Technical Note NVT-0036

Release date: 09/2025

Technical Note Description;

This document describes the process of checking the embedded S.M.A.R.T data on hard drives removed from NetVu systems to evaluate their fitness for purpose.

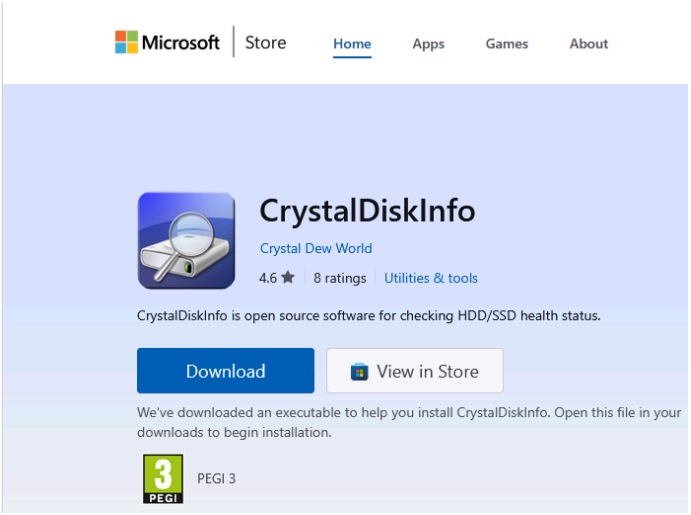
Product Models Covered;

All NetVu products that utilise hard disk recording.

Steps;

Connect the "suspect" HDD to a PC either temporarily via a spare internal SATA connector on your motherboard, or by inserting it into an external USB to SATA reader / caddy.

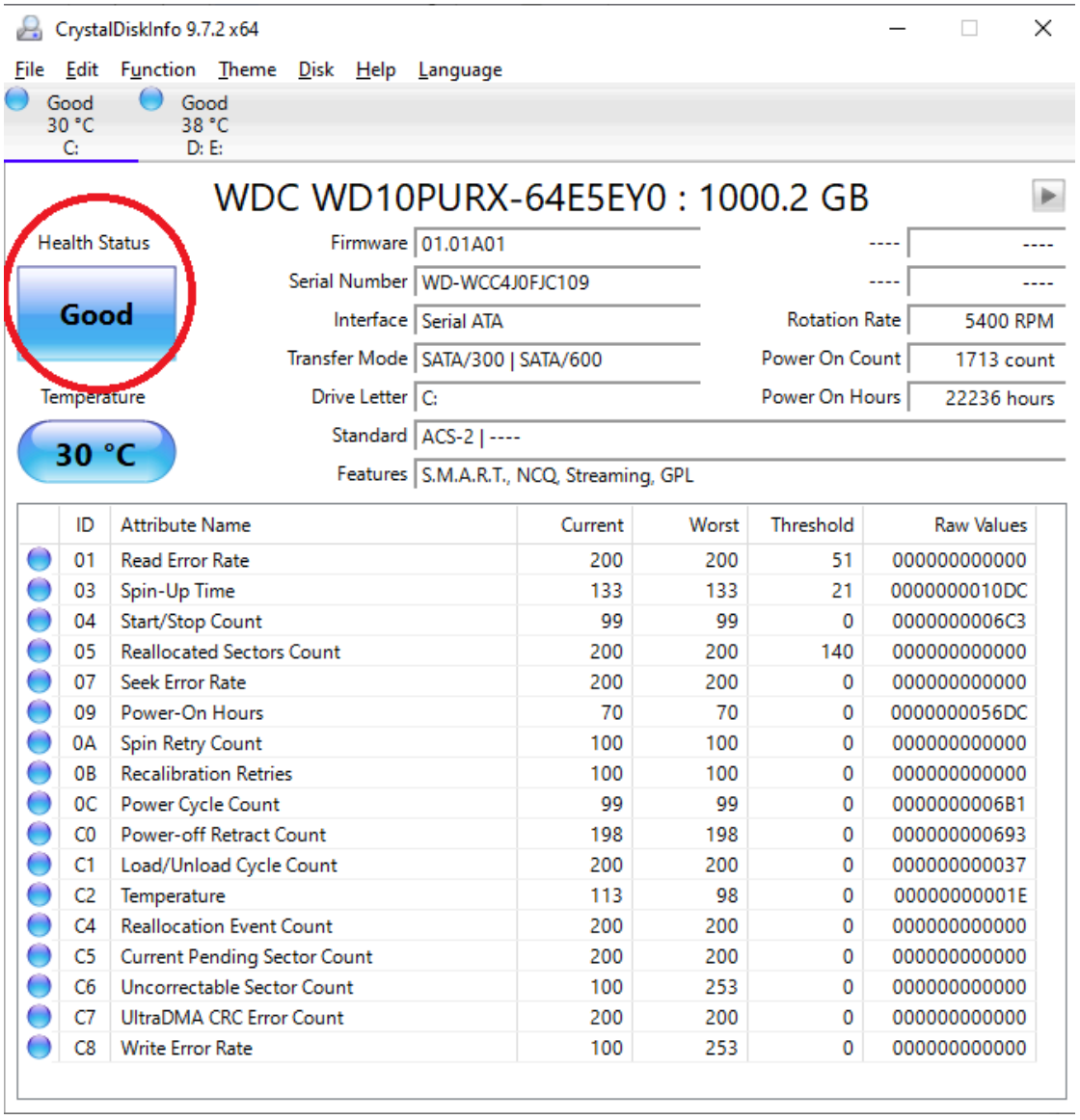
Download the free "CrystalDiskInfo" installer from the Microsoft store. Other download locations are available, but NetVu recommends the Microsoft store to reduce the risk of malware Etc.



Run the downloaded installer and click "Allow" when prompted by Windows to allow installation.

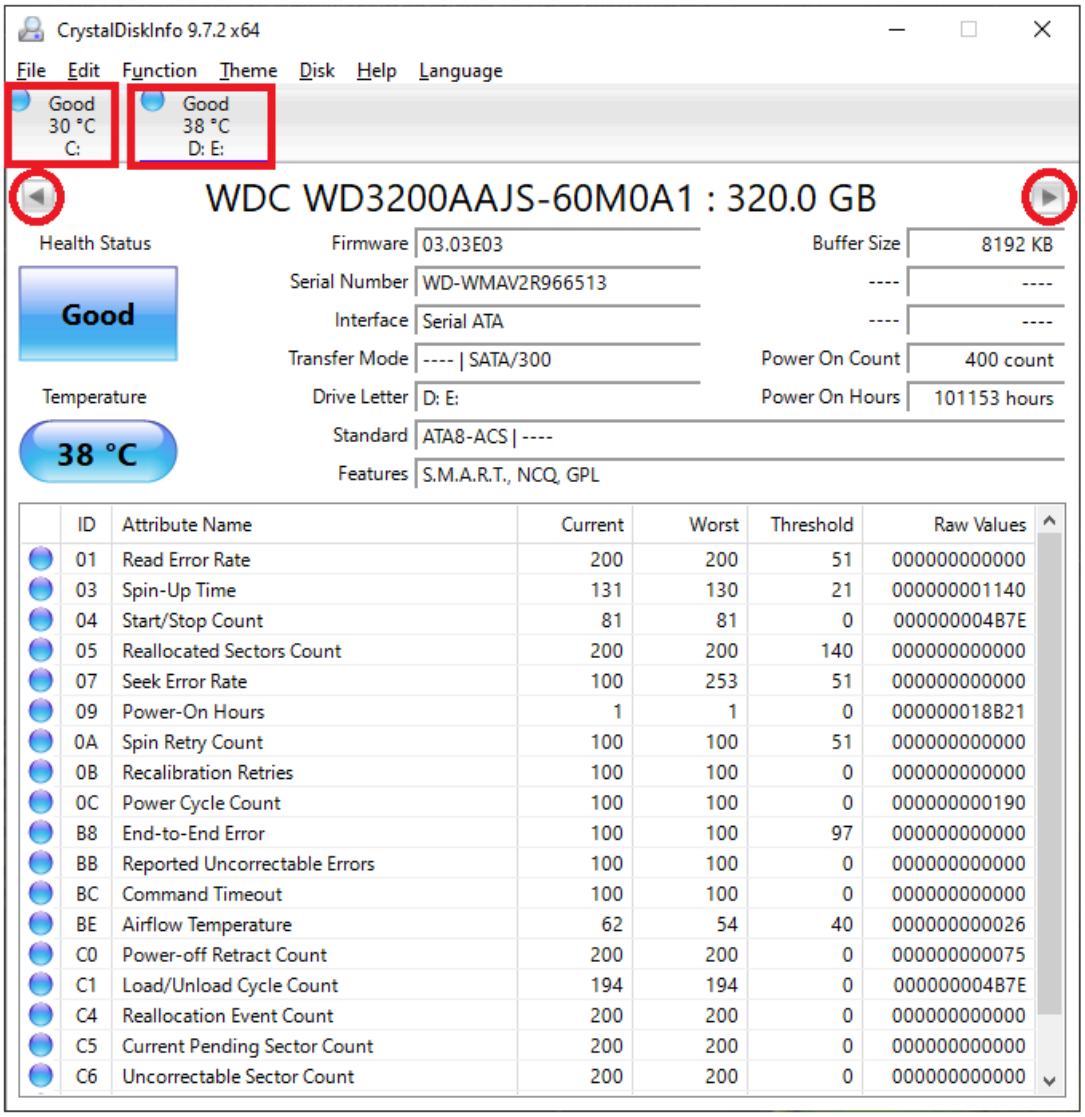
After installation the software should start automatically, but if not run it from the windows start menu, or desktop shortcut if you created one during installation.

When run the software should detect any drives connected to the system and display their health status as a percentage in the top left hand corner of its window. If it is 100% OK then no percentage info will be displayed.



ID	Attribute Name	Current	Worst	Threshold	Raw Values
01	Read Error Rate	200	200	51	000000000000
03	Spin-Up Time	133	133	21	0000000010DC
04	Start/Stop Count	99	99	0	0000000006C3
05	Reallocated Sectors Count	200	200	140	000000000000
07	Seek Error Rate	200	200	0	000000000000
09	Power-On Hours	70	70	0	0000000056DC
0A	Spin Retry Count	100	100	0	000000000000
0B	Recalibration Retries	100	100	0	000000000000
0C	Power Cycle Count	99	99	0	0000000006B1
C0	Power-off Retract Count	198	198	0	000000000693
C1	Load/Unload Cycle Count	200	200	0	000000000037
C2	Temperature	113	98	0	00000000001E
C4	Reallocation Event Count	200	200	0	000000000000
C5	Current Pending Sector Count	200	200	0	000000000000
C6	Uncorrectable Sector Count	100	253	0	000000000000
C7	UltraDMA CRC Error Count	200	200	0	000000000000
C8	Write Error Rate	100	253	0	000000000000

You can select which drive to check using the arrows to the left and right of the drive description, or by selecting the drive from the list. Ensure you are looking at the correct HDD, the software starts up looking at the PC's primary hard drive usually drive C:



ID	Attribute Name	Current	Worst	Threshold	Raw Values
01	Read Error Rate	200	200	51	000000000000
03	Spin-Up Time	131	130	21	000000001140
04	Start/Stop Count	81	81	0	00000004B7E
05	Reallocated Sectors Count	200	200	140	000000000000
07	Seek Error Rate	100	253	51	000000000000
09	Power-On Hours	1	1	0	000000018B21
0A	Spin Retry Count	100	100	51	000000000000
0B	Recalibration Retries	100	100	0	000000000000
0C	Power Cycle Count	100	100	0	000000000190
B8	End-to-End Error	100	100	97	000000000000
BB	Reported Uncorrectable Errors	100	100	0	000000000000
BC	Command Timeout	100	100	0	000000000000
BE	Airflow Temperature	62	54	40	000000000026
C0	Power-off Retract Count	200	200	0	000000000075
C1	Load/Unload Cycle Count	194	194	0	00000004B7E
C4	Reallocation Event Count	200	200	0	000000000000
C5	Current Pending Sector Count	200	200	0	000000000000
C6	Uncorrectable Sector Count	200	200	0	000000000000

Any drive displaying less than 100% health should be suspected as requiring replacement. Any drive with less than 80% should be replaced immediately.

NetVu have seen drives with SMART health of sub 10% still functioning in our units, and our file system is designed to work even with drives in very poor condition, but to provide optimum performance and reliability all drives should be maintained at at least 80%, and ideally 100% health.