

CLOUD COMPUTING – OUT OF THE CLOUD

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ABSTRACT

As with WEB 2.0 everything seems to be moving and changing with a fast pace and companies have to keep up by bringing new technology within their departments in order create a strong competitive advantage. That is why cloud computing is at the moment all the rage, “it’s become the phrase du jour” as Mr. Ben Ping , senior analyst at Gartner explains, echoing many of his peer. Being at an early stage of development there are speculations whether it is a good or a bad investment, but cloud computing is one of the key emerging trends for technologies today. New platforms, new providers and new opportunities abound. The strategic importance of information technology is diminishing as it becomes standardized and less expensive and the cloud computing paradigm shift is similar to the displacement of electricity generators by electricity grids early in the 20th century.

Key words: cloud, computing, cloud computing, web 2.0., IT, technology, cut costs, security, new, consulting, SaaS, green IT

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INTRODUCTION

Cloud computing is a technology that uses the internet and central remote servers to maintain data and applications. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. This technology allows for much more efficient computing by centralizing storage, memory, processing and bandwidth.

As a metaphor for the Internet, “the cloud” is a familiar cliché, but when combined with “computing”, the meaning gets bigger and fuzzier. Some analysts and vendors define cloud computing narrowly as an updated version of utility computing: basically virtual servers available over the Internet. Others go very broad, arguing anything you consume outside the firewall is “in the cloud” including conventional outsourcing. This concept comes into focus only when you think about what IT always need: a way to increase capacity or add capabilities on the fly without investing in new infrastructure, training new personnel, or licensing new software. Cloud computing encompasses any subscription- based or pay-per-use service that, in real time over the Internet, extends IT’s capabilities.

Cloud computing is broken down into three segments: "applications," "platforms," and "infrastructure." Each segment serves a different purpose and offers different products for businesses and individuals around the world. In June 2009, a study conducted by VersionOne found that 41% of senior IT professionals actually don't know what cloud computing is and two-thirds of senior finance professionals are confused by the concept, highlighting the young nature of the technology.

A simple example of cloud computing is Yahoo email or Gmail. You don't need software or a server to use them. All a consumer would need is just an internet connection and one can start sending emails. The server and email management software is all on the cloud (internet) and is totally managed by the cloud service provider like Yahoo, Google etc. The consumer gets to use the software alone and enjoy the benefits. The analogy is: "***If you only need milk, would you buy a cow ?***" All the users or consumers need is to get the benefits of using the software or hardware of the computer like sending emails etc. Just to get this benefit (milk) why should a consumer buy a (cow) software /hardware?

In the digital age, this new concept of cloud computing has the potential to revolutionize the way in which employees around the world interact and work with each other. But even if the economic advantages that cloud computing brings in a company are huge, these ultra-advanced servers face great barriers in Europe. Is this new technology another way to control and have access to inside information of companies in today's globalized economic environment or a tool that will change everything we know about how to conduct a successful business?

ADVANTAGES OF CLOUD COMPUTING

Cloud computing has been the transition that most software platforms and services have made in the last few years which is driven by the cost savings, ease of upgrades, and the ability to scale. The cloud solutions come at hand because one can eliminate costs related to buying servers, software licenses, hosting, maintenance, highly specialized technical staff, all sorts of upgrades, annual subscriptions, etc. In Sept 2009, an Aberdeen Group study found that disciplined companies achieved on average an 18% reduction in their IT budget from cloud computing and a 16% reduction in data center power costs. According to New York Times the most costly investments in IT equipment and staff will be eliminated creating an ideal network with real time, not interrupted conversations between employees all over the world without the need of translators.

A company only needs the final service and the cloud immediately offers them this service. Every company or person has access to a computer and Internet services so everybody can benefit in an instance of cloud solutions. For example, Gmail allows you to have a memory storage of 25 GB emails, while an in house solution that will offer inferior performances would cost 3 or 4 times more per year.

Let's take for example an emerging small company that tries to develop in a highly competitive market where the multinational firms have all the control. The secret is this technology that allows these kinds of businesses to match the technical resources of the big players on the market, because the most advanced technologies in the world are without doubt available at the local level. The costs of using these services are insignificant. Whether we are talking about

companies with 3 or 300 employees the ease of using these cloud services are immediate and the price will be directly proportional with the degree of usage.

Cloud Computing is divided in two categories:

1. SAAS – Software as a service

This category allows users to access different applications without installing them on their own PC. (Example: Google Aps, Photoshop). The main advantage of his service is that the processed files can be saved online and accessed from anywhere which is crucial for the paperwork of companies that can access any files they need from all over the world.

2. HAAS – Hardware as a service

As the name suggests it this is a service designed for hardware performances. With this we can buy processing power via Internet. The project developed by Amazon called EC2 – Elastic Compute Cloud is a relevant example here. This offers the opportunity to buy storage space or computing power which can also be accessed from anywhere using the Internet. Another advantage for this service is the fact that we can upgrade or downgrade the virtual system with a simple click.

DISADVANTAGES OF CLOUD COMPUTING

If you are going to move all of your information to data centers situated outside your company, then security should be of utmost importance.

- Lost control comes with handing over your data and information
- Depending on third-party to ensure the security and confidentiality of data and information
- If your cloud host disappears, where does your information go?

With Amazon moving into the cloud computing environment, everyone has access to what could be a major change in business intelligence. Amazon's Elastic Compute Cloud is a dedicated, high performance, analytic database cluster that is open to businesses, on a pay-per-use scale, for a monthly fee. This sounds like an excellent business deal, if you are prepared to hand over your personal data and information.

Moreover because documents, images and other information are no longer stored on the computer but online adds the risk for these to be accessed by other persons. Even if producers assure us that our data is perfectly safe there is no assurance for this. If we were to go further with the theft/copying/corruption of sensitive data we could also think of "online mercenaries" paid by other companies or by secret services in order to spy or gather information about competitors. There are a few safety measures that we can take to feel more secure about our data like establishing a powerful alphanumeric password or using a program like TrueCrypt for encrypting data.

The performance of the Cloud Computing model can also be affected by overloading the servers or limiting the bandwidth. Recently Amazon servers and even the gigantic infrastructure of Google have given signs of stress when providing web services for their business clients.

CONCLUSIONS

So the advantages are huge but there are also several downfalls that have to be considered when implementing such a technology in your company. Whether is the speed of data transfer or safety of information with a thorough investigation of the company's situation one can take the best decision. As with all new technologies there are pros and cons regarding this subject but I truly believe that cloud computing is the future in international markets and in global businesses.

The cost savings and continuous improvement in quality of cloud computing services make them very attractive resources, but consider the full cost of the software including disaster recovery costs and make sure that you are making the best decision for your business. If you are not comfortable with the solutions that are available or the companies that are providing it, then it would be worthwhile to keep those functions in-house until your comfort level increases. There are enough tasks to keep you busy as a business owner without worrying about your core business applications failing. Choose wisely!

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