

# SQL SAFE THE TRUE VALUE OF HIGHER BACKUP COMPRESSION

**THE TRUE VALUE OF HIGHER BACKUP COMPRESSION** It is easy to incorrectly calculate the true value of extra compression on a backup. You may find that the native compressed backups provided by SQL Server 2008 give a stated 75% compression when compared to the original database size. Evaluating SQL Safe with its IntelliCompress solution you may find that it compresses the same database to a 85% compression when compared to the original size.

It would be easy to make an incorrect assumption at this point and question the value of purchasing a solution like SQL Safe when it seemingly only gives a 10% better compression. However, this is incorrect. Lets examine why:

## IntelliCompress Overview

A 10GB database when compressed by 75% gives a 2.5GB compressed backup file size. The same 10GB database compressed 85% produces a 1.5GB compressed backup file. A 1.5GB compressed backup file is actually **40% smaller** than the 2.5GB compressed backup file (Calculation :  $(1.5 - 2.5)/2.5 * 100$  ) and is definitely NOT 10% smaller.

**A backup file which is 40% smaller is highly significant as it allows:**

1. **40% less network traffic** if the backup file is located on a machine other than the DB server (which it needs to be for recovery purposes in the event of a catastrophe).
2. **40% less load on the IO subsystem** of the SAN/NAS or backup repository in order to write the backup file.
3. The ability to keep **40% more backups online** before having to archive them OR
4. **Reduce the size of the backup directory by 40%**

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As shown above, the correct formulation is to **directly compare the size of the 2 compressed backup files to each other in order to determine actual savings**. One cannot compare the advertised compression percentages directly and its worth noting that each vendor in the SQL Server compressed backup industry uses a slightly different calculation of compression percentage. Hence it is always good practice to directly compare compressed backup file sizes to each other and calculate the percentage gains using the universal percentage formula as shown above.

## Further sources of information

Please request the **SQL Safe IntelliCompress document** to learn how to produce even smaller “zero impact” backups. Idera’s **SQL virtual database product** allows you to use your database backup files as fully functional databases without having to first perform a restore. Please speak to your Idera sales representative for further information.

**CONCLUSION** In order to calculate the true gain in higher backup compression one must compare the sizes of the compressed backup files to each other and NOT to the original size of the database. Typically smaller backups enable a site to maintain a greater number of backups online for a longer period or conversely dramatically reduce the amount of backup space required.

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**ABOUT THE AUTHOR** Brett Hawton is a SQL Server product architect at Idera and has worked with the internals of SQL Server since its inception in the mid 90’s.

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