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Communication from your computer guy: What is Cloud Computing?
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Cloud Computing
Having secure access to all your applications and data from any network device

There has been quite a bit of news lately with respect to a computing paradigm called "cloud computing", especially now that Apple has announced their new iCloud service. And of course, given our competitive world, vendors are taking different approaches to how they implement cloud computing. In this article, I will explain what cloud computing is and the difference in approach being taken between two of the most dominant vendors: Google and Apple.

Traditionally, the basic way that personal computing was done involved purchasing a computer that came with an operating system such as Windows or MacOS, downloading or purchasing and installing the applications that you wished to use on the computer, and then creating or downloading the content that the applications would process. The same paradigm was pretty much true with the iPod, iPad, and iPhone. If you wanted to access data (be it a document, address book, a photo, or music) you had to get it onto the platform first before it could be accessed. If you had content on your computer that you wanted to also access on your mobile device, you had to first attach that device to your computer, and then go through an explicit synchronization process.

In more sophisticated environments, a separate server was installed and data and services such as email could be moved to that server where it could be accessed and shared among different users and devices via a network. This however involved additional cost and complexity. The promise of the latest innovations around cloud computing is to deliver the same benefits as installing a server (and more) without significant cost and complexity.

You have been probably already using cloud computing without realizing it. For instance, if you are a Gmail user, your email is stored in the "cloud" where it can be accessed via your PC, iPhone, iPad, or any other of a variety of devices. Cloud computing means having every piece of data you need for every aspect of your life available immediately and efficiently and ready for use. This has very profound implications for information sharing, security, and privacy.

Google's approach to implementing cloud computing ultimately has all your data and applications running on Google's servers requiring you to be connected most of the time. Think in terms of doing everything via a web browser - that is the essence of Google's model.

Apple's approach is very different. Their focus is to manage data streams so that by using the cloud as a central repository, they can implement transparent synchronization of all of your data with all of your devices, keeping everything current and the same regardless of device. For example, when you take a photo with your iPhone, it is immediately available on your iPad and your Apple computer.

Apple's iCloud also takes a big step toward enabling the iPad to replace your PC. Until now, the iPad was primarily a device for viewing existing content, and not a content creation device. However, with the untethering of the iPad from your PC and the ability to store all your data in the Apple cloud, the foundation now exists for your iPad to truly replace your PC as your fundamental computing device.

For now, cloud computing raises many questions that will take time to work out. Here are some example questions for you to ponder:
. How long will it take for the internet to be fast enough, cheap enough, and reliable enough to be available virtually everywhere (think about the internet the same way you think about electricity)?
. Will businesses and consumers truly be willing to give up total control of their private data to the cloud?
. Will the focus of hackers move from computers to the cloud?

. Will the different implementations by the largest vendors inhibit broad adoption (for instance, what if I have an android-based device controlled by Google's cloud, but all my music and photos are in the Apple cloud?)
. What will be the true cost of the various cloud services I will require?

As always, I hope you have found this information useful. If you do not wish to receive these emails in the future, let me know.

All the best! Steve (650-222-4140)