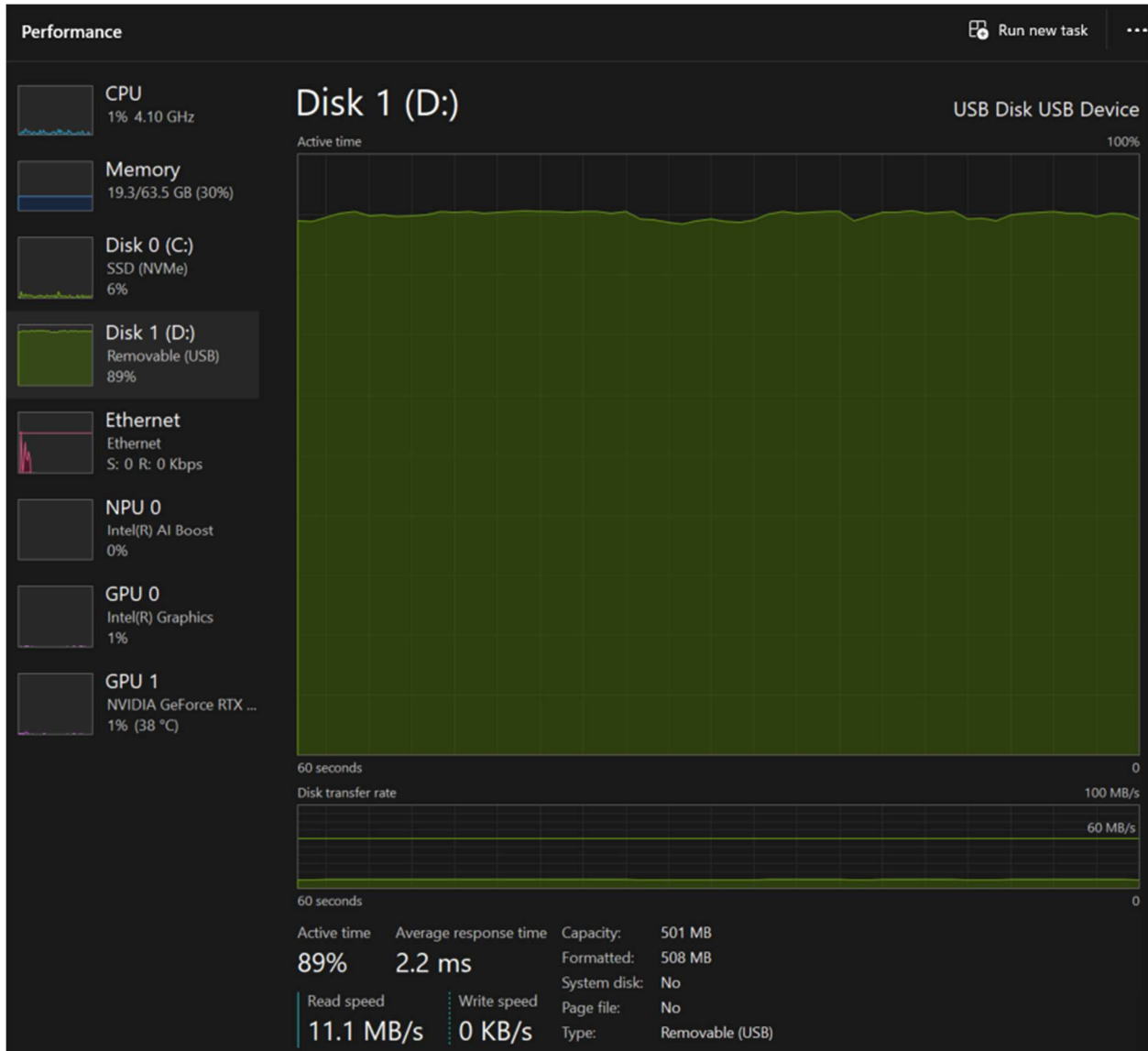


I seriously do not understand what is occurring with regard to the **Cipher** program.

The device under test is a **500MB** USB memory stick that shows up as Windows 11 device **D:**

The Task Manager shows the following related to the D: disk device.



Within the Windows **Resource Monitor** utility, the top disk reads show the following.

Image	PID	File	Read (B/sec)	Write (B/sec)	Total (B/sec)	I/O Priority	Response Time (ms)
System	4	\Device\HarddiskVolume8	9,680,610	0	9,680,610	Normal	6
System	4	D:\	293,026	0	293,026	Normal	1
System	4	D:\EFSMPPMP	293,014	0	293,014	Normal	1
System	4	C:\Program Files\WindowsApps\Microsoft.ScreenSketch_11.2510.31.0_x64_8wekyb3d8bbwe\SnippingTool\SnippingToolUI.dll	113,831	0	113,831	Normal	1
System	4	C:\Program Files\WindowsApps\Microsoft.ScreenSketch_11.2510.31.0_x64_8wekyb3d8bbwe\SnippingTool\SnippingTool.exe	25,400	0	25,400	Normal	0
System	4	C:\Program Files\WindowsApps\Microsoft.WindowsAppRuntime.1.5_5001.373.1736.0_x64_8wekyb3d8bbwe\Microsoft.WindowsAppRuntime.dll	15,750	0	15,750	Normal	1
System	4	C:\Program Files\WindowsApps\Microsoft.UI.Xaml2.8_8.2501.31001.0_x64_8wekyb3d8bbwe\Microsoft.UI.Xaml.dll	13,000	0	13,000	Normal	1
explorer.exe	30308	C:\Windows\System32\eframe.dll	12,377	0	12,377	Normal	0

The command window running **Cipher** shows the following after **2 hours and 5 minutes**.

```
PS D:\> cipher /w:D
To remove as much data as possible, please close all other applications while
running CIPHER /W.
Writing 0x00
```

The access indicator LED on the USB stick has been flashing the entire time.

Cipher says it is writing 0x00, yet I see no write activity in either of the monitor utilities.

As you can see from the Task Manager screen, at the moment, it was using 1% of the CPU, clocking 4.1GHz within the Intel i9 Ultra 275HX chip. Memory consumption has been tracking around 19GB out of 64GB.

Doing the math, 500MB total at say, 9MB/second throughput means that it would take less than 60 seconds to read every single bit of storage within the USB stick provided that 'MB' usage here I mean **bytes**, which I believe to be the case.

On the other hand, if the Windows utilities are showing mega **bits**, at a 10 megabit throughput, it would read every bit on the 500 megabyte USB stick in less than 7 minutes.

With all of this in mind, what is the Cipher utility doing running so long against a 500MB USB stick while showing nothing but **read** operations?