Backup Method - Incremental Backup

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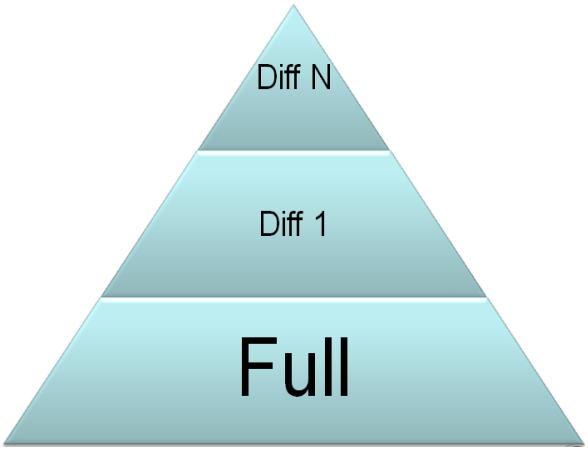
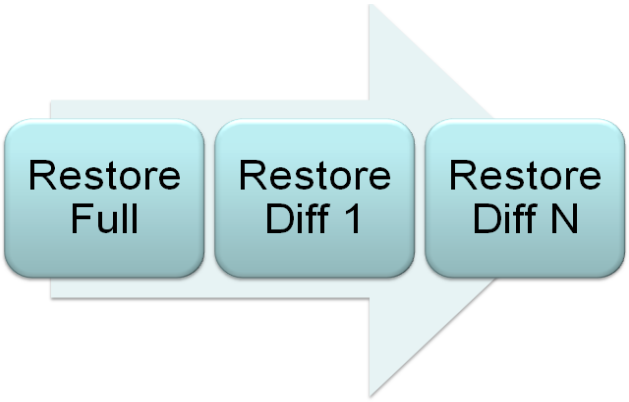
An incremental backup works by taking a periodic full backup. Followed by one or more "incremental" backups which are the changes to files made since the last full or incremental backup run. Typically an incremental backup is scheduled so that one full backup is performed weekly for example on Monday every week and a daily incremental backup is run on the other 4 working days.

Incremental Backup



Restore with Incremental Method

Restoring from an incremental backup involves multiple steps. First the full backup is restored. Then each incremental backup is restored until the desired restore point is reached.



Incremental Backup Disk I/O and Storage Impact

With incremental backup there is a savings in network I/O and storage consumed over full backup. Usually once a week a complete full backup is scheduled and this has the same impact as the full backup method. The other days in the week typically an incremental backup is performed and there is some savings. Surprisingly often there is no savings usually on server Disk I/O. The reason is that backup applications must compute some kind of check sums or deltas in order to accurately determine changed files. In order to perform these deltas all files and all their data must be read from disk consuming massive precious Disk I/O resources that grow linearly with the size of the data set.

Some applications rely on the last modified date or a Windows specific archive bit. This allows some savings on server disk I/O as only files that have the archive bit flipped or have a changed date since the last backup are read. The biggest disadvantage with this approach is that large files always have their complete contents backed up as if the entire file has changed.

