Types of Digital Storage

When you think of storage, you might think of plastic totes or boxes in a dark closet or attic. But in reality, most storage in this day and age is digital, and there are many types. While each type of storage can store digital information, not all storage types are created equal. There are too many types of storage to cover in depth, but here is a quick explanation of a few of the most popular types.

Hard Drives or HDDs

The term "Hard Drive" or "Hard Disk Drive" (HDD) is generally used for a drive inside of your computer to store all of the information required to run your computers operating system and store your personal files. However, more specifically, a HDD consists of actual disks, called platters, inside that spin thousands of times a minute. The digital information is stored magnetically on these platters and then gets read by an arm that moves over the platter as it spins. The more RPMs (Revolutions Per Minute) the disks spin, the faster the information can be written or read from them. Being a magnetic form of storage, large or powerful magnets can corrupt the stored information. That is why it's generally not a good idea to have magnets near a computer tower if it runs on a HDD. In addition, the spinning platters and moving read arm make this type of storage medium susceptible to wear and tear in an environment that isn't somewhat stationary. These drives typically range in size from 120 Gigabytes to 8 Terabytes.

Solid State Drives or SSDs

Solid state drives are also a form of internal storage usually reserved for computer operating system and personal file storage, however, the way information is stored is much different. Instead of using disks or platters, it uses integrated circuit assemblies as memory to store data. In this way, a SSD has no moving parts and can access data much quicker than your typical HDD, making it particularly well suited for mobile device storage such as mobile phones or laptops. However, this technology is still quite a bit more expensive than your typical HDD even with its recent rise in popularity and availability.

Flash Drives

A popular form of storage in the last ten plus years, the term "Flash Drive" usually designates a hand-held drive (usually with a USB plug on the end) that you can plug into a computer and move digital information to and from. The same technology is used here as used in an SSD, however the sizes are generally much smaller from around 4 Gigabytes to 128 Gigabytes. That makes these drives fairly inexpensive, and great for college students that need to transport digital files between campus computers or even to submit to their professors. An advantage to this technology is the ability to plug in this drive to almost any device with a USB port (which is almost all of them) and quickly get to the information on the drive. Any time you need to move a file between one device and another, a flash drive is a great option.

Cloud Storage

Sort of a controversial topic, cloud storage refers to any storage location that is accessed through the internet, provided usually by a third-party company. Many times, this access is provided through a website that you must log into to access your files (think Dropbox or Google Drive). This is a great option if the information being stored is required to be accessed from many locations, devices, or even sometimes by many people working in collaboration. The advantage of cloud storage is that the information is usually protected by the third-party company by being backed up off-site, or away from

your physical location. In the event of a natural disaster, your data is more likely to still be preserved. However, given the method for accessing this data (through the internet) certain risks arise, making this form of storage a little controversial. If somebody were to get a hold of your login information, they could have access to your personal data.

Hopefully this gives some insight into some of the forms of digital storage, so the next time you have a need to store some data, consider the pros and the cons and try to pick the right storage medium.