

Understand compression levels

SQL Safe allows you to set the compression rate suited to your backup needs. You designate a default compression level during the initial setup of SQL Safe. Any time prior to initiating a backup, you can modify your compression level.

How do I choose the best compression level for my environment?

The compression level that is best for your environment depends on your storage and performance needs. Before you choose a compression level, determine whether you need maximum storage and compression (lower performance) or maximum performance (lower compression).

Compression rates and backup times depend on the following factors:

- Whether the SQL Server computer utilizes multiple processors
- Whether you are striping data to multiple backup files
- Available bandwidth on your network connections
- Current processing load, such as backing up multiple databases in the same job
- The type of data you are backing up (for example, text compresses to a smaller size than binary data)

Level 1

Low compression. Provides high execution speed and minimal server load. This compression level typically provides 75-90% compression rates on text data. This compression rate may significantly decrease if you are backing up a database that contains binary data or previously compressed data. Use this compression level if you want to perform fast backups, sometimes during business hours, at the expense of a larger size.



In environments with a slow write speed, this level will not produce backups as fast as higher levels of compression.

Level 2

Medium compression. Provides good data compression while maintaining high-speed execution. This compression level places a moderate load on your server to provide increased compression. This compression level works well in environments with a good balance between multi-processor servers (for example, a 4- to 6-way SMP server) and IO speed.

Use this compression level if your environment includes one or more of the following conditions:

- You want to increase compression without significantly impacting performance
- You can schedule backups during off-hours, if needed

Level 3

High compression. Provides a high level of compression while slightly decreasing execution speed. This compression level provides significant reduction in backed up data size, while placing a higher load on your server. This compression level works well for nightly backups in environments with a powerful multi-processor servers (for example, an 8-way SMP server) where saving space is a high priority.

Use this compression level if your environment includes one or more of the following conditions:

- You want to maximize compression without significantly impacting performance
- You can schedule backups during off-hours, if needed

Level 4

Ultra-high compression. Provides the highest level of compression, to be used when saving space is critical. This compression level places a high load on your server. To achieve acceptable run times, this level should be used on very powerful servers with 8 or more processors and generally only during off-peak periods.

Use this compression level if reduction in backed up data size is your primary objective.

SQL Safe is a high-performance backup and recovery solution for your SQL Servers. [Learn more > >](#)

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