Hard Drive Recovery Group Publishes Blog Post Discussing RAID and NAS Data Storage Technologies

October 06, 2021

October 06, 2021 - PRESSADVANTAGE -

Hard Drive Recovery Group has published a blog post that discusses the differences between and the advantages of the RAID and NAS data storage technologies. The blog post aims to give personal and commercial users the information they need to make the right decision regarding their own data storage needs.

RAID and NAS are the two most widely used data storage technologies. RAID stands for Redundant Array of Independent Disks. NAS stands for Network Attached Storage. Both of them have their own roles to play when it comes to offering data storage options for enterprises as well as home users.

RAID is a method of enhancing disk performance, increasing storage capacity, and improving fault tolerance. RAID enables the same data to be saved across multiple disks while still appearing as a single logical drive using specialized hardware or software called a RAID controller. RAID is classified into many different levels, each of which offers a different combination of the aforementioned advantages. RAID levels, which are denoted by a number, determine the performance characteristics of a given configuration and how much or little data protection they offer.

In RAID level 0 (zero), also called data striping, block-level data is simply distributed but not copied across multiple drives, improving performance and storage capacity but not offering enhanced protection. If one of two or more drives in this configuration fails, all data is lost. RAID 1, on the other hand, offers a safety net in the form of data redundancy. By mirroring the contents of one drive onto another, RAID 1 ensures that data remains available should one of the drives in this configuration meet an untimely end. Other RAID configurations add their own benefits. For example, the popular RAID 5 configuration uses three or more drives to store data and recovery information called parity across the drives. If one disk fails, the remaining disks can keep the array going until a replacement arrives and is rebuilt.

NAS is a way to centralize data access by storing data on a network storage array instead of a local computer. It is used by enterprises large and small, as well as in SOHO (small office, home office) environments and by creative professionals and other enthusiasts. NAS devices are accessible over a network using an ethernet connection and file protocols like NFS (Network File System) or SMB/CIFS (Server Message Block/Common Internet File System). Often, they contain enterprise-grade NAS drives, hard drives built to withstand operating all day, every day, and provide better overall performance relative to their desktop counterparts. Some sport CPUs powerful enough to allow them to run applications, security software, or pull double duty as mail and multimedia servers. Others enable remote access, allowing users to access files on their PCs, phones, or tablets over the internet.

The right option to select depends on the kind of workload that is expected at the workplace or in the home. If multiple users need to access the data not only from any computer within the office but also from locations outside the office, over the internet, then NAS is the way to go. If the aim is to get maximum performance without worrying about potential drive failures and data integrity, a personal system in a RAID 0 configuration is the best choice. If the safety of the data is paramount, then the user can consider configuring their machine as a RAID 1 system to take advantage of the data redundancy. It is also worth mentioning that drives in a NAS can also take advantage of being configured in a RAID configuration as they can be set up using either a hardware RAID controller or using a software RAID configuration.

Hard Drive Recovery Group has been offering professional secure hard drive recovery services via software and clean room hands-on data retrieval for Mac and PC hard disk drives for over 30 years. It can be contacted at its 24/7 toll-free helpline number 1-866-341-4374 for all data recovery business inquiries.

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Hard Drive Recovery Group

Hard Drive Recovery Group has provided professional data recovery services for over 15 years. We specialize in RAID, Mac, laptop and hard drive data recovery services for consumers and businesses. Contact us for a clean room data recovery quote today!

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