# PC Lockups and how to Fix Them

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My PC started randomly freezing months ago, no blue screen – it would just freeze wherever it was for no apparent reason. This documents the steps I took to resolve the issue.

Although the ultimate fix for my problem is very specific, many of the steps that I took are valid maintenance steps for any computer and will help your computer run more reliably.

## How to Fix any Damage Caused

Once your PC has frozen, there is nothing you can do other than power cycle it. Ctrl-Alt-Delete doesn't work. You will need to press, and hold, the power button until the power turns off. It may then then turn back on briefly so you should wait around 30 seconds until it has stabilized and is really off.

Then press the power button again to turn it back on. You should get a prompt asking if you want to analyze the problem OR just reboot your PC. Just reboot the PC.

Since the freeze left your PC in a potentially unstable state, it is possible that files may be corrupted.

In order to fix these, you need to run the following commands at an administrative command prompt (hold Ctrl and Shift and left click on your command prompt icon):

- C:>sfc /scannow
- C:>dism /Online /Cleanup-image /Restorehealth

These commands should scan all of the operating system files and restore any corruption that may have occurred.

## The Dell Recommended Solution (September 2022)

After spending hours on the phone with Dell, they told me to do a "hard reset" which consists of the following:

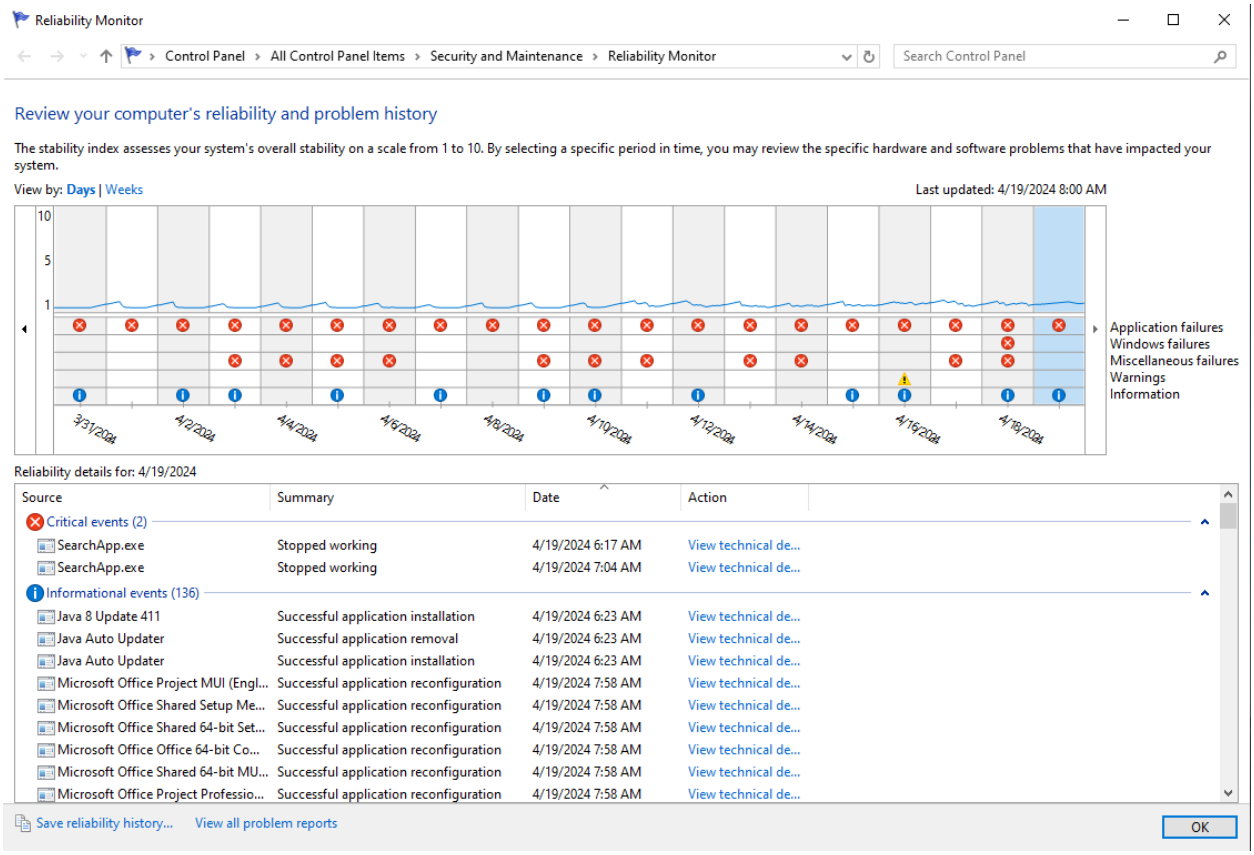
1. Unplug ALL cords (everything) from your PC box.
2. Press and hold, the power button for at least 15 seconds.
3. Reconnect everything, and power it back up.

This didn't fix anything for me, and frankly seems kind of silly. Their explanation was this would completely discharge some capacitor in the power supply that "might" be powering something even when the power was turned off. This is probably a design issue with Dell PCs.

My experience with Dell support was so bad (in that they were un-helpful, they were always very polite) that I stopped renewing my maintenance contract.

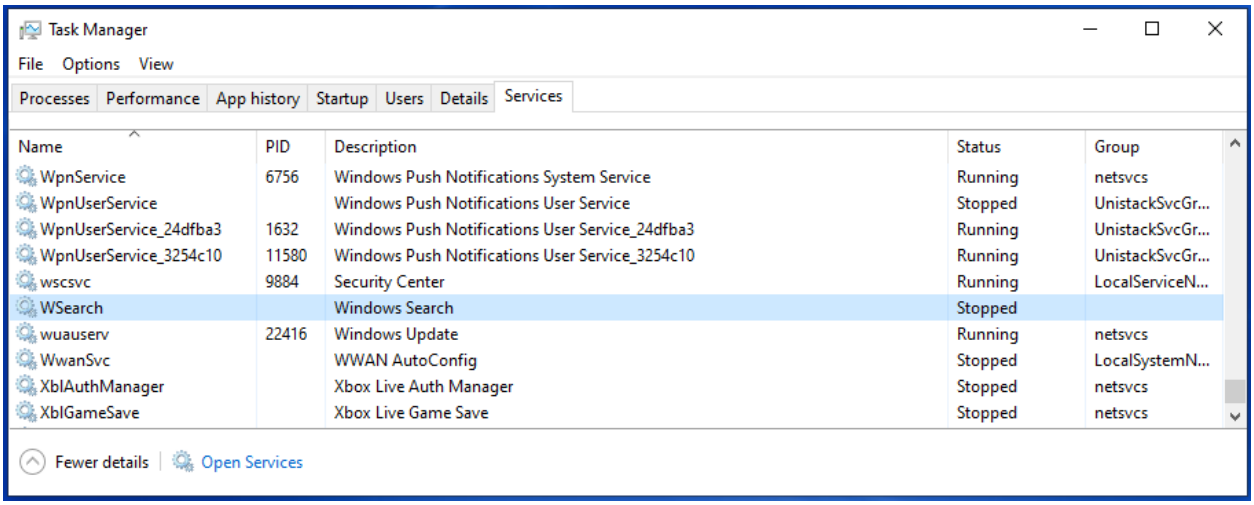
# View Reliability History

You can find this in the Control Panel and it shows things that went wrong so you can try to figure out what might have caused your freeze.



## Windows Search

In my case the freeze was always accompanied with critical events related to Windows Search.

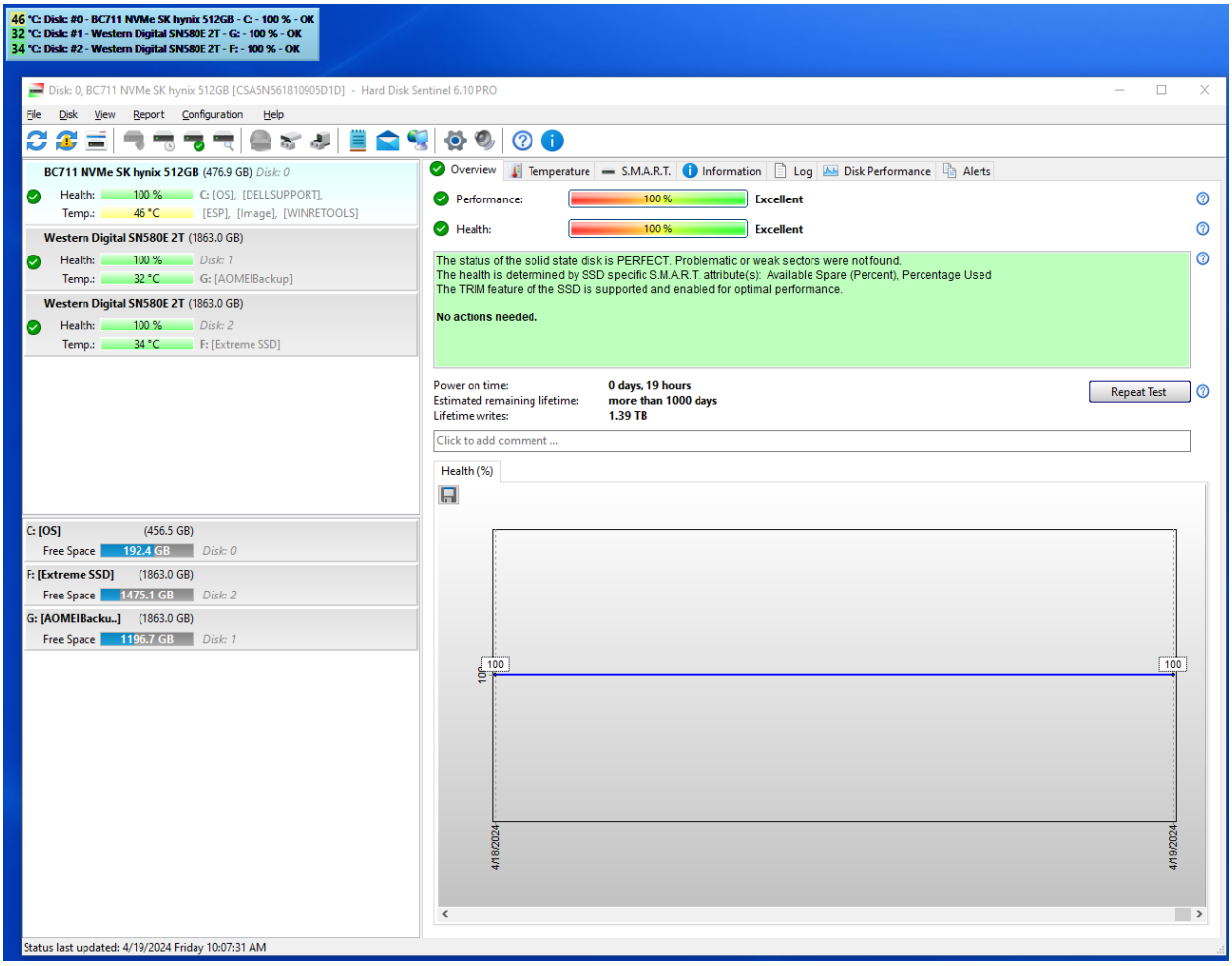



I used the Task Manager to stop the WSearch service (changed from “delayed startup” to “disabled”.) However, this also did not fix my freezing issue. Additionally, I would later see that even though the service was disabled at startup, it would be run later if other parts of the OS required it’s services.

I also tried disabling WSearch using GPEDIT.MSC (sadly I didn’t record the steps) but that was no more help in solving the freezing issue.

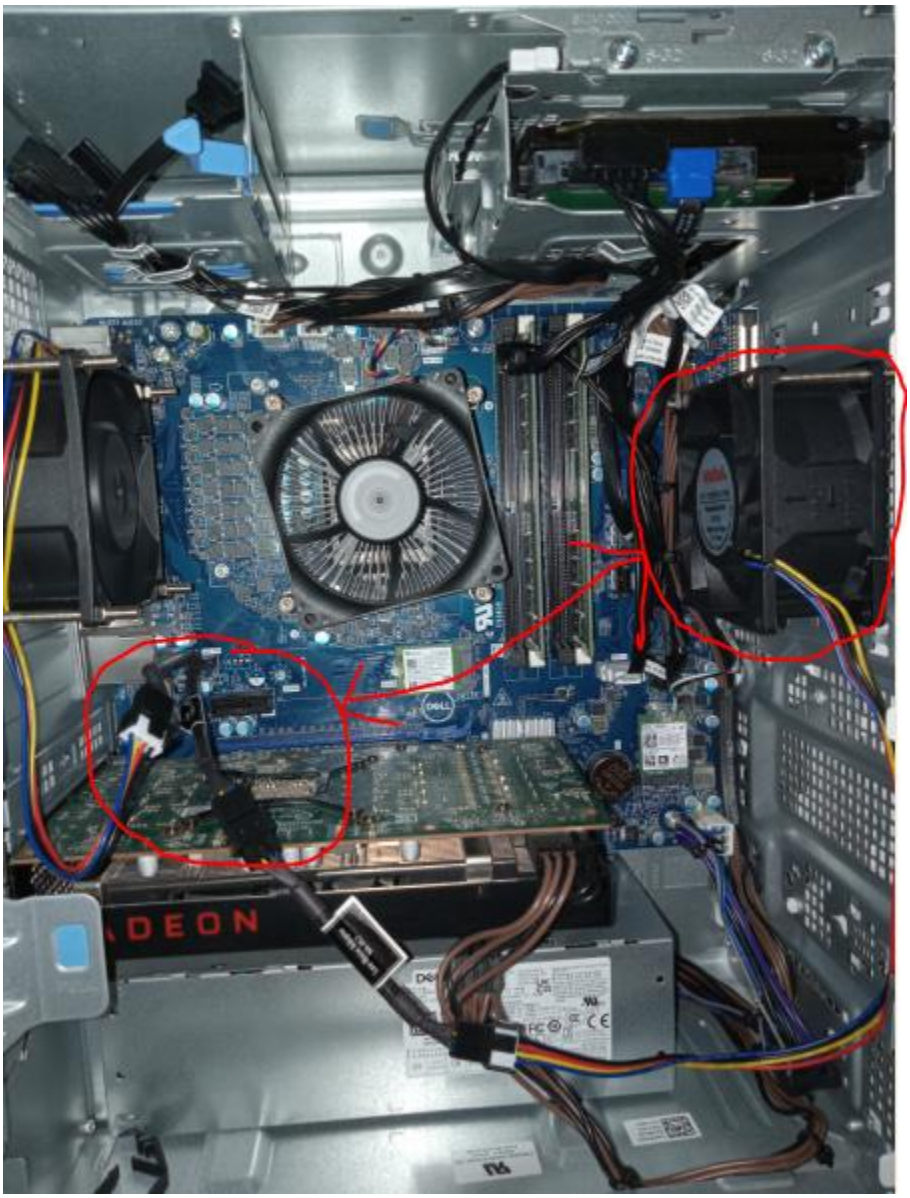
# Using Hard Disk Sentinel (October 2023)

This program can be downloaded here [Download Hard Disk Sentinel (hdsentinel.com)] and allows you to see every aspect of the health of your disk drives.  This is a great tool and I highly recommend it.



## Cooling Issues

Using this tool, I could see that my C: drive SSD was running a little hot so I added an extra fan to my PC chassis to improve the air flow.  However, this did not resolve my freezing issue.

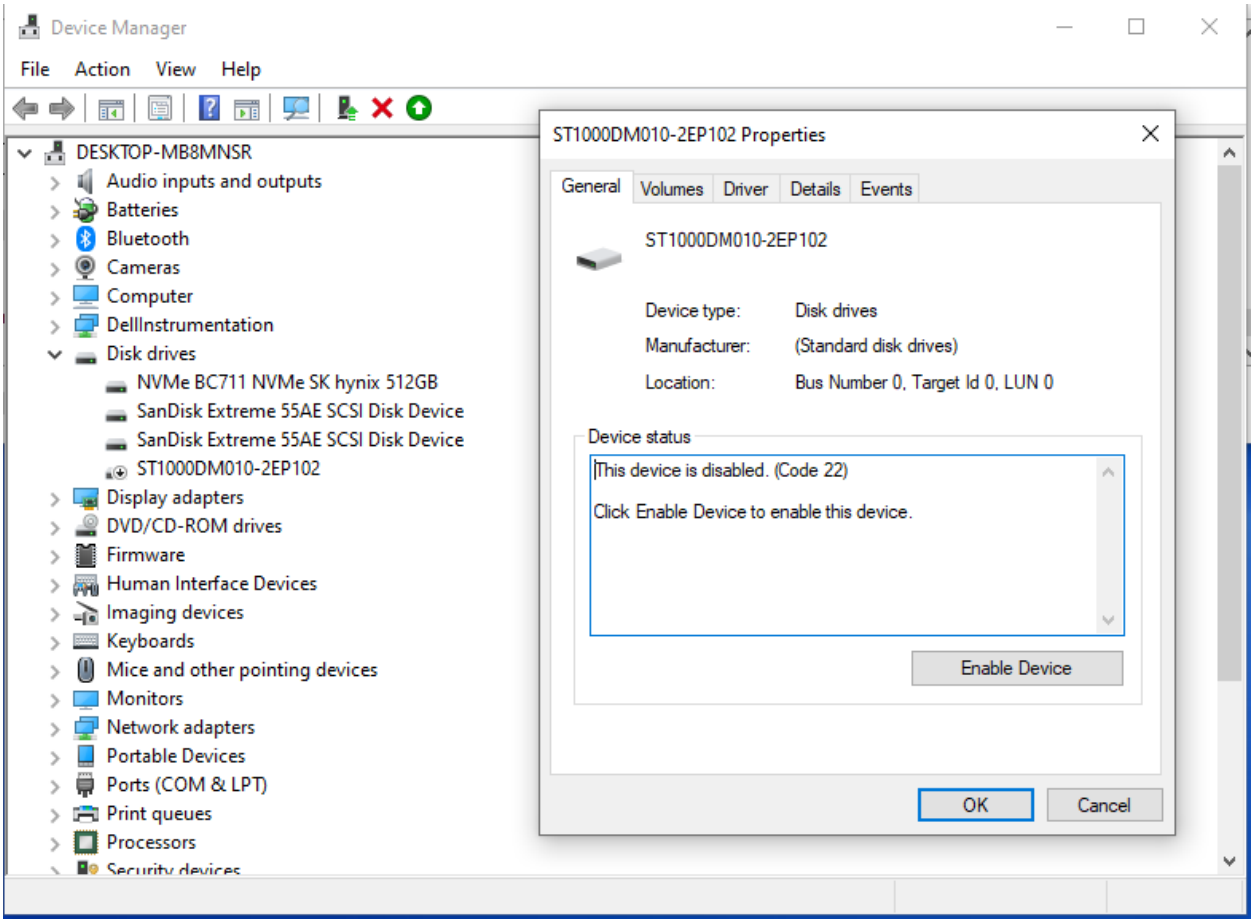


## Disk Errors

Using Hard Disk Sentinel I was able to see that there were many access errors on my D: spinning disk hard disk.

I bought some external USB SSD drives and transferred the data off of the D: drive spinning disk. I then disabled the D: spinning disk in Device Manager so that these errors could not cause the freezing when Windows Search crashed trying to index the drive.

However, this did not improve the freezing issue.




## NAS Server

I later realized that the SSDs I'd used were USB 2.0 which is incredibly slow. This slowed my PC down to a crawl during routine backups. So, thinking this might be contributing to the problem, I implemented a NAS server, transferred all the SSD data to the NAS, and removed the SSD drives (see NAS Documentation for more details.) Although this greatly improved the speed of my PC, this did not eliminate the lockup problem.

## Replacing Your C: Drive SSD (April 2024)

The Hard Disk Sentinel program indicated that my SSD was at 99% health which I assumed was OK. However, when everything else failed to solve the problem, I decided to replace the SSD.

Even though SSD drives are designed to operate with failed sectors (they replace them with 'spare' sectors) it is possible that the accesses times are longer to the 'spare' sectors in some cases. If this is true, AND your PC has a device driver that does not take this into account, it would be possible for the driver to fail and freeze the PC. Granted the "correct" solution would be for the vendor to update their driver so that this failure stops, but, in the meantime, a practical solution is simply to replace the "worn out" SSD with a brand new on.

I bought an NVMe duplicator along with a new SSD (yours may be different – make sure you match what is in your PC now)

With this you take out your current SSD and put it into the duplicator in the "source" slot. Then you put the new SSD into the duplicator in the "target" slot and press the duplicate button. After a few minutes you will have a complete copy of your original SSD.

Be aware the first time you boot up with the copied SSD you will get a BIOS warning saying there is something wrong (because it detected that the device changed.) This is OK, just click through and it will reboot and it should work fine the second time.

This worked for a day or so, and then it froze up again.

## Cleaning and Re-Seating Memory DIMMs

Over time, oxidation can occur on the DIMM memory connector gold contacts. You can clean this off with a pencil eraser, or ideally a gold contact cleaner like DeoxIT Gold, and re-seat the DIMMs. This can cause freezing if the oxidation gets bad enough. You can see on the right how much contamination was removed by the gold wipe even AFTER using a pencil eraser to get the bulk of it off.



I will try this now and see if it resolves my freezing issue. This also did not resolve my freezing issue.

## Replacing the PC Power Supply (October 2024)

Since I was running out of options and PC power supplies typically only last 3-4 years or so (and mine had been running for 4 years now) I decided to try a new power supply.

This also did not resolve the crashing issue.

## Terminate Windows Search with Extreme Prejudice

I found another solution to disable windows search here using the admin command prompt (Note: this is specific to Windows 10):

1. cd %windir%\SystemApps
2. taskkill /f /im SearchApp.exe
3. move Microsoft.Windows.Search_cw5n1h2txyewy Microsoft.Windows.Search_cw5n1h2txyewy.old

You have to execute steps 2 and 3 very quickly – otherwise step 3 fails saying "The process cannot access the file because it is being used by another process. 0 dir(s) moved." The reason for this is that the OS keeps trying to restart the Windows Search process. So, you need to keep doing steps 2 & 3 until step 3 shows the following "1 dir(s) moved."

Once you do this, Windows Search will not be able to restart because the OS won't be able to find the renamed folder.

This effectively stops the search app from running. It has now been 5 days with no freezing so I believe this has "solved" the problem (of course the real problem is that Microsoft's Search app is unreliable.)

**IMPORTANT**: It appears that Windows 'restores' the SearchApp settings when Windows Updates are applied so you may need to repeat these steps every time you get a Windows Update.

**Update**

Although this did improve the situation for a few weeks, the problem eventually came back. This is not too surprising as disabling the search process only 'reduces' the frequency with which the Solid State Drive (SSD) is accessed, thus reducing the likelihood of a problem. In addition, as mentioned above, this solution was really annoying because every time windows decided to do an update, the search would be re-enabled and if you forgot to disable it again, the lockups would start again.

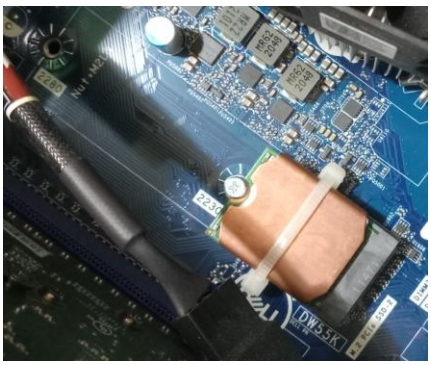
# Replace Original SSD with Faster Gaming SSD (June 2025)

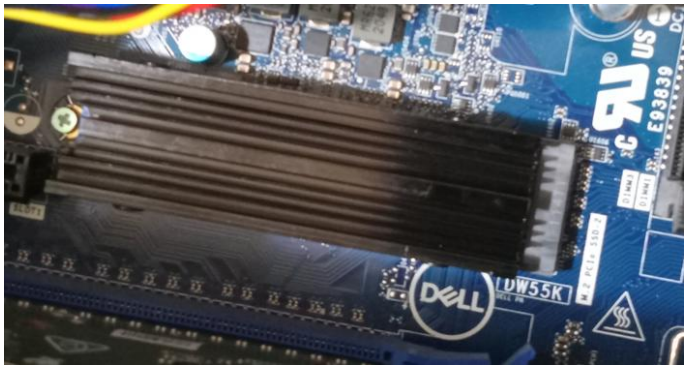
Since I had an extra gaming SSD laying around (from another project) I decided to replace (see previous section) my stock SKHynix BC711 512GB NVMe PCIe M.2 2230 SSD with a WD_BLACK 2TB SN850X NVMe Internal Gaming SSD Solid State Drive - Gen4 PCIe, M.2 2280, Up to 7,300 MB/s.



As you can see the WD_BLACK has a longer form factor – which your PC must accommodate (mine did.)

Additionally, since the diagnostic tools had been showing that the SSD was getting hot, I added a heat sink to the WD_BLACK to smooth out heat spikes during operation. Note that I had also put a heat sink on the original SKHynix SSD, but it was puny (and the only one I could find) compared to the one used on the WD_BLACK SSD. Note also how the old (left) heat sink had to be wire-tied to the SSD to keep it from falling off, whereas the the new (right) is properly secured with metal brackets, screws and thermal transfer material.






As an added bonus, this (with some extra work using AOMEI disk partitioning software) allowed me to have a much larger C: drive.

I am no longer disabling the Windows Search process. I have also removed the extra fans that I put in the case earlier trying to reduce the temperature – which is nice as my PC is now back to being quiet again.

This was done on 6/23/2025 and it has now been 2 ½ weeks (7/10/2025) without any lockups so I believe that the problem has now been resolved. I also upgraded Windows 10 to Windows 11 on this PC during this time, so it is possible that the upgrade contributed to solving the problem as well. However, the PC ran without lockups for several days before I did the Windows upgrade so it is most likely that the SSD upgrade fixed the problem (as it had been locking up several times a day before.)