The Cloud storage system, and how it is revolutionizing the way data is stored

The Cloud Storage System, and How it is Revolutionizing the way Data is Stored

Jonathan Pollock

George Mason University

IT-103-011

10/3/14

"By placing this statement on my webpage, I certify that I have read and understand the GMU Honor Code on http://oai.gmu.edu/the-mason-honor-code/. I am fully aware of the following sections of the Honor Code:

Understanding the Honor Code, Understanding the Consequences. In addition, I have received permission from the copyright holder for any copyrighted material that is displayed on my site. This includes quoting extensive amounts of text, any material copied directly from a web page and graphics/pictures that are copyrighted. This project or subject material has not been used in another class by me or any other student. Finally, I certify that this site is not for commercial purposes, which is a violation of the George Mason Responsible Use of Computing (RUC) Policy posted on http://copyright.gmu.edu/?page_id=301 web site."

Introduction

The cloud storage system is revolutionizing the way that data is stored. The Cloud system itself runs on a shared data farm offered by large corporations such as Google and
The Cloud storage system, and how it is revolutionizing the way data is stored

Amazon. The information is shared between the customer and the provider. These large companies use cloud system due to its ability store and retrieve data at any point in time. Consequently the cloud system is replacing the dated external hardware system such as portable hard drives and flash drives. The concept for the cloud system dates back to the mid 1900’s

Background

According to Mohamed (2009) The cloud storage system was, “believed to have been invented by Joseph Carl Robnett Licklid in the 1960s”. The original purpose of the cloud was to connect people and data anywhere at anytime. This system was the first of its kind to be purely web based. He also said that one of the (2009) “first milestones in cloud computing history was the arrival of salesforce.com in 1999”, which was the first website that allowed mainstream software firms to transfer data. This was then surpassed by the development of the Amazon Web services in 2002. This addition added storage computation and human intelligence. The next progression came in 2009 when Google started to provide browser based features such as Google apps. He also said (2009) “Other key factors that have enabled cloud computing to evolve include the maturing of virtualization technology, the development of universal high-speed bandwidth, and universal software interoperability standards”. This shows that the system is constantly being updated to become much easier and more accessible. Aside form the system being improved on w yearly basis; there are also many economical benefits that come form the cloud as well.

Potential benifits
First off cloud is a better way to run your business. First it doesn’t take human effort to maintain. The system runs on a shared data center. All you have to do is plug in to the cite and you can customize it anyway that you wish. This is great for businesses because they do not need to pay for human labor to maintain the servers. This is all done for them, which gives the business owner more time to focus his interest elsewhere. This is only possible because of the multi tenant app feature. This one App is used for multiple businesses but is flexible enough to be customized to the intended use of the individual. Also upgrades are handled for you, and there is a predictable monthly subscription fee. The benefits are limitless. The cost of running a business is so much cheaper thanks to the clouds ability to store and recall data. The customizable app feature makes it so that you can truly create a website that is an accurate representation of what you are trying to accomplish. Unfortunately when there is pros there are also cons.

Legal and ethical Issues

Although the system is secure, anyone with enough clearance within the company can easily obtain or extract the files themselves. Another concern is that hackers that know the internal IP addresses can access your cloud with ease. This means that there has to be more requirements required to prevent any mishaps in the future. Another legal issue is that if issued a warrant a company doesn’t have to give up any of their information if their server is based in another country. This could lead to many legal issues. Another concern is data ownership. The owner of the business must make sure that their contract with their service provider specifies that they will take necessary means to dispose of your data after you wish no longer wish to work on said project. This
The Cloud storage system, and how it is revolutionizing the way data is stored could result in a leak of confidential information. This also gives rise to many social concerns.

Social concerns

As for social concerns, there has been a lot of controversy lately around the huge celebrity photo leak from the Icloud (Authur 9/1/14). The report states that the photos were hacked by a method referred to as the brute force method. This is a tactic when the hacker uses a program that will continue to guess passwords until it guesses correctly. This was due to the weak password protection put in place by apple. Using the brute force method the hacker could guess as many times as they wanted without being locked out. This allowed the hacker to take as long as he needed to steal the data. This is an easily exploitable defect in the current design of the Icloud. The hacker then went on to attack other celebrity accounts by using a method called chaining (Authur 9/1/14). This is done by using the information found in the address book of one celebrity, and then using that information to hack another celebrity. Notable celebrities that were affected include Jennifer Lawrence and Kate Upton. The leaked photo count has surpassed over 200 images (Authur 9/1/14). It is evident from this incident that further research is needed to prevent any future leaks from happening.

Further required research

For the cloud to survive in the competitive world that we live in, there must be improvements. First Apple has added a family-sharing feature in their cloud system. This allows families the convenience of uploading data into a shared memory server. This then allows anyone connected to the server to add or extract anything at anytime. Also, everything is interconnected to the parents device. If any family member tries to make a
purchase the main owner of the account will be notified. This is not only more convenient, but also more safe. The ability to be notified when any one thing is being purchased makes the system as a whole a lot safer. Another added feature to Apples new update includes photo sharing. Users now have the option of having photos automatically save to a selected album. This makes sharing group experiences a lot easier. The same concept goes for calendar creation. These minor updates are critical to the success of any sort of marketable product. It is important to keep the idea fresh and new in the eyes of the consumer.

Conclusion

Finally the cloud storage system is a superior way to store and manage all types of information. It is easier and more convenient then previous external storage options. Unlike external hard-drives and flash drives the cloud can be accessed from any location at any given time as long as there is an Internet connection. Also unlike the previous storage devices the space available is always upgradable depending on the preferred payment plan. The individual can also specialize their cloud to their liking due to the multi tenant app feature. This allows for a much easier time setting up a website for whatever business endeavor that may come up. Also due to this fact of it all being interconnected, it is much easier to start a new business idea than in the past. The system is also more economical because the owner does not have to spend money hiring a staff to fix/ upgrade the cloud. Although there are some glaring issues at the moment, they are swiftly being worked out to prevent reoccurring incidents. Additionally added features such as apples shared data idea is making the cloud a much more intimate environment. Families are able to share important information with one another at an alarming rate. In
conclusion the cloud is a revolutionizing the way data is stored, by being constantly more
innovative, convenient, and safe.

References

Charles Authur. (9/1/14) Naked celebrity hack: security experts focus on iCloud backup
theory, retrieved from http://www.theguardian.com/technology/2014/sep/01/naked-celebrity-hack-icloud-backup-jennifer-lawrence

This article is about the nude photo leak that happened in early September 2014. The
hacker used a technique called the brute force tactic. He found and exploited a loophole
in Apples password protection verification process. He then used another tactic referred
to as chaining. The hacker took the information found in the celebrities address book to
obtain the email addresses of the other celebrities in order to hack them as well. The
hacker on record had stolen over 200 images.

Arif Mohamed. (3/2009) A history of cloud computing, retrieved from

This article is about the timeline of cloud computing. Cloud computing started back in
the 1960’s and was created by J.C.R Lickinder. He wanted to create an interconnected
world where anyone could save or retrieve information at any time. The first actual
application of this idea was in 1999 with the concept of delivering enterprise applications
via a simple website. The services firm paved the way for both specialist and mainstream
The Cloud storage system, and how it is revolutionizing the way data is stored software firms to deliver applications over the Internet. This was then improved by Amazon in 2002 which finally offered storage.


This article talks about the new features that the iCloud system has to offer. It offers many new ways to stay connected within a family. There is a new option that allows families to keep all of their data stored in data plan. This means that they can share music, photos etc on one plan. They can also sync all of their purchases to one account that the primary owner must verify. This makes the entire system much more secure.


This article talked about how people were switching from physical forms of storage to digital forms of storage. It also talked about how that today companies are relying on the cloud service to efficiently run their companies. It also went over the idea that the increased overall use of the internet has created a larger demand for digital means of storage. They also mention that the cloud minimizes capital investment. In general there is a visible shift away from non digital forms of storage.
The Cloud storage system, and how it is revolutionizing the way data is stored


This article also focused on how there was a shift from physical storage to digital storage. However this article also mentioned the security concerns. They talked about how Notre Dame uses the cloud to ensure that file sharing is secure. They have an agreement with a company called box cites, which makes sure that all files are backed up to ensures a secure storage system. This article was used to help me better understand cloud computing.