

Concept Behind iCloud

Shivam Gandhi¹, Latika Kharb²

¹Dept of Masters in Computer Applications

²Professor

^{1,2} Jagan Institute of Management Studies, Delhi, India

Abstract- *iCloud is built into every Apple device. That means all your stuff — photos, files, notes and more — is safe, up to date and available wherever you are. And it works automatically, so all you have to do is keep doing what you love. In this article we will discuss what is icloud, its purpose, its uses and the future of icloud.*

If you are using Mac or iPhone or Windows PC. Yes! Even windows machines can be connected to iCloud through Apple ID.

I. INTRODUCTION

“What is iCloud?”

iCloud is the generic name for all of the cloud based or internet-based services Apple delivers to us whether that’s on a Mac, iPhone, or a PC running Windows.



FIGURE 1 SOURCE: VENTUREBEAT.COM

Steve Jobs (co-founder of Apple) introduced iCloud at the Worldwide Developers Conference, in July 2011. It was the last product being introduced by him and was launched after his demise. “We’re going to demote the PC and the Mac to just be a device,” Jobs said. “We’re going to move your hub, the centre of your digital life, into the cloud.”

How iCloud works?

iCloud makes data synching very easy! It securely stores your photos, videos, documents, music, apps, and more such applications and keeps them updated across all your devices connected to it. Apple provides 5 GB of free iCloud storage for its users. Well the best part about iCloud is that the user doesn’t always have to manually back up their data to the cloud. It has made this service as easy as charging your devices. So, every time you plug your apple device into a wall outlet or a computer to charge it, the device will attempt to back itself up to the cloud. It also makes sharing quite easy. First you set up iCloud on your IOS device or mac. Then you sign in to iCloud on your other devices and computers using the same apple ID. Once this is done any changes made of one device will be reflected on the other entire device.

Before the iCloud, there existed a similar service which was known as MobileMe. It was launched on January 5, 2000. It is a subscription based collection of online services. With it you could have a chunk of cloud storage accessible from your Mac computers. It, however, came at a cost. Some of the reasons for its failure were its inability to recover from a miserable debut and its performance remained uneven. Steve Jobs acknowledged this failure and identified the cloud as the obvious next step of his “digital hub” strategy. iCloud finally replaced MobileMe in October 2011. After its launch, Apple made concerted and constant efforts to improve iCloud. While it seemed to remain far from perfect, it embarked in a crusade to change the way customers store and access their files and applications.

Apple’s data centre for the cloud is located in Maiden, North Carolina, The Guardian reported in July. It requires the same amount of power as roughly 14,000 households

What all does iCloud do?

We know till now that the basic purpose of this technology is to share and backup data among all your devices. Apart from this, It also allows to stream music and videos from the cloud. If it were, you could play media content directly from iCloud rather than having to download it

first. This could be particularly useful if you have a large music or video collection and don't want to use up all the available space on your iPhone, iPad or iPod Touch. These are partial backups that store only the data you've changed on the device.

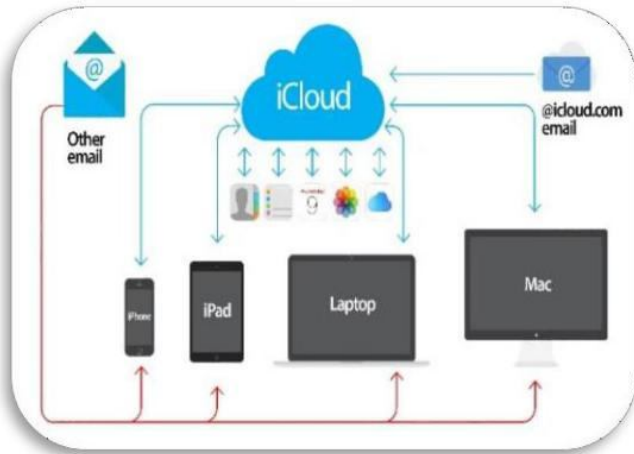


FIGURE 2 SOURCE: ICLOUDLOGIN.COM

If so many similar cloud storage facilities exist then why iCloud?

There are a lot of similar cloud services that exist such as Google Drive, One Drive and Dropbox that facilitate storing of our files.

So, what makes iCloud so different? Well, iCloud specifically caters to Apple users and makes their sharing and backing up of data a piece of cake. But it doesn't just stop there. It also has two distinct features that other companies don't provide.



FIGURE3 SOURCE: THEWINDOWSCLUB.COM

The first service uses cloud to help you find your device if you lose it. It's called the Find My Device feature. You have to sign in to iCloud.com or have the Find My iPhone app, you can see your missing device on a map or play a sound. It provides an approximate location of your device. And you can use Lost Mode to lock, track, or remotely erase all of your personal information. The second service is the Find MyFriends service which was added to iCloud alongside the launch of iOS 5. It allows users to share their current location with their friends or family. Concurrently with the launch of iOS 5, Apple also released an app for Find My Friends. iOS 6 added location-based alerts to notify the user when a device arrives at a certain location.

	OneDrive	Google Drive	iCloud	Dropbox
Company	Microsoft	Google	Apple	Dropbox
Free Plan	15GB	15GB	5GB	2GB
File Size Limitation	10GB	5TB	5GB	10GB browser, No limit with app
Storage Limitation	1TB	30TB	1TB	1TB
Price/month	50GB/\$1.99 1TB/\$9.99	100GB/\$1.99 1TB/\$9.99 30TB/\$299.99	50GB/\$0.99 1TB/\$9.99	1TB/\$9.99
Best Integrates with	Windows, Office	Google Docs, Gmail	Apple devices, iTunes	

The question arise that can we also share and edit documents using iCloud?

Yes! You can even save, edit or share documents using iCloud . We have primarily talked about photos and music being backed up and shared.

Yes, iCloud drive is the answer for that! In the simplest terms, iCloud Drive is Apple's version of Dropbox. It's a cloud-based, document-oriented file- storage service that keeps your data in sync between various apple devices. However, it doesn't operate in the same way as, say, Dropbox or OneDrive. Apple's cloud storage solution isn't quite as smooth as Dropbox, but it ties in well with the iPad, iPhone, and Macs. You can also access iCloud Drive from Windows, so you aren't locked into Apple's ecosystem.

How secure is iCloud?

Security is one of the major concerns of any company offering cloud storage. Apple's iCloud is considered to be one of the most secured cloud storage in the market. Apple's iCloud is considered to be one of the most secured cloud storage in the market. Subsequently, Tim Cook, Apple's

CEO, introduced a two-factor authentication. When someone tries changing an account password, restoring iCloud data to a new device, or when a device logs into an account for the first time, Apple will alert users through email and push

notifications. Whenever you try to sign into iCloud on a new device for the first time, you'll be asked to provide your password and a six-digit code (a complex alphanumeric code, or a generated random code). If your device is "trusted," the code is displayed automatically. For certain sensitive information, Apple uses end-to-end encryption. End-to-end encryption provides the highest level of data security. Apple uses a minimum of 128-bit AES encryption.

If your game has iCloud support, your game saves can be synced, so you can pause on an iPad and pick up on an iPhone.

What's next in store for iCloud users?

As of now, apple provides 5 GB of free storage. But that seems to run out fast and some other storage companies offer more for free. So how is Apple combating with this issue. Apple held an Education Event on March 27, 2018 and added a special free tier for educators and students. Every student that has an Apple ID managed by a school will have access to 200GB of storage space for storing assignments, resources, and other documents in the cloud.

This has been limited to only such students and not for the regular students. It is quite possible that in the coming future Apple will look into offering more storage in the free tier, doubling it to 10GB, or even pushing it to 15GB. There have long been rumours that Apple is working on making it possible for you to start watching a movie or listening to a song on one device and then finishing it on another via Handoff. It would be even more interesting if Apple made it possible for you to access all your music and movies via iTunes on the web. Apple could add iTunes to its icloud.com access from any computer or device.

What is the future?

There are speculations that apple is working with China-based server vendor "Inspur" as part of its ongoing plan to make its iCloud data services in-house. As of now Apple mainly uses Amazon Web Services to fulfil its cloud server needs.

There were rumours in the techworld that Apple is migrating some of its iCloud business from Amazon Web Services to Google's Cloud Platform in a deal estimated to be worth between \$400 and \$600 million. However, it is likely that the move to Google's Cloud Platform is getting faded as Apple is trying to achieve independence from many third-party cloud service providers and Apple is more than serious about handling its own iCloud data services in the near future.

Inspur currently has more than 60 percent share of China's Internet service server market, and has previously formed partnerships with companies including Microsoft, LG Electronics, Ericsson, Intel and IBM. It established an office in California last year, which includes both production labs and an R&D team.

Apple is also in the process of expanding its current data center in Prineville, Oregon, while also building new data centers in Ireland, Denmark, Reno and Arizona.

REFERENCE

- [1] Johnson, K., Li, Y., Phan, H., Singer, J., & Trinh, H. (2012). The Innovative Success that is Apple, Inc.
- [2] How Tim Cook is changing Apple - Fortune Tech. (n.d.). Retrieved November 8, 2012, from <http://tech.fortune.cnn.com/2012/05/24/apple-tim-cook-ceo/>.
- [3] Kharb, L., & Singh, R. (2008). Assessment of component criticality with proposed metrics. INDIACom-2008: Computing for Nation Development, by AICTE, IETE, and CSI, 453-455.
- [4] Kharb, L. (2014). Proposing a Comprehensive Software Metrics for Process Efficiency. International Journal of Scientific and Engineering Research (IJSER), 5(6), 78-80.
- [5] Enderle, Rob. (2004). HP's iPod will Outsell Apple. The Mac Observer. http://www.macobserver.com/tmo/article/Rob_Enderle_HP_iPod_Will_Outsell_Apple.
- [6] Apple's No. 2 Has Low Profile, High Impact.(n.d.). Retrieved November 8, 2012, from <http://www.eng.auburn.edu/enewsletter/november2006/alumni/tim-cook.html>.