

iCloud uses Azure and AWS

1) Describe what the company does.

iCloud is cloud product of Apple company, the biggest seller of cellphone and mobile device in the north America. iCloud is basically a place that you can store all your photos, emails, contacts and a backup of your devices. It is also a platform to keep all your devices, including MacBook, iPhone, iPad, Apple Watch and etc., in sync.

iCloud initially was launched on October 2011. As of February 2016, it was reported that iCloud has 782 million users. On June 30th, 2015 Apple launched apple music which is also running on iCloud servers.

2) Detail how they utilize the cloud.

Initially in 2011 when they launched the iCloud they confirmed that they are using the Azure's Content Delivery Network (CDN) capability. The Azure's CDN is an extension to Windows Azure cloud operating system's storage. CDN will allow developers to deliver content quicker and in more efficient way by putting delivery points closer to the user.

Later as iCloud expanded more they started to AWS as well. Now they are a hybrid cloud user. Although neither of Microsoft or Amazon never confirmed it initially that apple is using their product, in 2014 in a security agreement released by apple it was indicated that the encrypted portion of some iOS files are stored in Amazon S3 and Microsoft Azure.

3) Explain why they chose the cloud instead of running IT themselves.

In today's world of technology, preempting other companies in different specific field is very important. Mainly because if you are the first company to introduce a product you are always ahead in experimenting the market need and product problems. iPhone and Google can be mentioned as good examples in Smartphone operating systems. They preempted Microsoft and they were always a step ahead of Microsoft and windows phone.

Same problem was existing when apple wanted to launch a cloud platform. At that time AWS and Azure were big enough and very well known that spending money on something totally new didn't seem so much reasonable. By buying another company's service they cut down unnecessary costs and hidden cost that could come up for unknown challenges along the way.

Other reason was that they didn't need to postpone projects that needed a cloud server to start. By using another company's existing cloud service, they were able to launch other projects and ideas. In order to have their very own cloud service they had to think about the datacenters.

Considering all the listed reason, I think it was highly profitable for them to migrate some of their data to an external cloud service instead of insisting to create their own from scratch. In conclusion, economic reasons were main reason for them.

4) What risks are they taking by using the cloud?

In 2016 Apple announced that they are migrating some of the data from AWS to Google cloud. This has the risk of raising the uncertainty in cloud server providers when it comes to offering service to Apple, but because of cloud service being a competitive field I think it is a fair game.

Since Apple is using multiple cloud services, they may have the challenge of integration between different security protocols, network execution and management. The biggest challenge of hybrid cloud computing is the lack of required compliance and encryption. It also may include poor data redundancy and data leakage. Basically, security of some parts of their data is out of their hand.

Since they are using different services, unprotected APIs also can be a challenge too. They have to spend more time securing their data because API endpoints expose sensitive data to malicious attacks that exploit an authentication/authorization token or key to manipulate personal information and data.