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Data deduplication for better performance by Backup Safe

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What is data deduplication?

Deduplication is a way of reducing the size of large quantities of backup data far more effectively than by compression. Compression looks only for repeating patterns of information and reduces them. Once a file has been compressed it cannot be compressed again.

Data deduplication reduces the size of the data regardless of its internal format. It simply compares the content of the file with previous versions and extracts the new unique data. This provides a much greater data reduction capability than compression. In fact, most of our products apply compression algorithms in addition, so that we can provide an even greater size reduction.

Deduplication differs from incremental or differential backups in that only the byte-level changes are backed up. Incremental backups scan selected files for changes. If there is a change in the file, of even a single byte, the whole file is saved in the newest backup file. If that file is 500MB, it saves the whole file to the new backup. Data deduplication technology will only store those pieces of data that have changed, not the entire file. If one byte has changed in a 500MB file, then only one byte will be backed up.

Different methods of deduplication

There are several different approaches to deduplication, and though each approach has its own pros and cons, some are much better than others.

Backup2Safe uses post-process deduplication which provides a higher backup throughput, and smaller backup time window.

We use byte-level differencing rather than pattern matching (storing a hash for each pattern or block). This is more scalable, immediately effective, and provides a far shorter restore time â€“ close to the time for copying the non-deduplicated information.

Our approach is also data-agnostic rather than content-aware. Data -agnostic technology works with any kind of information or file format. It can deduplicate data of any kind, any file format or file type.

Backup2Safe has been at the forefront of deduplication technology since 2003. We use the most advanced and effective deduplication system currently available.

Benefits of data deduplication

When duplicate pieces of data are not stored, the result is huge savings in disk space. Our byte-level deduplication technologies can reduce the total amount of stored data by a ratio of 100:1 or more, depending on the environment.

In other words, if you are keeping a terabyte of disk backups today, the next dayâ€™s full backup will be only an additional 10GB. And the 990GB of storage that is left over means you can defer additional storage purchases for years before you will need to add more disks to your storage capacity.

This also means that many backups from different dates can be kept on one small device â€“ from 20TB - 250TB of backup data, depending on which Backup2Safe appliance you are using. So not

only will the most recent backup be available for an immediate restore, but also full backups from previous days, weeks, and months.

Backups can also easily be replicated to a remote server over a normal internet connection.

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Backup Safe - About Author:
Backup2Safe solution has a Disk backup solution combines the automatic generation of local backups and a secure remote backup service via the Internet. The backup are stored in the a Disk backup resource Lortu Data Appliance, which allows quick backup and restoring of data via the local network.

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