

## How to help your new SSD have the longest life possible

The Solid State Drives are immune to dropping and wear-and-tear that can crash a hard drive. SSDs do have their own care and maintenance.

Flash RAM is the storage technology used by SSDs. Every time you write to flash RAM, it uses up some of its life, and brings closer the day it fails.

One website states that an SSD will last 1.5 to 1.6 million hours. As you can see, MTBF [Mean Time Before Failure] refers to the failure rate of a drive over its expected lifetime. This doesn't mean a 1.2 million hour MTBF drive will last 1.2 million hours, and a 1.5m MTBF drive will last 1.5 million hours (that's 136 to 171 years by the way)

In the case of the Intel 335, the 1.2 million hour MTBF means that if the drive is used at an average of 8 hours a day, a population of 1000 SSDs would be expected to have one failure every 150 days, or about twice a year. The Samsung 830 is expected to have one failure every 187.5 days. However not all drives are tested to the same standards.

Still it will take many sessions of 'writing' before that happens. If you avoid unnecessary writing, your SSD will probably last until you want to replace it with something better. You can avoid unnecessary writing by turning off these Windows settings.

### Defragger

An extremely fragmented hard drive can slow down a PC, but fragmentation is irrelevant on an SSD. Worse, it writes all over the place. It is best to turn automatic Defragmentation off.

### Superfetch

Is a cache-like Windows feature that's supposed to improve performance. It didn't really help all that much with hard drives and it actually slows down SSDs as it wears them down.

To disable Superfetch, search and select services.msc. In the resulting Services window, scroll down to and double-click on Superfetch. Pull down the Startup type menu and select Disabled.

### Hibernation

When you put a Windows PC into the energy-saving sleep mode, it still uses some electricity. When you hibernate it, you shut down the hardware entirely.

But hibernation also copies everything in RAM to the C: drive--wearing out the SSD just a little bit. You can simply not hibernate. Or, to be safe, you can disable it. If you're using Windows 7, follow Microsoft's instructions. In Windows 8, don't worry about it; hibernation is disabled by default.

### Turn Off Virtual Memory

This can speed up your machine, but may reduce how many programs you can run at once. It may not be needed anymore as SSD's have improved since they first came out.