
Data Backup Essentials — What Every Company Must Know

Any loopholes in managing company data can have serious consequences. Take, for example, Morgan Stanley, which had to pay up financier Ronald Perelman a whopping \$1.45 billion, in part because the global giant could not produce all the critical email communication during the trial's disclosure phase. Whether yours is a small, medium-sized, or large business, you must put the necessary data backup procedures in place. You must examine the risk, the business impact, and the cost factor. But before you actually devise a strategy, you should be aware of backup basics and standard practices.

Archiving and Backup: What's the Difference?

You will use backups as part of your disaster recovery plan. A backup is basically a copy of your data that is created in the event that the original may be lost or destroyed. It works much like saving or taking a backup of your Word document on your PC. The difference is that you typically store the backed-up data remotely on storage disks.

Archiving is used as a long-term solution for data preservation and retrieval in cases like disasters, enquiries, and litigation. The archived data files are typically stored at offsite locations for several years.

What are the Different Types of Data Backup?

There are two types of data backups: full and partial. Companies typically use both of these to back up files on a daily or weekly basis.

Full backup. This involves a full backup of all the files on your system, which includes data files, software files, and system files. A full data backup should usually be performed every week, every two weeks, or each month. This will allow you to restore all your system data should an unfortunate event wipe out your original files.

Partial backup. In a partial data backup, you copy all the files that have changed or added since the last time you backed up the data. Partial data backup can be 'differential' or 'incremental'.

Differential. Here, you backup files that have been modified since your last full backup session. Suppose, you perform a full backup on Saturday, so on Sunday, you will only backup

files that have changed since Saturday. And on Monday, you will only perform a backup of files that have changed since Sunday, and so on. This process is quicker in comparison to a full backup as the data being backed up is lesser.

Pros of Differential Backup

- Faster system-restore times as just the differential and full backup tapes are required.
- The cost of downtime during system disasters is low.

Cons of Differential Backup

- Backup process is slower as more files will need to be copied.
- More wear on backup tape and device.
- You will need more tapes.

Incremental. Here, you backup all your files on a weekly or bi-weekly basis, and then perform a daily or more frequent backup of just those files that have been modified since your last backup task, whether it is a full or an incremental one. For instance, if you are performing an incremental backup on Monday, you are only backing up the data that changed since your incremental backup on Sunday. The problem with incremental backup is that if you have to carry out a restore, you will have to use all the incremental backups that have taken place since the last full backup. This problem is resolved through a differential backup.

Pros of Incremental Backup

- Fewer files translate into quicker backups.
- Less wear on backup tape and device.
- You will need fewer tapes.

Cons of Incremental Backup

- System restore times will be slow as you will need a full backup tape and multiple incremental backup tapes.
- Cost of downtime is high.

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Backup Frequency - What Will Work Best?

Typically, companies back up their data files on a daily basis or backup files that have changed. Companies will also perform a complete system backup on a weekly, monthly, or bi-weekly basis. Examine the criticality of your different data files and determine how frequently the data changes in order to make an informed decision with respect to backup frequency. Once you have determined the right backup frequency for your data, you can seek a managed backup solution from a reliable MSP and avoid downtime in the event of a disaster. The MSP can ensure error-free and reliable records management and storage.