[Troubleshooting] Task Manager shows High CPU, Memory and Disk Usage

Sometimes the system would run very slow due to the abnormally high loading of CPU, Memory, or Disks, it means that these main components are constantly working under heavy loadings, they won't have any spare resource to perform other tasks, even routine operating system tasks.

It is usually caused by multiple reasons, such as the background program, Windows Services, the improper virtual memory settings or the low configuration (only 4GB/8GB RAM and traditional hard disk without SSD).

The list below shows you all actions which might help against all different kinds of situations. Apply all actions one at a time to get the system improvement.

- **Remove unnecessary language packs manually**
- **Perform a disk check**
- **Reset Virtual Memory**
- **Disable Windows Services**
    - **Disable Windows Search Index**
        - **Search Index for the System Drive**
        - **Windows Search Service**
    - **Disable SuperFetch Service**
    - **Disable Message Signaled Interrupt (MSI) mode**
    - **Disable System and compressed memory process**
- **Disable Antivirus Software and Windows Defender**
- **Update the latest driver and utility on MSI website**

- **Remove the unnecessary language packs manually**

  For MSI Notebooks which has the pre-installed system with multiple language packs only. Skip this step if there are no additional language packs found on the system.

  To manually remove the unnecessary language pack helps to avoid the system running the uninstallation on its own in the background automatically when Windows is idling for a while (default 10 minutes) which gives the high disk usage.

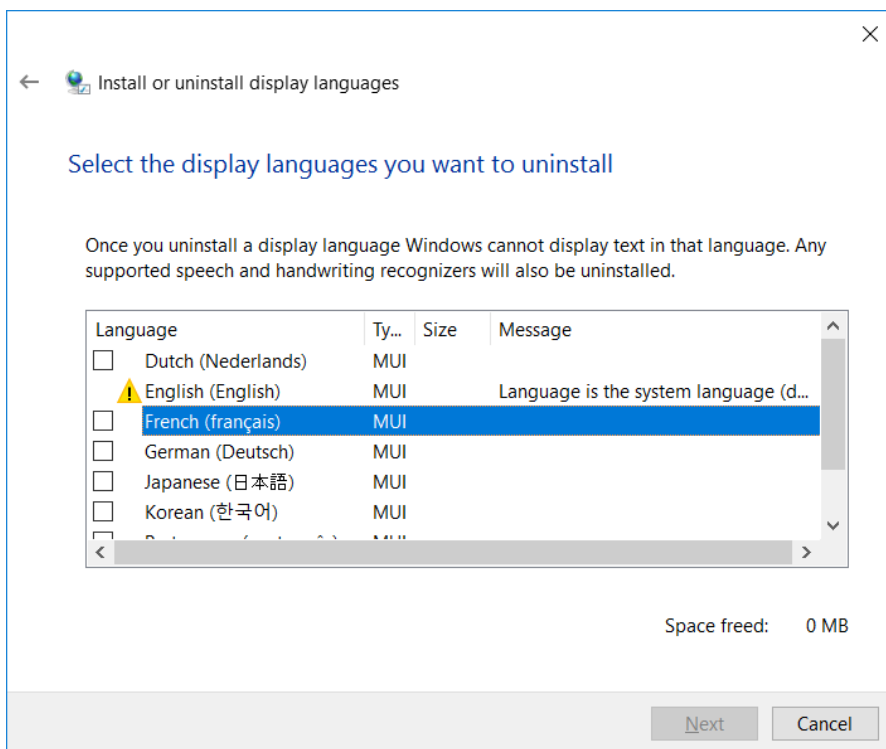 P.S. Don't forget to create the backup recovery media by using MSI BurnRecovery in advance.

1. Press **Windows key** and **R key** at the same time and type the command "**lpksetup**" to open the language pack setup wizard.
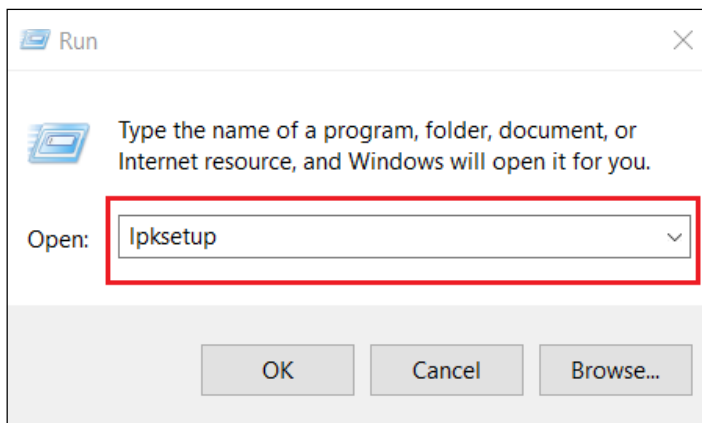
2. Select "**Uninstall display languages**".
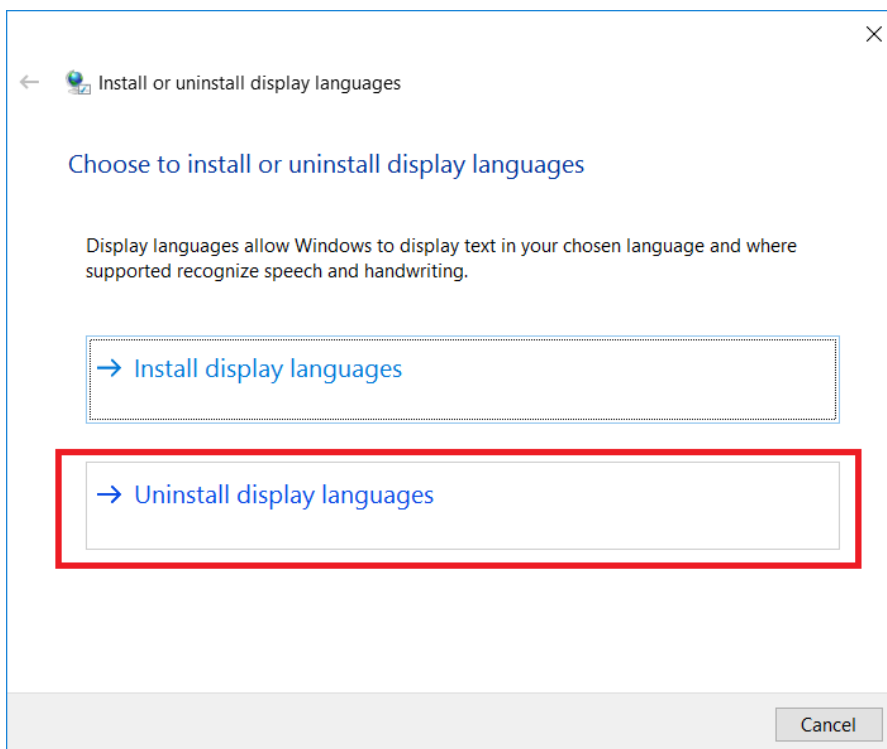
3. Select unnecessary languages.

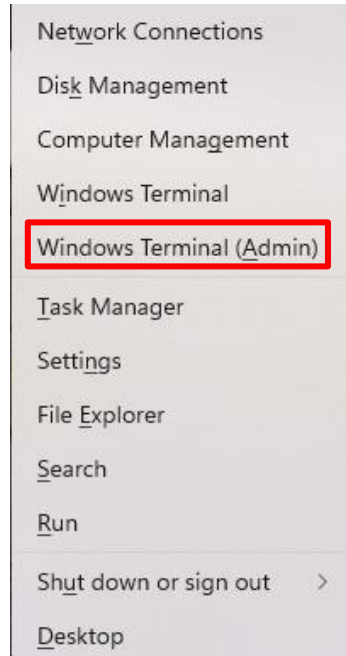4. Select "**Next**" and those languages will be removed.

5. After they are removed, the system will restart and begin optimization for a while.
   We've estimated that if you removed five languages, it would take about 10 minutes to wait during the restarting.
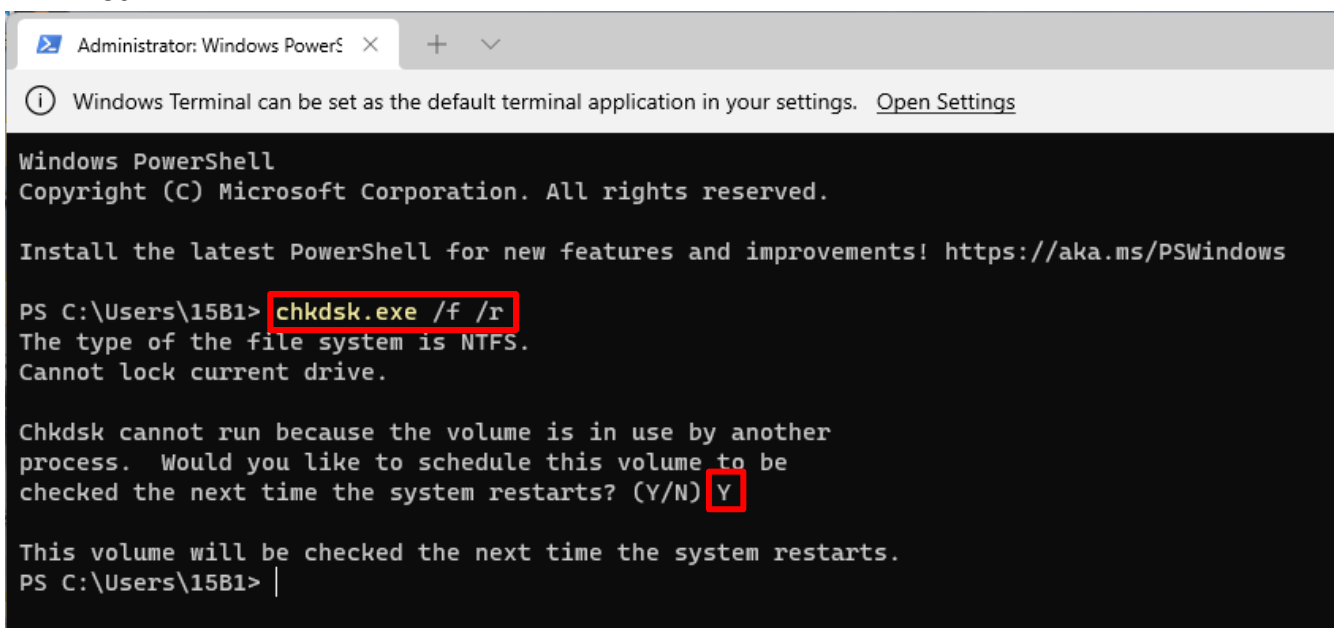
- **Perform a disk check**

1. Press **Windows key** and **X** at the same time, then choose Windows Terminal (Admin).
   Command Prompt(Admin) can do this too.

   Network Connections
   Disk Management
   Computer Management
   Windows Terminal
   Windows Terminal (Admin)
   Task Manager
   Settings
   File Explorer
   Search
   Run
   Shut down or sign out   >
   Desktop

2. The command prompt will display. Type in the following command:
   chkdsk.exe /f /r

3. Press **Enter** on your keyboard, then type **Y** to perform the disk check the next time restarting the notebook. Please make sure all of the applications are closed first.

   Administrator: Windows PowerS ×   +   ∨

   ⓘ Windows Terminal can be set as the default terminal application in your settings. Open Settings

   ```
   Windows PowerShell
   Copyright (C) Microsoft Corporation. All rights reserved.

   Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

   PS C:\Users\15B1> chkdsk.exe /f /r
   The type of the file system is NTFS.
   Cannot lock current drive.

   Chkdsk cannot run because the volume is in use by another
   process.  Would you like to schedule this volume to be
   checked the next time the system restarts? (Y/N) Y

   This volume will be checked the next time the system restarts.
   PS C:\Users\15B1>
   ```
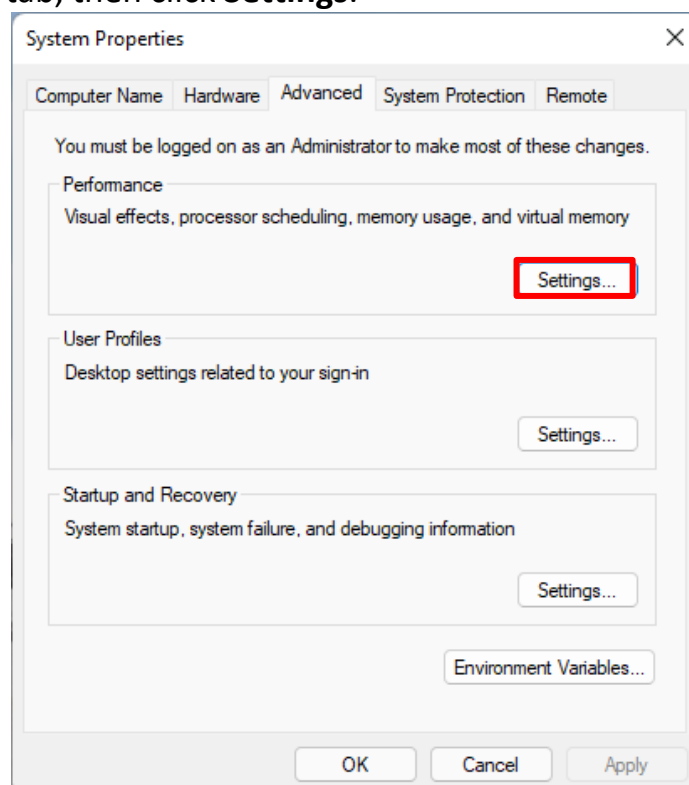
- **Reset the Virtual Memory**
  The Virtual memory can be considered an extension of the notebook's physical memory. It's a combination of RAM and a portion of the hard drive. When the RAM isn't enough to perform a task, Windows will temporarily store files in virtual memory, then swap them back to RAM when required.
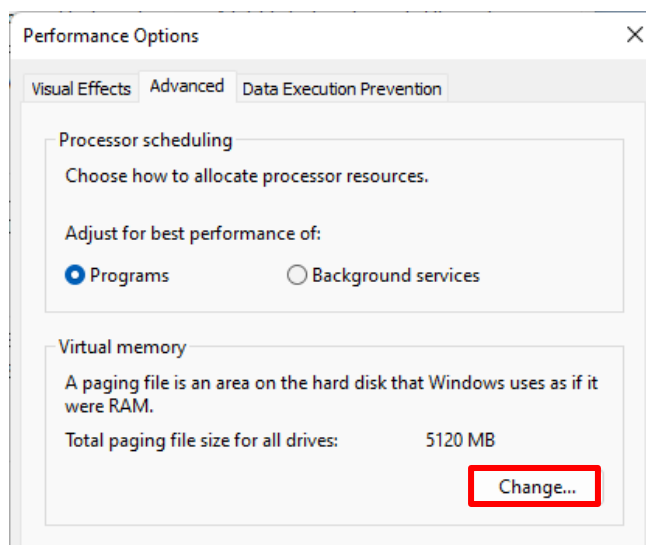
1. Press **Windows key** and **Pause/ Break key** at the same time. Then choose **Advanced System** Settings.
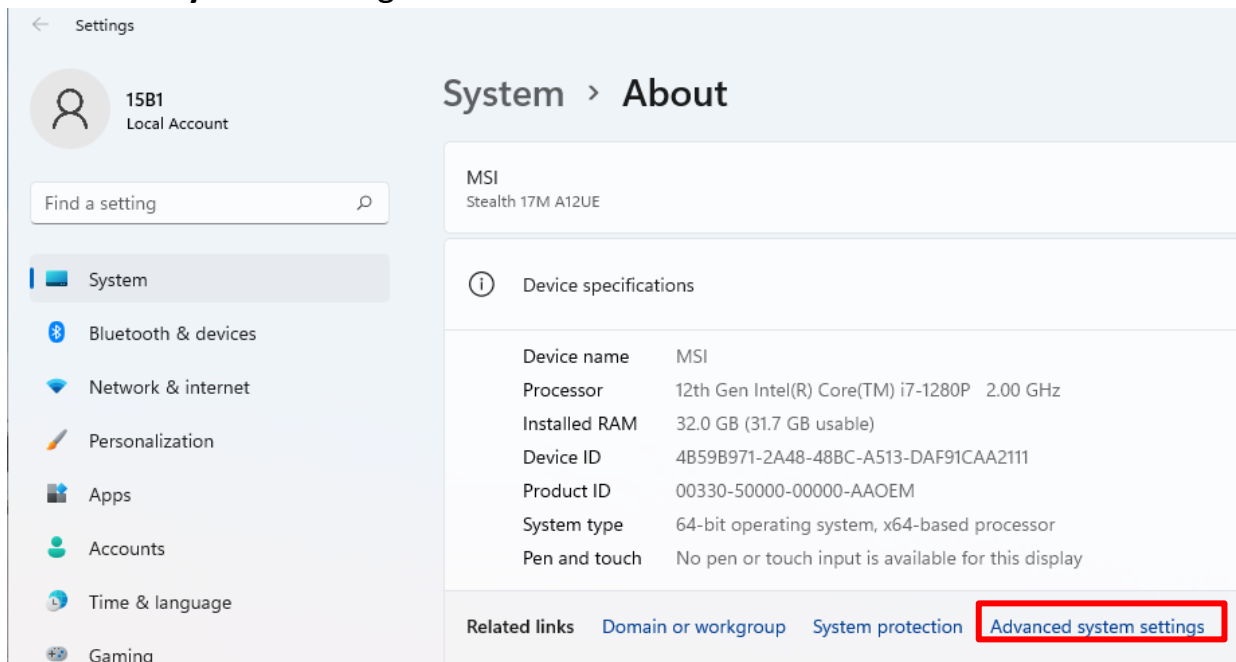
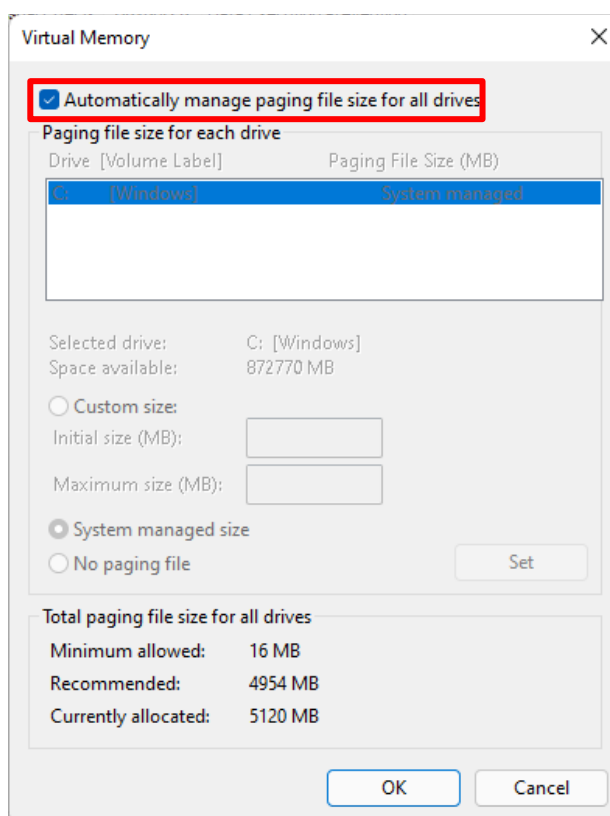2. Go to the **Advanced** tab, then click **Settings**.

3. Go to the **Advanced** tab again, and choose **Change** in the Virtual memory section.

4. Check "**Automatically manage paging file size for all drives**" is enabled, and click OK. (It would need to restart the notebook.)

If the function is enabled already, please disable and click OK. Enable it again after system restart.

5. Clear all the system's temp files. Press **Windows key** and **R** at the same time, then in the Run form, type **temp** and hit Enter. This will invoke Windows Explorer with Temp folder open, showing all the temp files in the system.
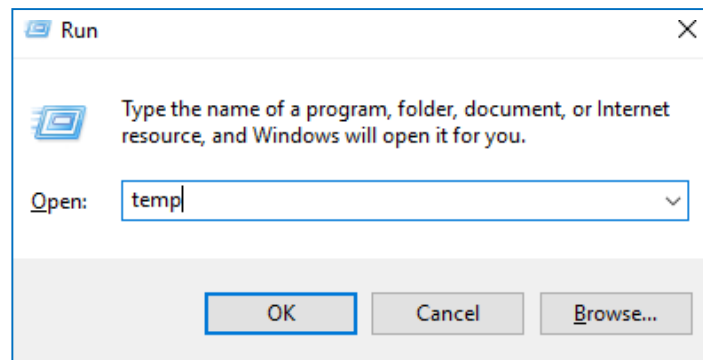
6. Select all the files in the Temp folder and delete them.

- **Disable Windows services**
  Various Windows services running in the system background increases the CPU, Memory or Disk usage, disable the services listed below helps to decrease the extra usages for the components.
  Windows Search
  Superfetch
  Message Signaled Interrupt (MSI) mode
  System and compressed memory process

- **Disable Windows Search Index**
  Windows Search Index runs optimization for the stored data constantly by default because this saves more time when users try to find a specific file from the whole system; however, the optimization gives heavy loads to the running system (especially when having the traditional hard drive as the main system drive). Disable the service to avoid the extra system loadings given from the file search optimization.
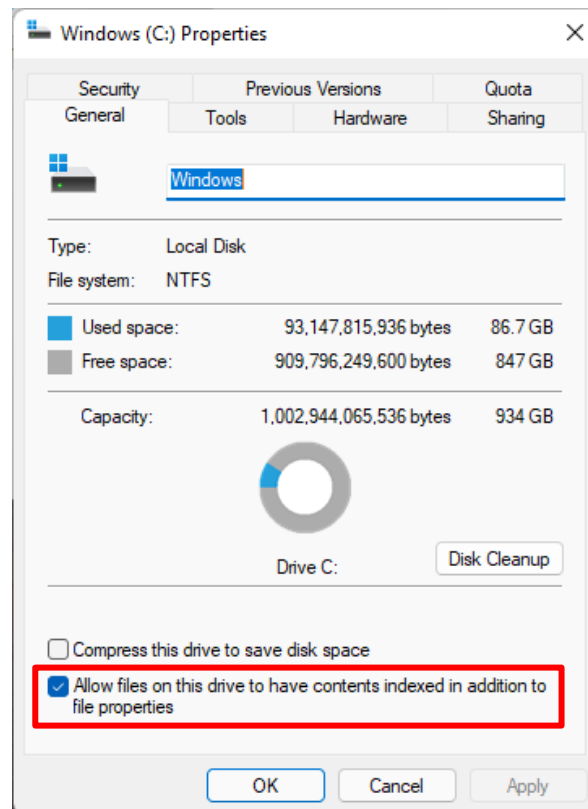
  I. **Disable Search Index for the system disk**
      1. Press **Windows key** and **E key** at the same time to open "**File Explorer**" or just click on the "**File Explore**r" icon on the toolbar.

2. Click "**This PC**" on the left panel, all the disks would show on the right panel, then right click on the Disk volume you want to disable, click "**Properties**".
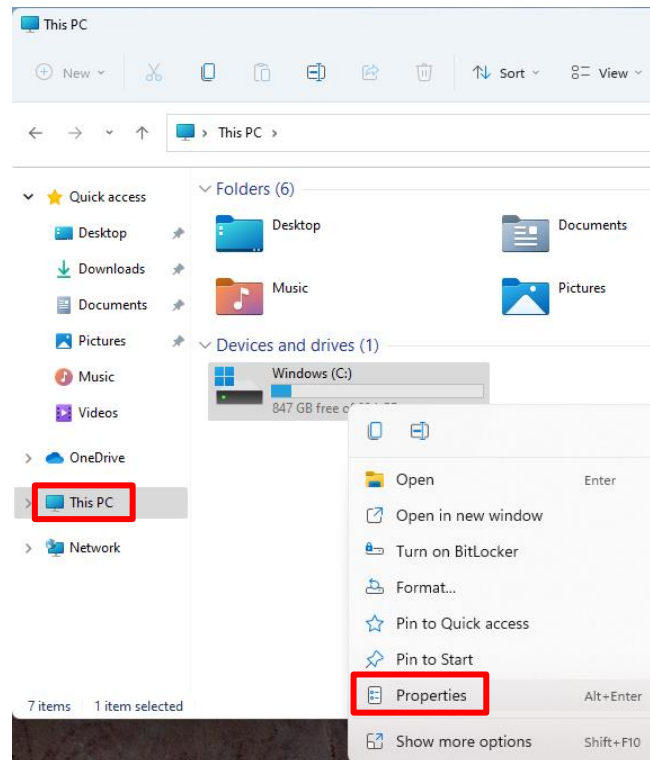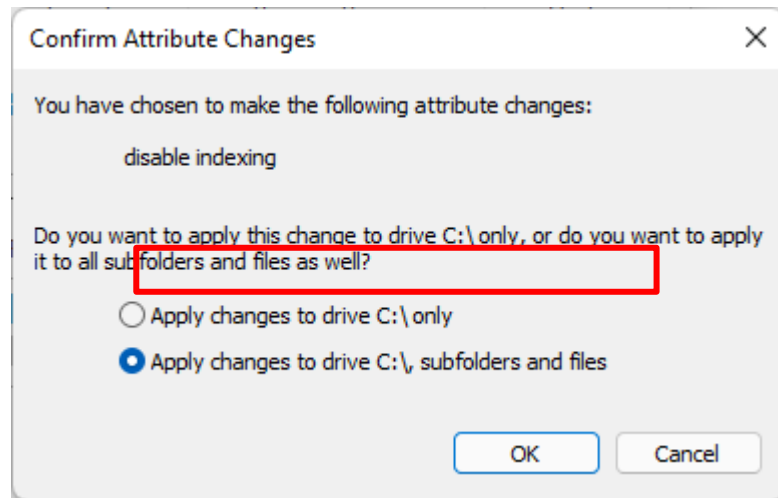

3. Uncheck the "**Allow files on this driver to have contents indexed in addition to file properties**" and then click "**Apply**".
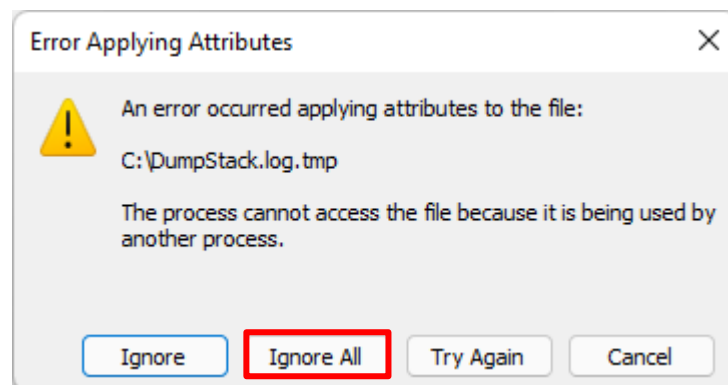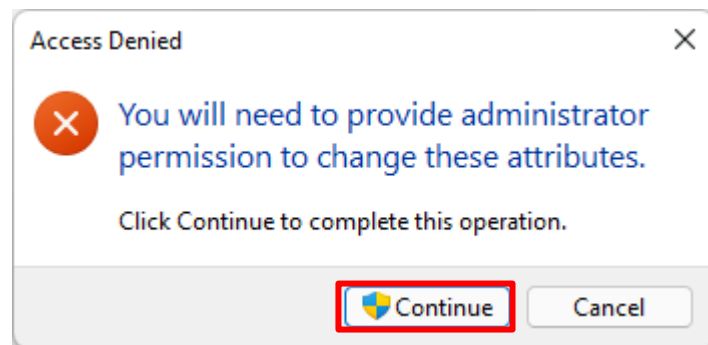
4. Select "**Apply changes to drive C:\subfolders and files**" ,then click on OK.

Confirm Attribute Changes ✕

You have chosen to make the following attribute changes:

    disable indexing

Do you want to apply this change to drive C:\ only, or do you want to apply it to all subfolders and files as well?

○ Apply changes to drive C:\ only

◉ Apply changes to drive C:\, subfolders and files

OK   Cancel

5. Click **"Continue"**, and another window appears, click**"Ignore All'** to continue the process. It may take a few minutes to finish the whole process.

Access Denied ✕

❌ You will need to provide administrator permission to change these attributes.

Click Continue to complete this operation.

🛡Continue   Cancel

Error Applying Attributes ✕

⚠ An error occurred applying attributes to the file:

C:\DumpStack.log.tmp

The process cannot access the file because it is being used by another process.

Ignore   Ignore All   Try Again   Cancel

II. Disable Windows Search Service

If you don't need Windows Search function at all, disable indexing completely by turning off the Windows Search service.
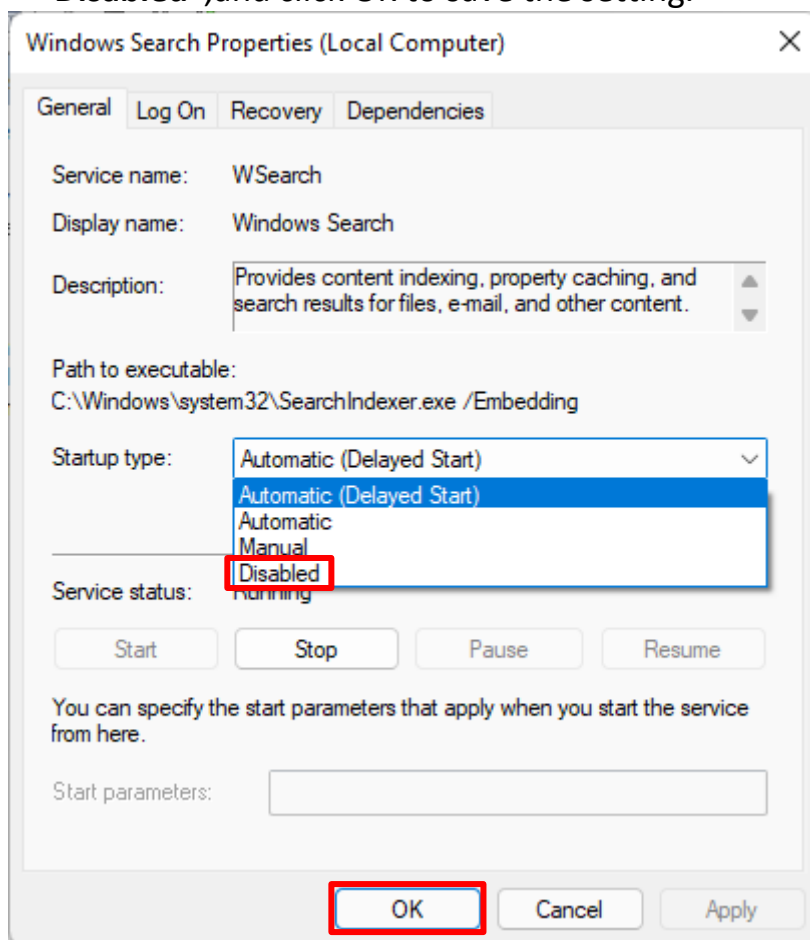
1. Hit Windows search icon on Windows tool bar or press **Windows key** and **Q key** at the same time, enter "**services**" in the search column, click "**Services**" item in the result list.
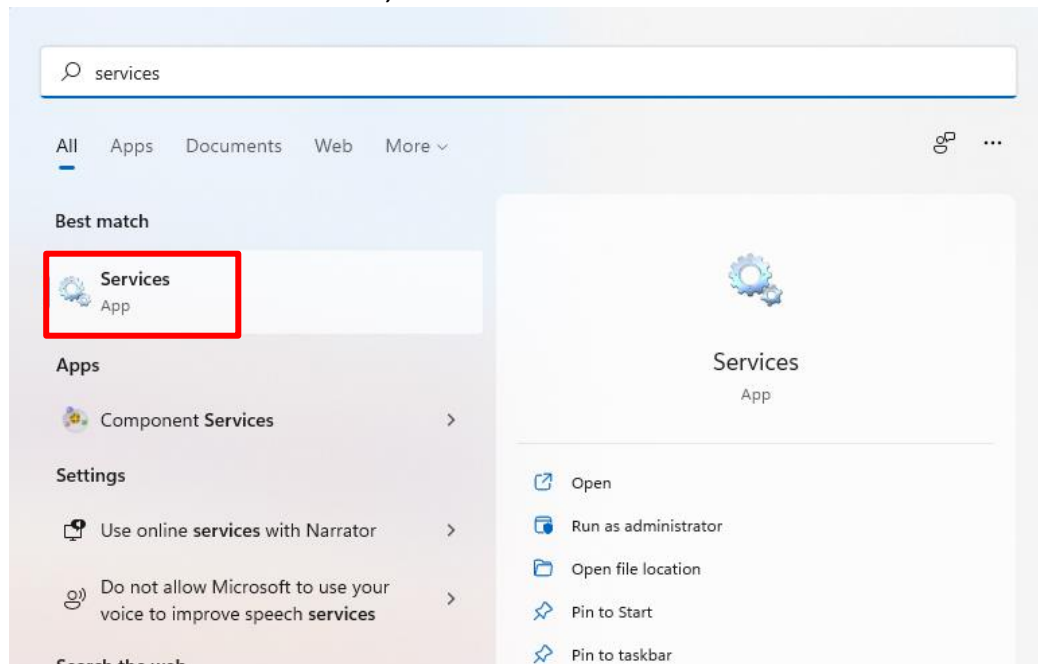
2. Find "**Windows Search**" in the right panel, double click WindowsSearch.
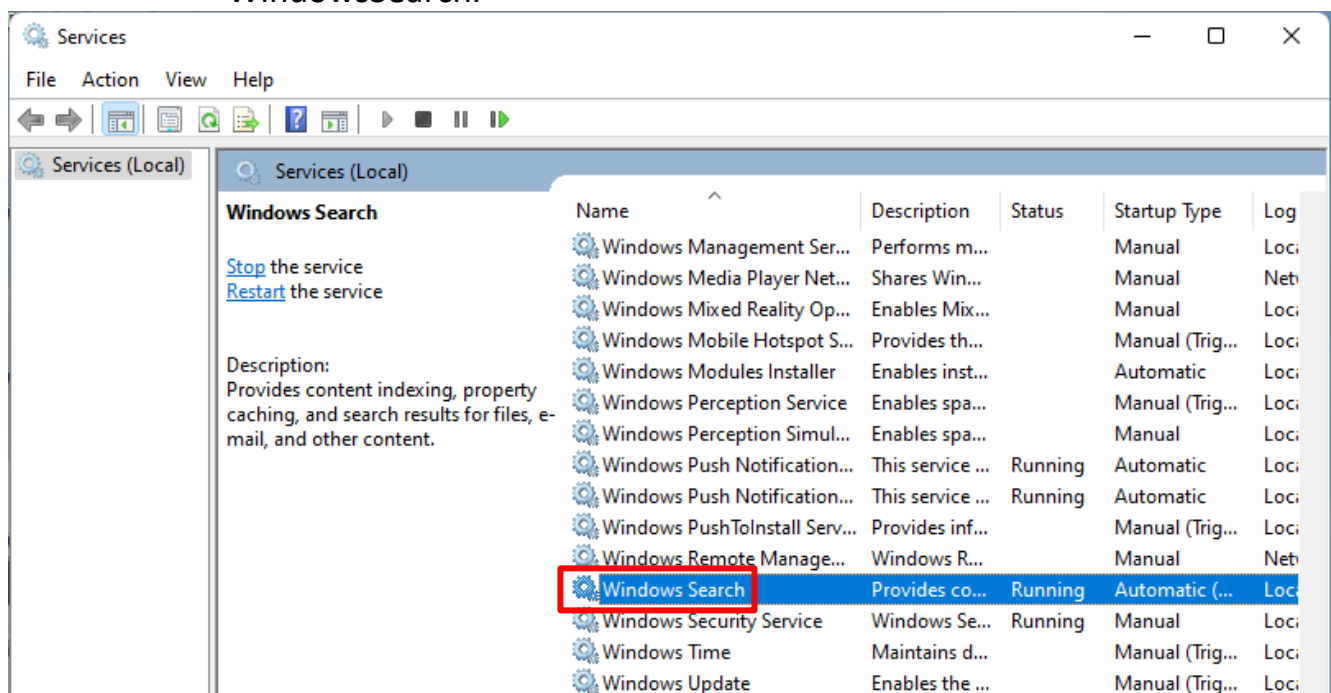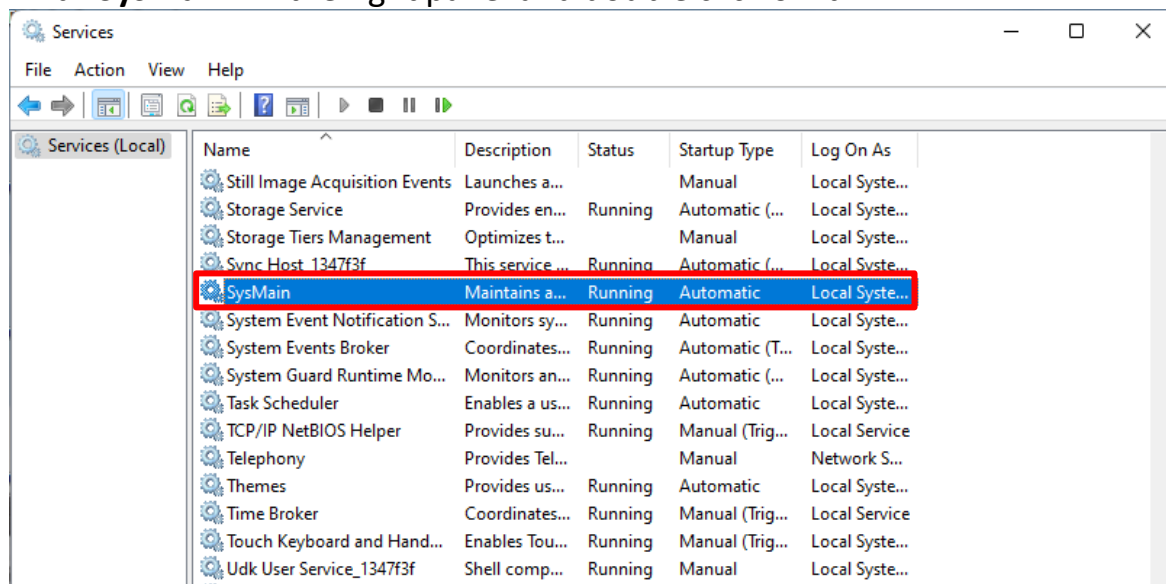
3. Under **General** setting tab, change "**Startup type**" to "**Disabled**",and click OK to save the setting.
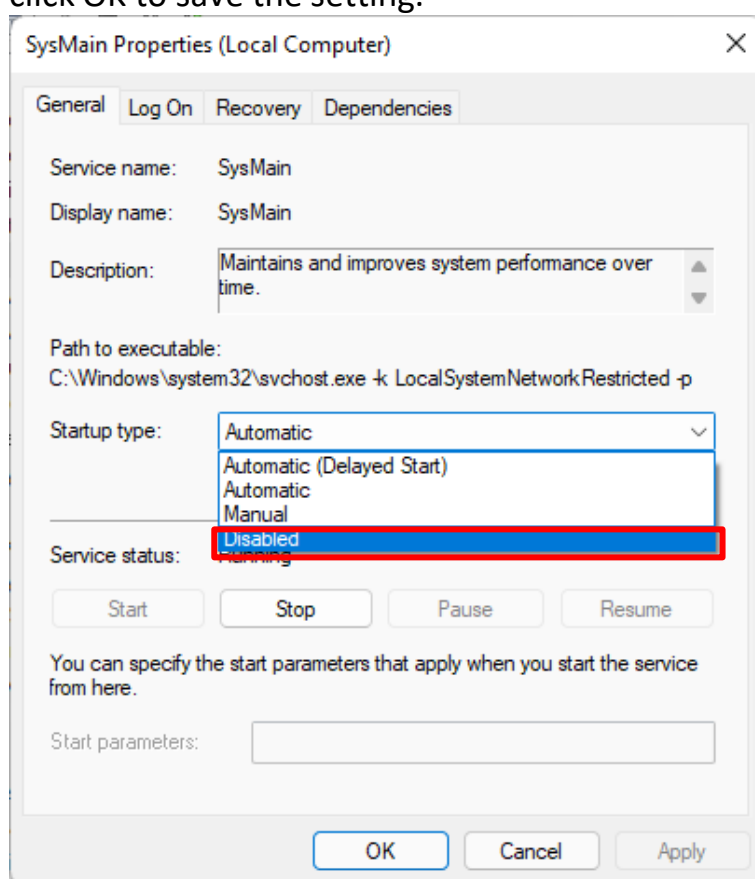

■ **Disable SuperFetch Service**

SuperFetch helps to decrease boot time and make must-load programs more efficiently. However, it may be a potential cause of disk performance issue in Windows 11.

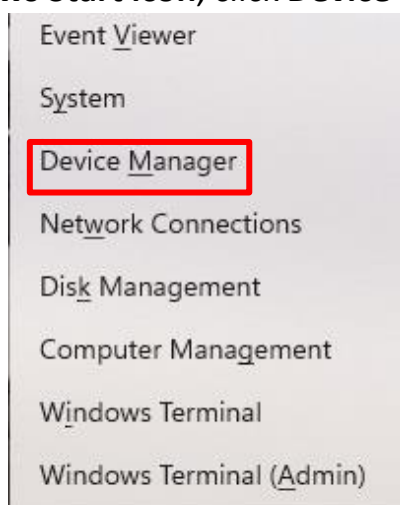1. Find "**SysMain**" in the right panel and double click on it.

2. Under **General** setting tab, change "**Startup type**" to "**Disabled**", and click OK to save the setting.

SysMain Properties (Local Computer)   ✕

General Log On Recovery Dependencies

Service name: SysMain

Display name: SysMain

Description: Maintains and improves system performance over time.

Path to executable:
C:\Windows\system32\svchost.exe -k LocalSystemNetworkRestricted -p

Startup type: Automatic ⌄
| Automatic (Delayed Start) |
| Automatic |
| Manual |
| Disabled |

Service status: Running

Start   Stop   Pause   Resume

You can specify the start parameters that apply when you start the service from here.

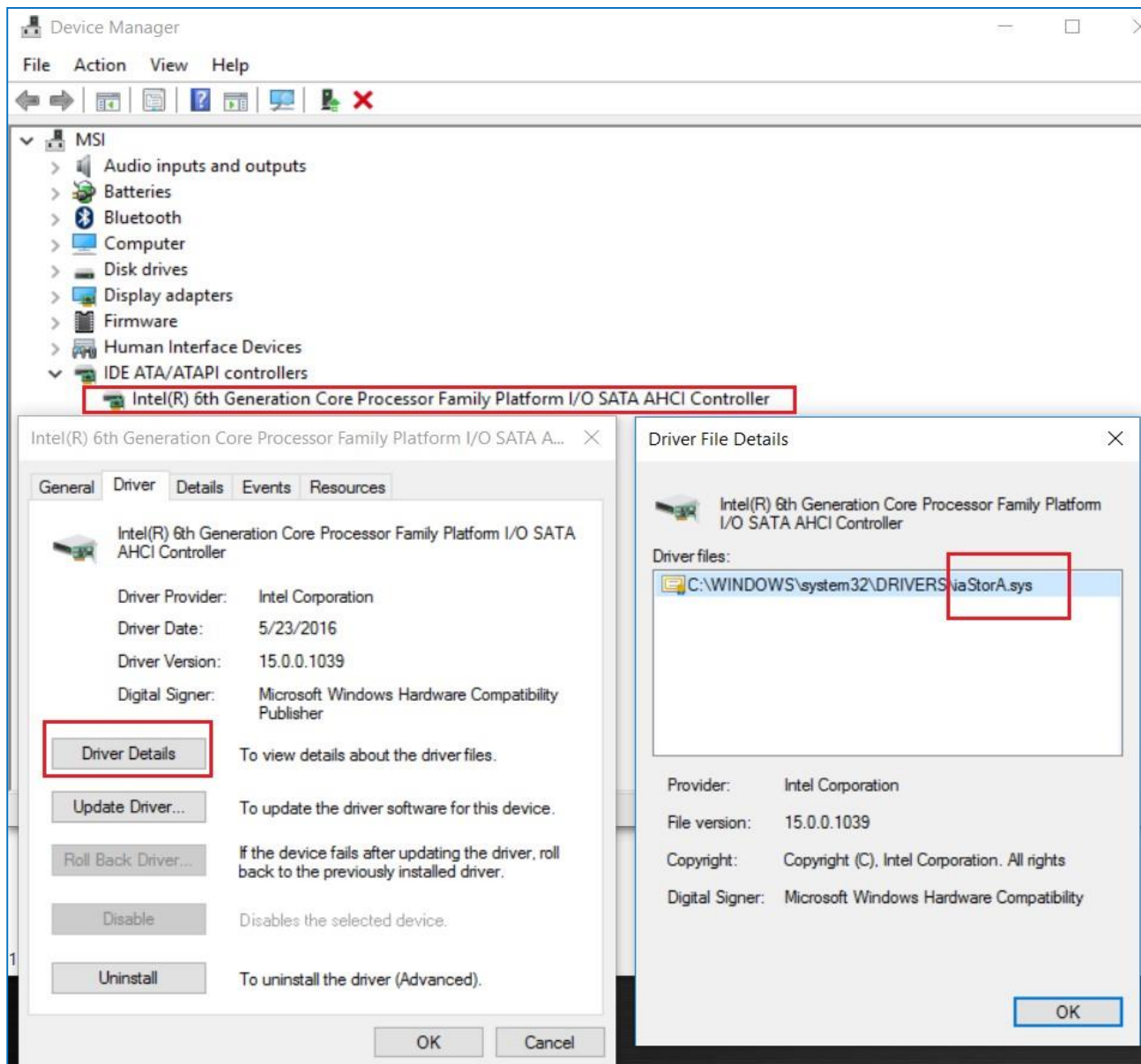Start parameters:

OK   Cancel   Apply

■ **Disable Message Signaled Interrupt (MSI) mode**
The 100% disk usage problem might also be caused by some Advanced Host Controller Interface PCI-Express (AHCI PCIe) models running with the Microsoft inbox StorAHCI.sys driver due to a firmware bug.

1. Identify if you are running the inbox AHCI driver (StorAHCI.sys):
Right click on the **Windows Start icon**, click **Device Manager**.

Event Viewer

System

Device Manager

Network Connections

Disk Management

Computer Management

Windows Terminal

Windows Terminal (Admin)

a. Under **IDE ATA/ATAPI Controllers** right-click on the **AHCI controller** node and select **Properties**. This node is usually called "**Standard SATA AHCI Controller**."
b. Navigate to the **Driver** tab and click **Driver Details**.
c. If you see "**StorAHCI.sys**" in the list, you are running the inbox driver.

2. Disable MSI for the Controller:
   a. In the same properties window opened in step 1-b, navigate to the **Details** tab and select **Device instance path** from the **Property** drop-down menu. Note this path.
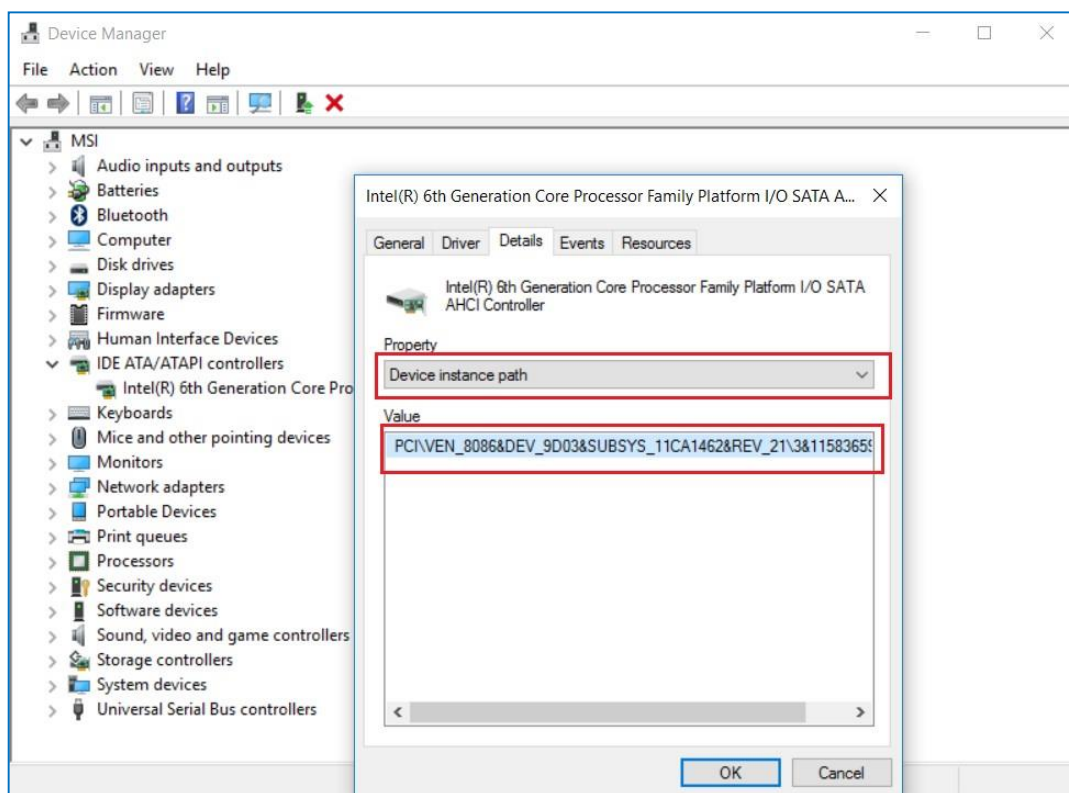
   b. Open the registry editor by typing **regedit** in the previously opened **command prompt**.
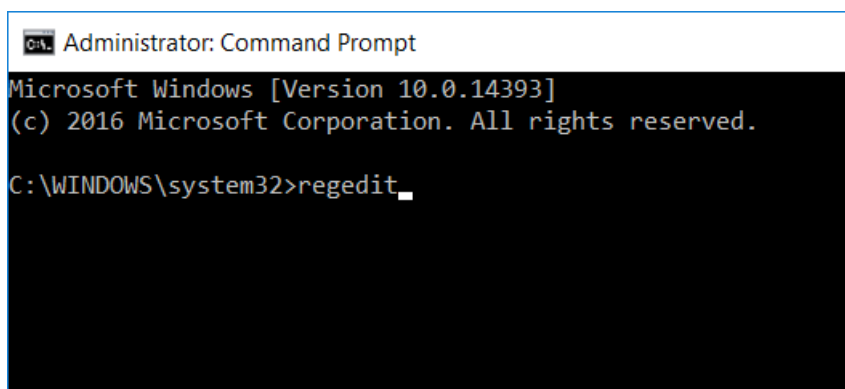
   c. Navigate to:
   HKEY_LOCAL_MACHINE\System\CurrentControlSet\Enum\PCI\
   <AHCI Controller>\Device Parameters\Interrupt
   Management\MessageSignaledInterruptProperties, where **<AHCI Controller>** refers to the **device instance path** noted in step 2-a.
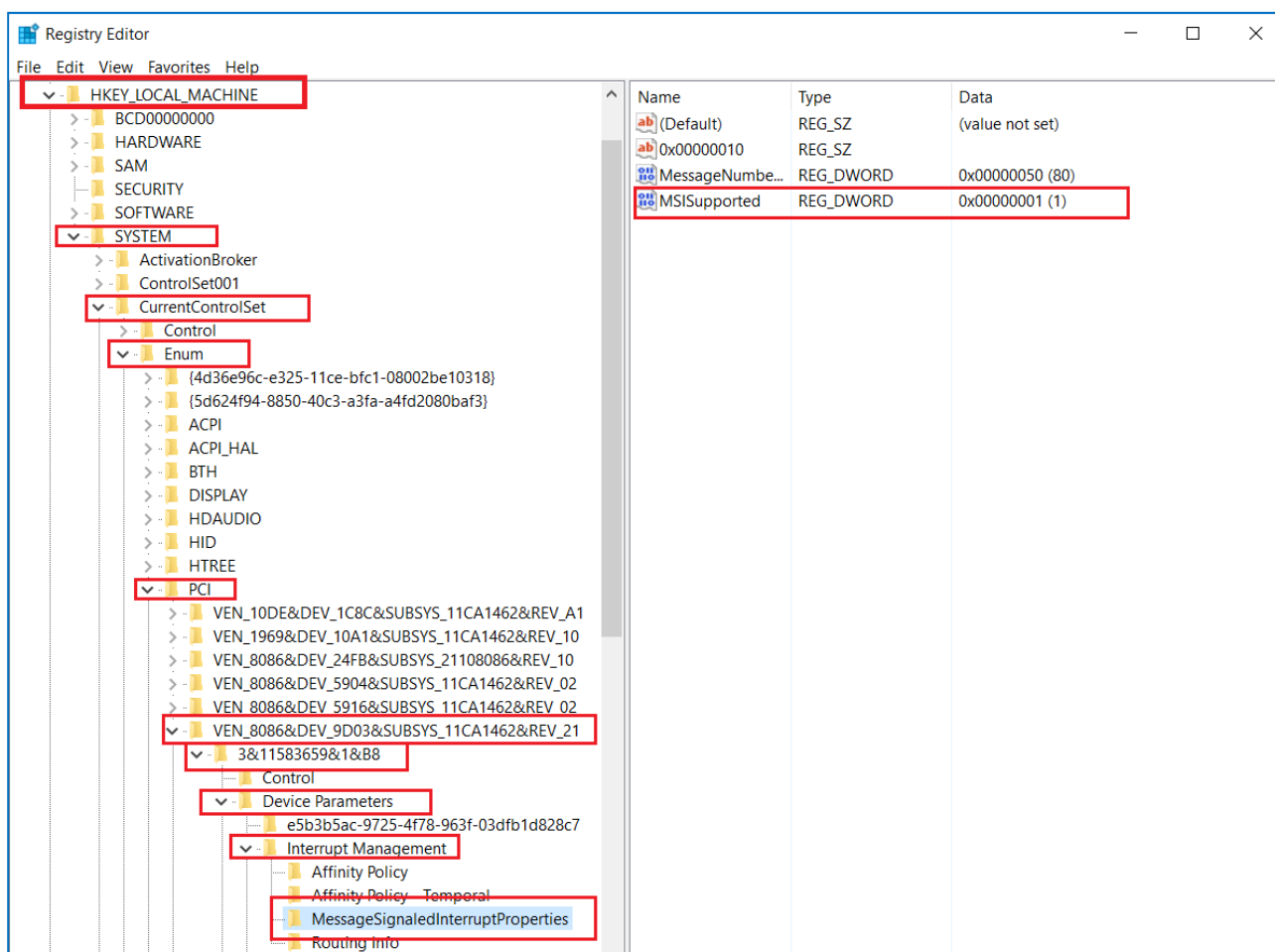
d. Change the value of the **MSISupported** key from "1" to "0".

e. If you don't know which controller your boot device is attached to, repeat steps 2-a through 2-d for all AHCI controllers found under 1-b.

3. Restart the notebook.

■ **Disable System and compressed memory process**
The System and compressed memory process is usually supposed to take a small amount of CPU and Disk. However, in some cases, the System and compressed memory process starts using up 100% of the disk, causing the system performance to become slower.

1. Press **Windows Key** and **R key** at the same time. Type Control Panel and hit Enter.
2. Search for **Windows Tools** and choose **Task Scheduler**.
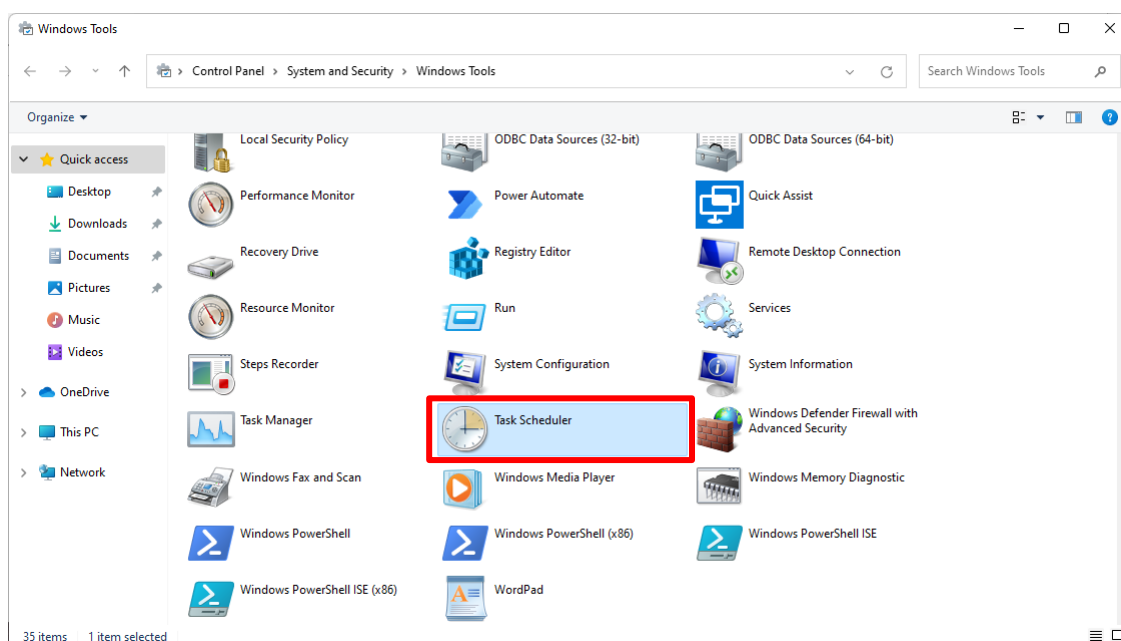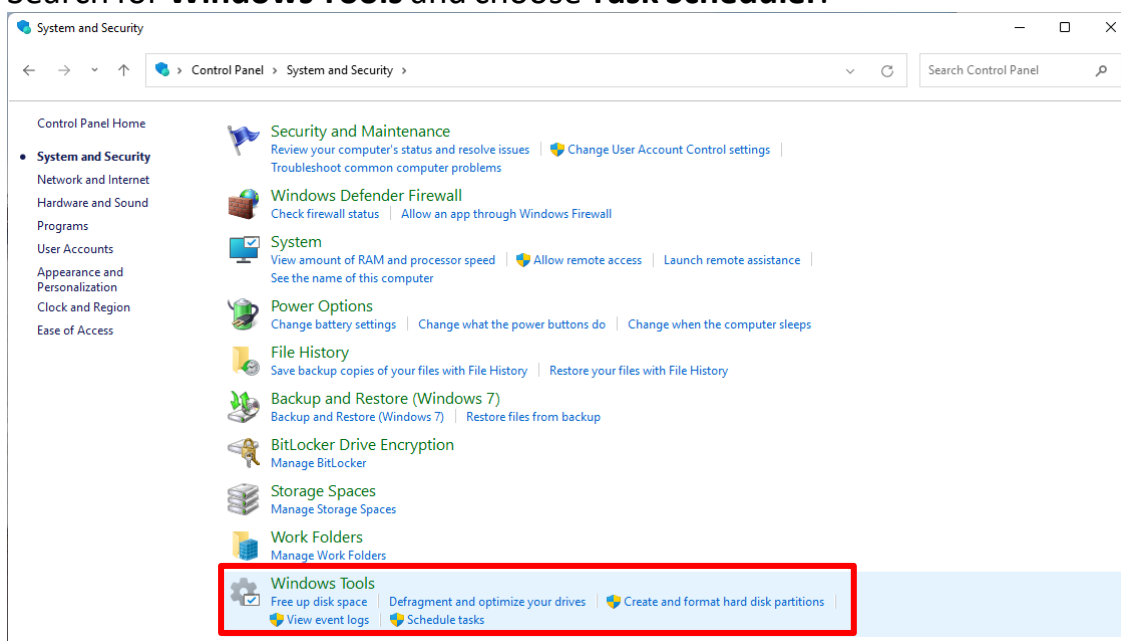
3. In the Task Scheduler window, double-click on Task Schedule Library in the left pane to expand its contents.
4. Double-click on **Microsoft** in the left pane to expand its contents.
5. Double-click on **Windows** in the left pane to expand its contents.
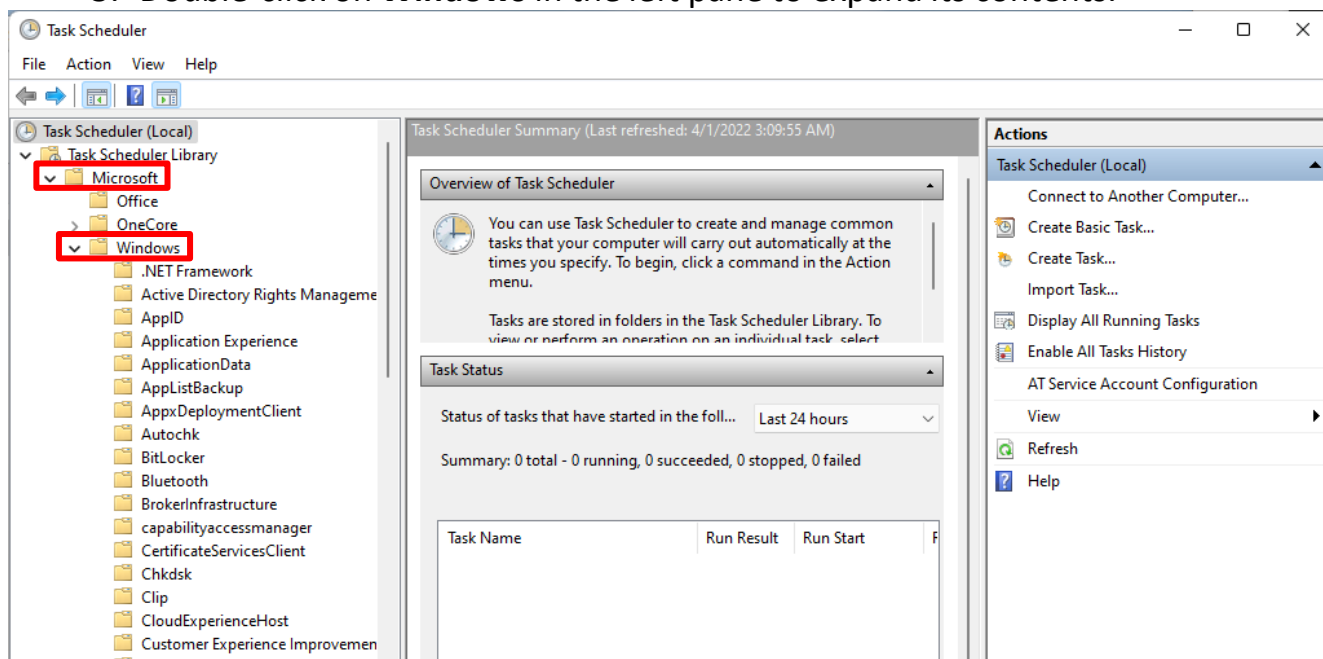
6. Click on **MemoryDiagnostic** in the left pane to have its contents displayed in the right pane.
7. In the right pane, locate and right-click on a task named **RunFullMemoryDiagnostic**.
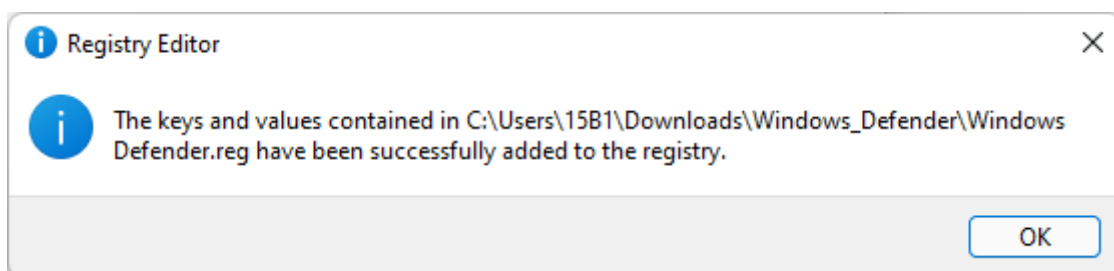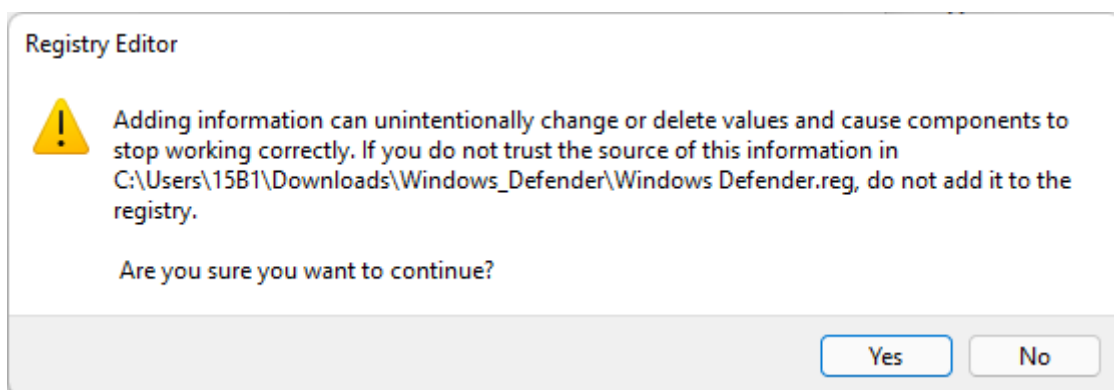8. Click on Disable in the contextual menu.
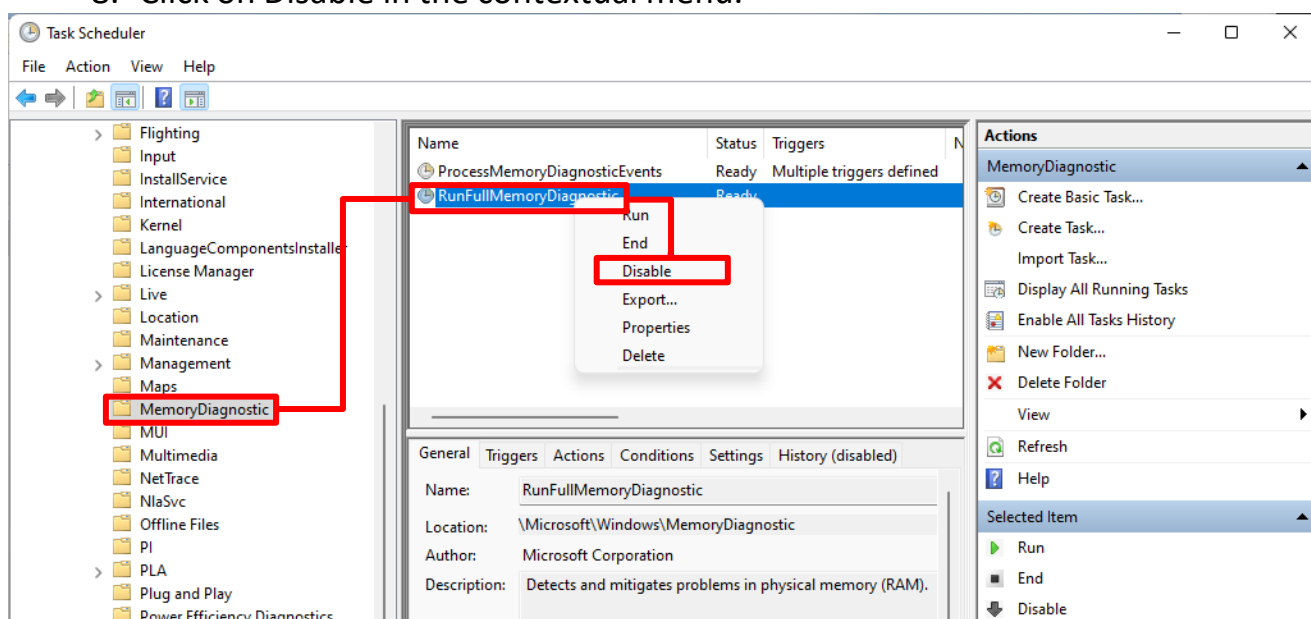
9. Close the Task Scheduler and restart the notebook.

- **Disable Antivirus Software and Windows Defender**
  If the system is installed with antivirus or anti-malware programs such as Norton, Kaspersky, AVG or Avast, please temporarily turn them off or disable them to see if they're causing the high CPU, Memory or Disk usage problem. If the system usage returns to normal after the adjustment, please contact the vendor of the software for further help.

  Microsoft has its own default anti-malware which is Windows Defender. It's automatically enabled even if other antivirus applications are also installed. Even if other antivirus programs are disabled, Windows Defender is still in the back ground.

1. Download and unzip the file "Windows Defender.zip" to the desktop.
   ([Download Link](#))

2. Double click on the Windows Defender.reg file.

3. Click on **Yes** and **OK** to confirm the process.
   (The file directory will be depending on personal settings)

Registry Editor

⚠️ Adding information can unintentionally change or delete values and cause components to stop working correctly. If you do not trust the source of this information in C:\Users\15B1\Downloads\Windows_Defender\Windows Defender.reg, do not add it to the registry.

Are you sure you want to continue?

Yes   No

ℹ️ Registry Editor   ✕

ℹ️ The keys and values contained in C:\Users\15B1\Downloads\Windows_Defender\Windows Defender.reg have been successfully added to the registry.

OK

- **Update the latest driver and utility on MSI website**
  Update the latest driver and utility on MSI website would help the notebook to have a stable status and performance. It also recommend to update the latest Windows 11 build.

1. Use the Windows Media Creation Tool to get the latest updates.

2. Find the proper clean install/update method which MSI suggests and also the proper update steps for specific drivers in [How To] Driver/Software Install and Update.