On the interaction between the FILE_FLAG_NO_BUFFERING and FILE_FLAG_WRITE_THROUGH flags

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The CreateFile function has two related flags: FILE_FLAG_NO_BUFFERING and FILE_ FLAG_WRITE_THROUGH . These flags can be set independently, but they sort of work together.

First, let's look at **FILE_FLAG_NO_BUFFERING**. Setting this flag prevents operations on the handle from going through the disk cache. Reads come directly from the disk, and writes go directly to the disk.

The **FILE_FLAG_WRITE_THROUGH** flag increases the urgency with which write requests are sent to the disk. Setting this flag forces writes to go to the disk immediately, and combining this flag with **FILE_FLAG_NO_BUFFERING** adds the additional urgency of telling the disk controller to flush the data out of its internal cache.

So let's fill out a table.

		NO_BUFFERING	
		Clear	Set
	Clear	Writes go into cache Lazily written to disk No hardware flush	Writes bypass cache Immediately written to disk No hardware flush
WRITE_THROUGH	Set	Writes go into cache Immediately written to disk Hardware flush	Writes bypass cache Immediately written to disk Hardware flush

Bonus reading: <u>We're currently using FILE_FLAG_NO_BUFFERING and FILE_FLAG_WRITE</u> THROUGH, but we would like our WriteFile to go even faster.

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