data from natural or man-made disasters.

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