

Cloud Storage

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Abstract: Cloud storage can be defined as huge computers with a high security that have huge storage space, user upload their files to be stored, and companies create programs on them, which is called cloud computing. There are different types of cloud storage providers available at the moment; some of them are available for free while others require a reasonable amount of registration fee. Cloud storage providers allow people to upload and protect their data from a third party, providing them with a storage space of their own, in addition to sharing limited data with specific people. This report has focused on the advantages and disadvantages cloud storage services on general basis as well as comparing the different providers with regards to privacy protection, data encryption and the space provided in order to choose the most practical site based on my own point of view. Cloud storage provides complete protection for data as no one can open or view other's personal files with a high-security privacy policy. These services are easy to use, and allow users to share files with a third party under their authority where the intended parties can amend and add more data without their physical presence in the same place. However, just like any other man-made programs, cloud storage applications have some potential disadvantages that developers are trying to overcome. With respect to the other services, the study suggests that dropbox can be a good choice for data storage and sharing since the advantages of some programs such as, Dropbox, outweigh their disadvantages.

Keywords: Cloud storage, Cloud services, Personal files, Dropbox, Data sharing, Storage

1. INTRODUCTION

Cloud storage can be defined as huge computers with a high security that have huge storage space, user upload their files to be stored, and companies create programs on them, which is called cloud computing. For example, when you need the Word program installed on your computer In order to be able to use it in cloud computing, Microsoft will install the Word program on the company's servers and then launch it on its website so that all users with cloud storage accounts so you will not have to carry your computer with you on all your travels, where you can connect from any computer and access your account to the cloud storage company to start using these programs, as well as access to your files that you stored in the servers. There are different cloud storage providers that are available for users, such as:

1. Gmail, Hotmail, and other sites and email services.
2. Online upload and save services like iCloud, OneDrive, Google Drive, Dropbox, SkyDrive are the most famous sites that offer this service.
3. Cloud applications Google Docs, Photoshop Express, where these applications rely on the same idea and that work directly on the Internet without the need to tweak.

In addition, some cloud storage services are available for free while other can be used for a single, monthly or annual payment. Cloud storage providers allow people to upload and protect their data from a third party, providing them with a storage space of their own, in addition to sharing limited data with specific people. This report will focus on the advantages and disadvantages cloud storage services on general basis as well as comparing the different providers with regards to privacy protection, data encryption and the space provided in order to choose the most practical site based on my own point of view.

2. POTENTIAL PROS AND CONS OF THE CLOUD STORAGE SERVICES

2.a) **Advantages:** Cloud storage provides a perfect solution for navigating and browsing data anywhere, at any time, where users can simply sign in to their accounts and download the data they need directly without the need of carrying their devices everywhere. They also provide complete protection for data as no one can open or view other's personal files with a high-security privacy policy. Moreover, most cloud storage services are either free of provide large storage space for a very reasonable price that are available for the long-term at anytime without being lost, damaged or stolen. Cloud services are easy to use, handle and allow users to share files with a third party under their authority where the intended parties can amend and add more data without their physical presence in the same place. Furthermore, cloud storage services are also useful in the education and learning sectors.

2. b) Disadvantages: However, just like any other man-made programs, cloud storage applications have some potential disadvantages that developers are trying to overcome. Cloud applications need an Internet connection, which means any interruption in the Internet connection might affect your business. Yet, It seems that companies are getting better as HTML5 and JavaScript technologies can build web applications that can work offline. There are some potential concerns regarding security and privacy. Some people fear putting all their information and files on cloud service providers claiming that those services can be compromised by hackers, who may possibly obtain users' information, and the ability to sell or use their data to the other service provider will be a real problem. Hence, It is really important that users sign up with reputable and trustworthy companies. Another potential drawback that the majority of cloud applications have not reached the quality level as of traditional desktop applications yet For example, web image editing applications have not reached levels comparable to traditional Photoshop, and document editors across the web have not reached Microsoft Office but are gradually approaching them over the years.

3. COMPARISON BETWEEN DIFFERENT PROVIDERS

There are different types of cloud storage providers in the market some of the cloud storage services can be classified based on the extent of privacy protection provided to their users with respect to other features provided by each one of them: There are a lot of global services known in the cloud storage sector, which is believed to violate the privacy of users, which requires their users to be cautious while using them to prevent their data from being exposed by spyware and by people working in the support team and service development. The privacy policy in all of these services, which users often agree to without reading, refers to the right of those companies to access their clients files and to prevent any files that may infringe the property rights of companies or any data that is questionable in nature. Some of the leading cloud storage services that rely on these methods is Dropbox, Google Drive, Apple and SkyDrive. However, with the careful use, these services have many benefits that are summarized below:

1. iCloud released by Apple Inc in 2011, all Apple user already familiar with iCloud. Running and accessing iCloud either you need (iOS-5.x) or (Mac-OSX-Lion-10.7) (or later). Synchronizing pictures, music, contacts, eBooks, and all other kind of data you need Apple ID that can be integrated with other popular Apple products and iTunes.

Advantage of iCloud

- 5_GB free storage space.
- Compatible with all Mac devices and iOS.
- Accessed from dedicated application or website.
- Respectively Upgradeable storage to 50_GB, 200_GB, 1_TB or 2_TB.

Disadvantage of iCloud

- Incompatible with Android and another OS.
- Lack of synchronization or a small bug can result in loss of data.

2. OneDrive Developed by Microsoft, previously known as Sky Drive, Using PFS " perfect forward secrecy" encryption makes it most secure cloud storage platforms. It has a dedicated application for Android, iOS, and Windows devices. Almost compatible with all OS, also integration, and connectivity with MS-OneNote, MS-Office-365.

Advantage of One Drive

- 5_GB free storage space.
- A wide range of plans and customization.
- Compatible and integrated with MS_Office_365.
- A dedicated application for all leading OS.
- Using your Microsoft account make you manage everything in one place
- Premium Upgrading to a max of 5_TB

Disadvantage of One Drive

- Via application and website, we can manually manage file and folder

3. Dropbox Released-2007. Wide range used as cloud storage and sharing services, because of it is a clean and sophisticated design for almost all platforms. Dropbox extensive compatibility and integration with MS-Office365 gives it a lead Over One Drive.

Advantage of Dropbox

- 2→16_GB free storage space.
- Provides unlimited storage (premium plans).
- Compatible with all the major devices.
- Creating a specified directory on system ease to upload files.
- Easy to use.
- Provides unlimited storage (premium plans).
- Accessing via application and website

Disadvantage of Dropbox

- No control how data displayed when editing via its website.

4. **Google Drive** officially 2012 Released, backed by Google, makes it one of the most widely used cloud sharing networks, and services in the world. Application available for all the leading OS such as Android, iOS, Mac, Providing a voluble support for all Google product such as documents, sheets, photos makes it quite convenient to be used for business as well. Google Drive use Natural Language integration, SSL encryption, can invite others to collaborate, and integration with other popular Google products makes it easier for users to manage their drive, also gives it advantage over a Dropbox free storage capacity.

Advantage of Google Drive

- 15_GB free storage space.
- Premium Upgrading to a max of 30_TB.
- Using Specific website and application, which is compatible with all OS platform.
- Support 60 different language.
- Easy setup and integration With Google account
- Performing auto backup and support with other Google services

Disadvantage of Google Drive

- Some users share space with their Gmail that may lead to data overflow.

Another group of cloud storage that allows data encryption without violation to the users privacy, and these companies are summarized below:

1. **Spider Oak:** This service provides free space of 2 GB and can be increased to 100 GB for \$ 10 per month. What distinguishes the service is that it encrypts all the files that are uploaded to the service and can be downloaded to your computer.
2. **Wuala:** It is characterized by the adoption of confidentiality and security in the storage and storage of files on multiple servers and allows the sharing and download of files with ease, as well as providing free space of 5 GB free, and for areas greater than 20 GB to 100 GB You can pay € 3 to € 10 per month.
3. **Tresorit:** The service is more specialized in storing games and files in a confidential and secure and without the possibility of being spied on by the owners of the service or hackers, and gives users initially 5 GB of free space, and space available for purchase is estimated at 100 GB. And that the service is very safe and the company provided to them confident of it, it allocates a grant up to \$ 10000 for those who can penetrate it!
4. **Mega.co.nz:** This service offers attractive offers to users, including 50 GB of free space when joining the service and can be increased to 500 GB at prices starting from 10 euros to 99 euros per month, the horizon of delivery to 4 terabytes. Do not forget that it preserves your privacy by encrypting files.
5. **Amazon:** Of those who do not know the location of the number 10 on the global level, the site entered the cloud storage area to compete with the largest companies specializing in this area, offering free storage of 5 GB. You can buy 20GB space for \$ 10 for the year and 100GB for \$ 50 for the year and 1000GB for \$ 500 for the year.

4. CONCLUSION

In conclusion, this report has focused on the advantages and disadvantages of the cloud storage sites in terms of the user's privacy protection, public security and data encryption. Some services violates the users' privacy under the pretext of protecting property or public security whereas other sites support file and data encryption and do not violate



users' privacy. The study suggests that dropbox can be a good choice for data storage and sharing since the advantages of some programs such as, Dropbox, outweigh their disadvantages. It gives the highest free storage space up to 16 GB and unlimited Maximum storage in TB for premium version. Dropbox is also compatible with all leading operating systems. The study also suggests that cloud storage can be used in education to get the following benefit:

1. Giving lectures or classes remotely, on the virtual cloud (which may be in the form of a website or application on smart devices) for viewing and browsing away from time or space barriers.
2. Sharing the curriculum or part of it through the cloud sharing tools provided by the cloud.
3. Creating bridges of communication between teacher and student, at school or in higher education.
4. Delivering the required duties and costs and following up with the teacher.
5. Reducing the financial burden of paper printing, handing over duties and returning them.
6. Study collectively on the Internet.
7. Reduce software costs, maintain hardware and reduce power consumption.
8. Providing access to learning resources and resources collectively through online education.
9. Enhancing the efficiency of computer management in schools and control the quality of content.

In my point of view, the future of cloud computing is might get to the point where all operating systems will switch to cloud systems similar to Google Chrome OS. Google started this line early, followed by other companies, and this is not a prophecy but an extrapolation of reality. All operating systems may become cloud-based or full-fledged systems. We may reach a stage where we can run all applications across the web, even the largest games. Cloud computing and web applications are evolving rapidly, and Internet speeds are also evolving, which may increase the probability of widespread use of cloud storage system in almost every aspect of the computing system and technology.

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