

5 hard drives with the best reliability

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Computer users often care about CPUs and graphics cards, but hard drives are an integral part of a computer. A computer with a good GPU and CPU does not have a good ground if the hard drive is not good. Samsung is leading oil in manufacturing SSD drives. So what about traditional hard drives? This article will introduce you to the 5 most reliable hard drives reported by server companies.

Should buy a server hard drive?

Not all hard drives are created for the same purpose. In general, HDD drives come in two types: for desktops and servers. Server hard drives are designed for 24/7 workloads and (theoretically) longer for heavy use. Users should purchase a server hard drive if they are running a server at home or in the office. With devices like Netgear ReadyNAS, Data Robotics Drobo FS, or QNAP TS-419P + Turbo, it's simple to create a server at home.

1. Notes when buying a computer hard drive

Determine the reliability of the hard drive

Unlike SSD hard drives, data integrity (data integrity) of an important HDD is as important as physical reliability. Backblaze server company has tested over 10,000 hard drives. In my test, Backblaze found that the hard drives for businesses had a failure rate of 1.61% for more than 300,000 days. On the other hand, consumer hard drives have an error rate of 1.60% for more than 420,000 days. Therefore, both hard drives for consumers and businesses have the same annual error rate.

Error rate

ExtremeTech classifies data according to the annual hard drive error rate and drives size comparison. Error identified when:

1. Do not connect to the operating system
2. No synchronization, still synced, or in a RAID stack.

5 best reliability hard drives according to server companies

1. Western Digital Red hard drive



The Western Digital Red series of drives are amazingly reliable. WD60EFRX has an annual error rate of 4.6% / year, WD40EFRX with a rate of 1.9% and WE30EFRX with an error rate of 1.21%. However, this hard drive only has a rotation speed of 5400 RPM.

2. Toshiba hard drive MD04ABA400V



Although Toshiba is not known as a manufacturer of electronic components or hard drives, it also produces solid lines of hard drives. The MD04ABAV series is rated for 24/7 use. Specifically, these drives are created with video surveillance and have vibration sensors. This ensures the MD04ABA500V can work even in RAID systems or multi-drive stacks.

3. HGST HUH72808ALE600 hard drive



HGST HUH72808ALE600 is a high-speed hard drive. This 7200 RPM hard drive has an annual error rate of 0.2%. Good reliability combined with fast read / write speed has made HGST HUH72808ALE600 hard drive a choice of many people. Owning own 8TB capacity, HUH72808ALE600 of HGST is suitable for servers. Backblaze said the average error rate of these hard drives is between 1.7% and 1.10%.

4. Seagate ST8000DM002 hard drive



When talking about hard drive reliability, Seagate cannot be mentioned. Seagate ST8000DM002 hard drive is designed for business use, it has an 8TB capacity, 7200 RPM speed and has 6GB / s SATA protocol and 12GB / s SAS. It is specially designed for 24/7 workloads, about 550TB per year. According to Backblaze research, this hard drive has an annual error rate of 1.2%. In addition to the above hard drive, users can review the ST8000NM0055 hard drive, also from Seagate. This hard drive has a low error rate, rotation speed of 7200 RPM and has 8TB of storage.

5. Western Digital Black hard drive



While the WD Red series is geared towards NAS applications, the WD Black series is geared towards high performance. It is still highly reliable, but suitable for applications such as video editing, gaming and general use. If you don't run the server or even use it for a basic home server, the WD Black series is still the right choice. However, for computers that are always active, select the WD Red hard drive.

Depending on the needs of users such as choosing a server for business or family, select the appropriate hard drive. A consumer HDD is still available for servers, it only has a higher annual error rate when running on a 24-hour machine.

In general, Western Digital and Seagate are rated as one of the best hard drive manufacturers. But Toshiba and HGST also provide excellent hard drives. HGST provides drives with low error rates.

Which hard drive do you find to be the most reliable? Let's discuss below.

See also: The best SSD hard drive for Windows computers

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