



Presents:

Using the Cloud

By Angie Harris

Adapted from the Texas State Library's TEAL for All Texans Student Resources Manual

Using the Cloud Topics

- What is the Cloud?
- Using the Cloud
- Terms & Conditions

Goals & Objectives

- Learn what a cloud is and what types there are
- Learn how cloud computing can be beneficial and convenient
- Understand the conversation around privacy, security, and ownership concerns with online storage

The Cloud

- In the simplest terms, cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive. The cloud is just a metaphor for the Internet. (In the past, cloud drawings were used to represent the gigantic server infrastructure of the Internet in computer network diagrams). Cloud computing is online storage. With an online connection, cloud computing can be done anywhere, anytime.
- When you store data or run programs from the hard drive of your computer, that's called local storage and computing. Everything you need is physically close to you, which means accessing your data is fast and easy for that one computer. Working off your hard drive is how the computer industry functioned for decades and some argue it's still superior to cloud computing.
- It is important to understand that cloud computing is not a new idea. The term has become trendy as a result of marketing but anytime you store information on the internet that can be accessed elsewhere you are cloud computing and people have been doing that for years—namely with email.

Local vs Cloud Storage

Local Storage

- Programs and files are stored on the hard drive (C: drive) on just your computer.
- Limited access to files but better protection from service outages or hackers.
- Files are only available on your computer so if you have copies elsewhere you have to make edits or copy the updated file manually to each location.

Cloud Storage

- Programs and files are stored on a remote server that can be accessed from any computer.
- Convenient access to files but more susceptible to service outages or hackers.
- Files are able to be synced to other devices so when you update a file on one it updates on all the others.

Types of Cloud Storage

- Many people have been using the cloud without ever realizing it when they check their email. Yahoo mail, Gmail and other providers are all examples of clouds that have been in use for many years. The now popular term has extended to personal storage of documents, photos, music and more, not just email messages. These other types include:
 - Amazon Cloud Drive
 - Apple iCloud
 - Dropbox
 - Google Drive
 - Microsoft Onedrive

Advantages of Cloud Computing

- You can access your files from anywhere, anytime, and from any device with an internet connection.
- You can share large files and collaborate with people easily over the internet.
- You don't have to install applications or software to access your files on other computers.
- You can create, edit, and save documents, spreadsheets, and presentations on the go.
- You are creating a backup of your files so if something happened to your hard drive you'd still have your files online.
- You take up less space on your computer by storing files and photos online.

Using the Cloud



Cloud 101

- **Creating an Account** - When using any online service you always have to create an account first. You typically provide your name and age and create a username and password---many use their email as a username.
- **Uploading Files** - Once you've created an account you have the option of uploading files to the cloud or downloading a desktop app where you can simply drag and drop files and folders into the app's folder and they are instantly accessible online.
- **Creating and Editing** - Some storage services allow you to create and edit files inside of their cloud. Whenever you create files you will be creating file types that either are or closely resemble Microsoft Office file formats. This allows you to edit files anywhere, and the format stays uniform between services and computers.
- **Syncing** - When you sync things it simply means to match data between devices. Whenever you add, edit, or delete files they will match up with all other devices and online. You can view and edit files on your computer offline but synchronizing occurs over an internet connection.
- **Downloading** - Files that you typically have to download to access are music and video files. Some cloud services have built in media players but most will just store your files and when you download them they will play on the default media player for your device.
- **Sharing** - Many cloud services allow you to share photos and other files through email, text message, and even some social media.

Terms & Conditions



Privacy

- **Privacy**: Any company that is storing your information has access to that information. Putting all your faith in the cloud means you're also putting all your faith in continuous access and strong security. It's not that you can't trust bigger entities like Apple and Google, but there isn't much they don't know about you: name, credit cards, likes, dislikes, emails, passwords, friends, family, trips, online searches, birthday lists--even what we need to pick up at the grocery store after work. We wouldn't trust most people with that kind of information, but with online services, we have little choice but to hand it over for the convenience and access to all they offer.

Security

- **Security:** Even though we have no real reason to believe that a company is going to compromise our data--someone else might. Insidious hackers are always trying to break into Apple's fortress and other large conglomerates. It's bad enough when your social media or email gets hacked, but the thought of your entire online trove falling into the wrong hands is a frightening notion. Cloud services have decent security protecting their servers but it's just as important to have a strong password and know what you post online because the bulk of securing your information falls on you. This is also why it may be better not to store sensitive information in cloud storage.

Ownership

- The industry still has some hiccups to work out since online storage on a grand scale is still new territory. The conglomerates have access to and can delete files they deem inappropriate but generally speaking they have no reason to unless there is something that could raise suspicion.
- But there are also intellectual property issues. Who owns the data you store online? Is it you or the company storing it? Consider how many times there's been widespread controversy over the changing terms of service for companies like Facebook and Instagram—which are definitely cloud services—regarding what they get to do with your photos. Ownership is a relevant factor to be concerned about.
- After all, there's no central body governing use of the cloud for storage and services. The Institute of Electrical and Electronics Engineers (IEEE) is trying, having created an IEEE Cloud Computing Initiative in 2011 to establish standards for use, especially for the business sector. But otherwise, cloud-computing—like so much about the Internet—is a little bit like the Wild West, where the rules are made up as you go, and you hope for the best.

Disadvantages of Cloud Computing

- If you are somewhere with no internet service you will not have access to your files online.
- If a server were to crash you have no control over when it will be back up and if all your data will be intact
- Privacy and security is imperative so check and adjust your settings as needed and use very strong passwords to protect your information.
- Some companies are moving their services to cloud only, causing consumers to pay more to use them (Adobe as an example)
- Hacking is a market and hackers are constantly trying to find ways to breach large conglomerates like Apple and Google. They have strong protections in place but the risk is more apparent than with local storage.

Before using the Cloud

- Always Always Always make sure you read the privacy agreement for a cloud service. On most services we just click agree and move on but since you are storing your information online, you should be extra careful with who has access and rights to your information.
- Always keep hard copies on your local computer as a backup. The cloud works as a backup for your computer but your local copies will always be in your control.
- Bottom Line: You don't have to use cloud services in your personal life unless you want to. It can provide benefits such as backup, convenient access, easy sharing capabilities and additional storage space. However, storing files online means your files may not be as secure and privacy and ownership issues that require letting the company have access to your files can be uncomfortable for many people. All in all you can decide whether you want to use all cloud storage, some cloud and some local, or local storage only. The online storage market is still largely uncharted territory with a lot of potential to grow or fail. It may become more pervasive or it may fade away like other trends but it is definitely introducing new changes and definitions to the way people share and access information.

Review

- What is a cloud?
- What cloud service have people used for years without realizing it?
- What does synching or synchronization mean?
- Who are the two biggest cloud providers?
- What is the number one thing you should do before using any cloud service?

Resources

- For more information on Google Drive and Microsoft One Drive visit: www.gcflearnfree.org/usingthecloud
- For reviews and comparisons of cloud storage services visit: www.pcmag.com
- For Amazon Cloud Drive: www.amazon.com
- For Apple iCloud: www.apple.com/icloud
- For DropBox: www.dropbox.com
- For Google Drive: www.google.com
- For Microsoft OneDrive: onedrive.live.com