

Useless PC Tools

Drive defragmenters

Increasingly irrelevant, likely dangerous

Back when platter (HDD) drives were common, defragmenting them was a necessity. As an HDD writes and rewrites, bits of data can get scattered across the disk, gradually increasing seek time for the reader. Defragmenting undoes this decay, allowing the platter to spin as efficiently as possible.

Here's the thing -- outside of servers and network-attached storage (NAS) systems, few people use HDDs anymore. Most computers rely on SSDs (solid state drives), which are based entirely on flash storage, i.e. memory chips. Rearranging sectors isn't going to provide a meaningful speed improvement, since there are no moving parts.



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Flash chips have a finite number of write cycles, and defragmenting them will aggressively use those up, shortening your SSD's lifespan. In fact, trying to defragment an SSD is one of those things that's actively harmful. You should never, ever run a defrag on an SSD. SSDs do need to undergo a process known as trimming, which removes "garbage" data and flags that space as available for writing again. This should happen by default if you're using Windows 10, 11, or any recent version of macOS, so there's no need to install any third-party TRIM tools.



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