

The Cloud

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Are you in The Cloud?

YES!

How can I be so sure?

- You use email
- You shop and/or bank online
- You Web surf for news, entertainment & information
- You access and view videos, YouTube, movies
- You stream music
- You participate in social media
- You use audio / visual communication services

How can I be so sure?

- You store your files online (limited device storage)
- You use online applications
- You back up your files online
- You collaborate with others online (work; other)
- You game play online
- And many more – some you don't even know about

So what is The Cloud and how did it get started?

- Cloud computing = shared resources to optimize performance
- Began in the 1950's with dumb terminals & mainframes
- Originally wired; then added wireless (Wi-Fi, cellular, etc.)
- Began in business & academia; then homes, now everywhere
- Internet of Things (IoT); artificial intelligence
- Some aspects cost money; others are “free”
- But with all these advances, are there any risks?

Chicago man says he hacked celebrities

**'Computer nerd' to plead guilty
to swiping nude photos in
Celebgate (Chicago Tribune; 8/31/16)**

**(This was a 2014 Apple iCloud hack,
which also involved email accounts)**



Top 10 breaches

 myspace	359,420,698	MySpace accounts	
	164,611,595	LinkedIn accounts	
	152,445,165	Adobe accounts	
	112,005,531	Badoo accounts	 
	93,338,602	VK accounts	
	68,648,009	Dropbox accounts	
	65,469,298	tumblr accounts	
	49,467,477	iMesh accounts	
	40,767,652	Fling accounts	
	30,811,934	Ashley Madison accounts	

 Sensitive breach, not publicly searchable

 Unverified breach, may be fabricated

So what are the risks?

- Your information may be stolen during transmission
- Your information may be stolen from Cloud servers
- Those with whom you interact may sell your data
- Your files may be lost if the provider goes out of business
- Ownership of stored information may not be clear
- Back-up copies may not be deleted when you delete a file
- Government agencies may access your information

Given the risks, should I simply avoid or abandon
The Cloud?

Answer: It would be very difficult to do

Besides.....

Consider this:

In 2010, there were an estimated **5,419,000** crashes (**30,296** fatal crashes), killing **32,999** and injuring **2,239,000**. The **32,479** traffic fatalities in 2011 were the lowest in 62 years (1949). Records indicate that there has been a total of **3,613,732** motor vehicle fatalities in the United States from **1899** to 2013. (Wikipedia)

Yet we still drive, despite distracted drivers. Why?

- We must go to some other location
- Speed
- Convenience (timeliness, comfort, companionship)

And so we drive – but we take precautions. We buy safe cars. We maintain our cars. We wear seat belts. We practice defensive driving. We avoid night driving because of visibility & drunks. And, we hope for the best.....

What other risks do we take every day?

- Eating
- Drinking
- Breathing
- Seeking medical care
- Investing
- Believing politicians
- Buying things for children / grandchildren
- Coming in contact with other people

What's the point?

- Life is based on a certain amount of trust
- Life also carries risks
- Common sense calls for enjoying life, with some caution
- The same idea applies to cloud computing
- Take stock of how we interface with the world through our devices & identify specific areas of possible concern
- Research, select and implement countermeasures – starting with the highest priority and going from there

Create our own server



My Cloud



My Cloud Mirror

Other Options

- Unique passwords & user names; change frequently
- Use one-time credit cards (BoFA ShopSafe)
- Implement two-factor authentication for login
- Research your providers; change where appropriate
- Consider an email client vs. webmail
- Encrypt everything – phone, email, browser, hard drive
- Utilize a VPN (Virtual Private Network)
- Use Duck Duck Go as your search provider
- Use Ghostery / Disconnect to offset tracking cookies

Conclusion

- Search the Web / media for information about this topic
- One search will often provide useful link(s) to a new site
- Share information / new risks / countermeasures
- Ask yourself why you are
- Is this needed / beneficial or not?
- Is there a better way to accomplish the task?
- Seek a reasonable balance between paranoia & benefit