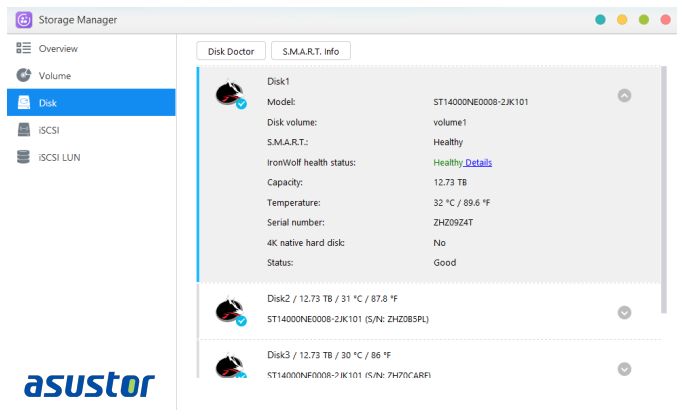


Seagate IronWolf Health Management



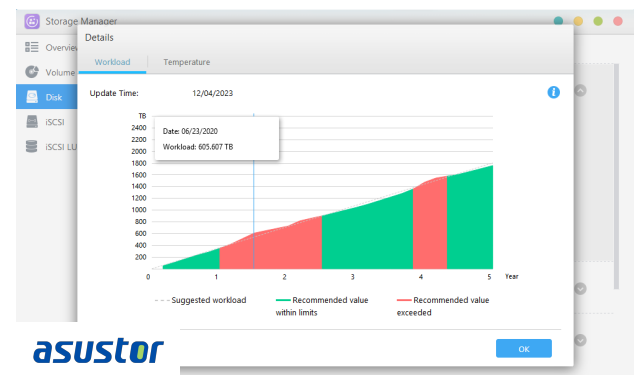


Backing up files gives everyone a sense of security and allows them to worry less about the data—until something bad happens like a drive or RAID failure. If users knew what was happening inside of their drive, they could intervene before disruption or loss of data. This is where Seagate's IronWolf Health management (IHM) comes in. Bundled with select IronWolf and IronWolf Pro drives, IHM delivers prevention, intervention, and recovery for the most popular NAS operating systems currently available.

As the NAS is running, IHM is working in the background to detect issues and then implement preventative actions to help secure drive health and hence the user data. The issues that are closely monitored include temperature, shock, vibration, intermittent connections, and signal integrity. Leveraging adaptive algorithms and predictive analytics, IHM can help avoid data loss and recommend a user backup when needed. Not only is IHM looking at data health, it uses sensors on the drive to monitor system level parameters such as performance, shock and vibration. If there is a failure, IHM lets users access Rescue Data Recovery Service through their NAS OS.

The integration of IHM with the user's NAS OS makes it easy to schedule tasks or review issues that IHM finds. Within the NAS storage management interface, users can pull up IHM and quickly see the health of the NAS drives and anything that needs addressing. IHM works 24x7 and further allows the collection of trends that allows users to predict drive health into the future. With IHM, users can monitor current workloads and assess how these compare to the drive suggested workloads. If workload exceeds then recommendations are made available.

An example of how IHM is brought into a NAS OS is shown on in the Asustor Data Master (ADM) suite. With the Seagate IronWolf and IronWolf Pro, the NAS knows what the warranted endurance of the drive is and can track the amount of data written to the drive over time via IHM. With that, it can calculate (based on an ongoing usage model of 5 years) if the drive is under or over the warranted workload. In the example screenshot shown above, we see a period of 5 years of simulated activity, where green is drive usage under the warranted life, while red is tracking above. From this type of data, users are able to see if they are pushing the drives too hard during periods of high activity and to scale things back, if possible, to maintain a proactive usage model. Since data written to the drive is cumulative in nature, users may see times where the drive is above or below the warranty over the lifespan of the disks. In no case, however, will the user ever encounter a surprise over-run in drive usage, as the Asustor NAS reads the health data provided by Seagate and gives a clear indication of where all of the hard drives stand.



Clearly, Seagate has found a great way to differentiate itself by offering valuable insight into their IronWolf and IronWolf Pro NAS hard drives. As a result, NAS vendors like Asustor that integrate with Seagate are on the leading edge when it comes to delivering the best value possible to their customers.