1 - How should I store the old drive once it's disconnected?
(some place that is not going to moved around, anti static location, and be in cool environment.

That's why that say its being put in *Cold Storage*.

Best Practices of storing data--

Backup, Backup, Backup (Multiple copies of your important data in multiple locations)

What's the best way to preserve your important files for years to come? Questions like this are being asked more frequently in our data-driven society. Here are some best practices when it comes to long-term data storage.

Let's say that you've got a hard drive full of pictures that are valuable enough to hold on to, but not worth storing on your primary computer. One common solution is to transfer the files to an external hard drive, or leave them on the hard drive of the old computer when it comes time to upgrade to a new one. These drives can then be stored away in a climate-controlled environment so that it's available for future use.

For the average consumer, a data storage system like this creates a closet full of beige computers. Perhaps this describes your current data storage system, with each computer being referred to by the corresponding period of your life, like "my wedding computer," "my college computer," "my Disney vacation computer," etc. To be sure, this is a highly inconvenient and cluttered way to store data for the long term, but is it bad for the data?

The issue in question is known as data degradation. When it comes to storing hard disc drives, research has shown that data degradation isn't an issue, so long as the drive is stored in a climate-controlled environment. In the IT world, storing powered-down hard drives in a climate-controlled environment is called "cold storage." Even though it seems like a boxed-up hard drive would be perfectly fine, there are a few things to consider in order to ensure that your data will be available for when you need it.

Power on your hard drive every few years. While your drive's data is unlikely to "leak away," a hard disc drive that's stored for several years runs the risk of having the oil around its ball bearings drying out. An HDD without oil will produce a nice crunching sound when turned on, aka, a hard drive crash. By taking time to power on a hard drive every few years or so, the ball bearings will remain lubed up enough to prevent this problem.

Make sure that the place you're storing the drive is truly climate controlled. While data degradation isn't a problem in a climate-controlled environment, it is known to happen in environments that are subject to the elements, like extreme temperatures and high levels of humidity. Therefore, when boxing

up a drive, think about the environment of your storage situation for the next five-to-ten years, or more. For example, if a location has its AC or heat turned off during certain portions of the year, then you should scout out a more consistent location.

Make additional copies of the data to be stored in a second location. One disadvantage of keeping a hard drive stored away in one location is that you're at risk of losing the data if a disaster like a fire or flood were to happen. Or, what about an overzealous spring cleaning mishap where someone disposes of your old, crusty-looking equipment without your permission? This is why it's a good idea to have your data backed up on a second drive at a second location, or better yet, the cloud.

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How long can you store an external hard drive?

The average lifespan for an external hard drive, assuming no physical damage occurs, is around 3-5 years, depending on the make, model and conditions it is stored in. If you're using an external hard drive to back up your data, you might want to consider replacing it every few years to ensure your data is safe.

How long do external hard drives last if not used?

3 to 5 years How Long Do Hard Drives Last Unused. The straightforward answer to this question that many customers ask is they can last anywhere from 3 to 5 years. Feb 22, 2023

How do I store my external hard drive long term?

These drives can then be stored away in a climate-controlled environment so that it's available for future use.

Do power on your hard drive every few years.

Make sure that the place you're storing the drive is truly climate controlled. ...

Make additional copies of the data to be stored in a second location.

Can an external hard drive last 20 years?

Assuming no physical damage occurs, the average life span of an external hard drive is about 3-5 years. Your external hard drive will certainly last longer if you carefully handle it.

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2 - Is there any prepping I should do to the new drive before putting it "into service"? I wonder about designating it a proper drive letter, creating partitions within it, etc. (I don't even really know what "creating partitions" is but I figure you do and might have some insight on what I should do.)
-----Thoughts to consider on questions 2?

How do I initialize a brand new hard drive in Windows or Mac OS?

Why does a hard drive need to be formatted? Formatting will define the file system and cluster size of the partition. So, when there are file system errors, or you want to change the file system, or you want to change cluster size of the partition for extending purpose, formatting is the best way.

NTFS – For Windows Users Only

NTFS or the New Technology File System is the current Windows default. It's the most secure, robust file system that a Windows user could wish for. This means it's the format of choice for system drives on Windows computers.

NTFS has quite a lot of strong advantages, which may actually make it a good format choice for certain external hard drives, depending on the circumstances.

NTFS is resistant against disk corruption caused by a power failure.

It has extensive security features, such as per-folder permissions.

Making is simple for multiple users to share the same drive without having access to each other's data.

It's also notable for its journaling feature, which keeps a record of file changes. This is part of the reason why it's more resistant to file corruption.

If you want to use your external drive with Windows machines only, NTFS is a fine choice and probably the best option overall. However, if you need to use the drive beyond the confines of the modern Windows ecosystem, it's better to go with exFAT instead.

Quick Format Vs. Full Format for a New External Hard Drive

Quick Format

A quick format allows you to overwrite any files on the drive, but it does not fully erase them; with the right software, the old files could be recovered. In Windows you have the option to do a quick format into either the FAT or NTFS formats. A full format is generally preferred over a quick format; the latter is mostly used for its speed.

Full Format

A full format erases any files from the disk, changes (or maintains) the file system and checks the disk for bad sectors. A full format takes significantly longer than a quick format. Windows supports both FAT and

NTFS for both quick and full formats. While a full format deletes files from the drive, it is not a secure solution for removing data; a secure format requires external software.

Choosing a File System

Windows supports two file systems: NTFS and FAT. For an external drive, FAT is the most common file system, as it is read/write compatible with Windows, OS X and Linux. FAT only supports drives up to 2 terabytes, and cannot handle files larger than 9GB; NTFS supports drives up to 256TB, with a maximum file size of 16TB. NTFS also has security options not available to the FAT file system.

What is the point of partitioning a drive? Partitioning allows the use of different filesystems to be installed for different kinds of files. Separating user data from system data can prevent the system partition from becoming full and rendering the system unusable. Partitioning can also make backing up easier.

Is it good to partition external SSD? Since SSD uses memories for storing data with no moveable component, its transfer rate of memory chips is the same. Data does not remain confined to one physical region. So, if you want to enjoy an outstanding performance from your SSD, you can keep it as it is, as partitioning has no impact on its operation.

What are the disadvantages of partitioning a hard drive?

False Sense of Security. If you're not careful, having multiple partitions could lead to a data loss disaster. Complexity and Chances for Errors. ...

Juggling Partitions and Wasted Space. ...

It's Generally Unnecessary for the Average User. ...

SSDs Negate Many Past Benefits.

Is it better to partition external hard drives or leave it as one drive?

Depends on what you are trying to achieve. Possible reasons for partitioning include: having different formats (APFS, NTFS, ExFAT, etc) on different partitions, keeping temporary and commonly changed files and more permanent stuff on different partitions so that defragmentation, etc is less necessary, running test software and unreliable stuff on one partition and being able to erase it if it all goes wrong while maintaining the other partition, reducing the default block size because the partition is smaller, supporting older operating systems which cannot handle big drives. Apart from that, use one partition. That’s all I can think of right now. Hope this helps.

Additional information on Partitions how to partition external hard drives

PAGE 3) Additional information I find useful.

How To Fix External Hard Drive That Keeps Disconnecting [Step By Step Guide]

- Broken USB cable
- Incompatible USB driver
- Too long USB cable
- Damaged or wobbly USB port
- Hard drive goes to sleep mode
- Bad sectors/Degraded surface
- Corrupted external hard drive
- Not enough power supplied in the USB hub