

Assignment on Data Storage

What is Data Storage?

Data storage provides service which enables saving the data on offside of storage system. This data is managed by third-party organisation. That data is accessible by a web services API.

Storage Devices

Categories of storage devices are:

- 1) **Block Storage Devices** – It provides raw storage to the consumers. This raw storage is separated for creating volumes. Volume is a recognizable unit of data storage.
- 2) **File Storage Devices** – The file storage device is offered to the client in the form of files to maintains its file system. Storage data can be accessed by using the Network File System (NFS).

Storage Classes of cloud

Following are the categories of storage classes:

1) Unmanaged Cloud Storage

- The storage is configured before for the client, this is called as **unmanaged cloud storage**.
- The client cannot format not even install his own file system or change drive properties.

2) Managed Cloud Storage

- Managed cloud storage offers the online storage space as per requirement.
- This system shows that the customer favours raw disk that the user can partition and format it.

Creating cloud storage System

- The cloud storage system conserves many copies of data on many servers at the various locations.
- The data is stored at various locations so that if any system fails it can change the pointer location to where the object was stored.
- The cloud provider uses the virtualization software to sum the storage assets into cloud storage system. This system is known as storage grid.

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- Storage GRID creates a virtualization layer which detects storage from various storage devices into a single management system.
- It manages data from the CIFS and NFS file system over the Internet.

How does cloud storage work?

Cloud storage is very simple as well as easy to use.

Once you have registered to set up your account, you simply save your files with the internet using your unique username and password. This ensures your data remains safe, secure and cannot be accessible to anyone else.

Should you choose, you can provide some permissions in place and share your data with others. This provides it easy to share and view files in a collaborative working environment, or to send photos with your family.

Significance of Data Storage?

When you will login to cloud storage, you can easily decide the amount of space you will need. You can start with a small amount and then increase the storage size as per your need.

You can store anything digital: all your files, images, videos and pictures.

Whether you want to use this storage to store your family albums, you want to use it to store your any documentation, you find it will provide you with convenience and can be used easily.

What Are the Characteristics of Storage Devices?

Internal Hard Disk Drives

Personal computers use hard disk drives to store data. Hard disks are generally a form of magnetic storage. Data is written to and read from the internal disk through the magnetic needle-like heads. It can store several terabytes of information. It can take up to five to twelve milliseconds for a head to find the data on the disk, although hard drives often store a cache of frequently-accessed data to boost the speed of the process. As all data is encoded

magnetically and mechanically, hard disk are vulnerable to stray magnetic fields as well as mechanical failures.

External Hard Drives

External hard disk drive is removable storage media, capable of storing more than a terabyte of information. Any internal hard drive can be placed into a hard drive enclosure and used as an external hard drive. 2.5-inch laptop hard drive is preferred for this as they are lighter and require less power. As a result, it can be powered solely by the enclosure.

Flash Memory

Flash memory is growing continuously in popularity as a storage medium. When used in computers, it is known as solid state hard drives. They are electronically maintained chips that store information that can be altered, accessed and erased electronically. Because they use less consumption of power than hard disk drives as there are no moving components in them, they are popular in internet books and other battery-saving electronics. Flash memory is also faster, because of the lack of moving parts and less vulnerable to any mechanical failure. One of the most common form of flash memory is the USB memory drive, which can potentially store hundred of gigabytes of data.

Why it is required?

Data storage saving: By storing data online you can reduce the burden of your hard disk, which means you can eventually save disk space.

World Wide accessibility: It is the main advantage of online data storage. You can access data anytime, anywhere in the world. You don't need to carry hard disk, pen drive or any other storage device.

Data safety: HDD cannot be trusted and storage device every time because it may crash anytime. In order to make your data secure from such hazards you can keep it online.

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Easy sharing: you can share data with your colleagues' faster, easy and secure manner, which makes you can make your close ones happy!! .

Data recovery: Online data storage sites provides fast recovery of files and folders. This makes them more secure.

Automatic backup: you can even schedule automatic backup of personal computer in order to not suffer from manual backup of files.

Points needs to keep in mind:-

None of the thing in this world doesn't have any disadvantage. There are some disadvantages there while using online data storage but if you can handle things with care then you can avoid them. Some of these are as follows-

- 1.** Improper handing may cause trouble: Your user-id and password safe to secure your data as if someone know or even guess your credentials, it may result in the loss of data. Don't use simple passwords and try to avoid to store them in your personal storage devices such as pen drive or HDD.
- 2.** Choose good medium to avoid any kind of hazard: There are many online storage sites out but you have to identify the one, on which you can trust. You can always prefer the list of free online data storage sites.
- 3.** Internet connection can sucks!! To access your files everywhere the only requirement is you need is internet connection. If you don't got internet connection somewhere then you may end up with no access of data even if it is safely stored online.