Journal of Engineering and Applied Sciences 12 (12): 3174-3177, 2017
ISSN: 1816-949X

Storage, Processing and Distribution of Information and Communication: Cloud Computing in Latin-American

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Abstract: Remote computing operations including storage, processing and distribution of information and communication began to emerge in the last decade of the last century in business and corporate environments. However, its use has spread as a fundamental service in the latest web applications as usual practice of any current Internet user. Tightly, interwoven with network communication experiences they are in turn transforming the use of computer technology, now based on parameters such as maximum mobility, greater lightness on computers, communication and concurrency in creating mini ad hoc applications, among others. This study describes some of the most important communicative features of cloud computing as well as their social uses. Among them, breaking the traditional concepts of space, time and identity construction.

Key words: Social communication, operating systems, free software, mobile devices, construction

INTRODUCTION

The concept cloud computing, now called one of the technical and communication network operations that although >20 years of application is changing its recent generalization much of the daily practices of computers and use social that make information and communication digitally transformed by them (Angel *et al*., 2006).

It refers to the conversion of the physical resources of the computer or computers such as word processing or storage, scalable resources, modifiable and usable on the Internet. In the "cloud computing", it is then treated in a first and superficial approach to move to transfer, information and communication network, seemingly delocalized form and dematerialized (Angel *et al*., 2006; Awerbuch *et al*., 2003).

Communication (in the form of computer data, text, photographs, videos) or also application of parts of applications or even a complete operating system, organization or individual personal computer to a remote location outside moves. That remote location physically relocated to the user and alien to their everyday environments is usually composed of a group of servers (computer farm) on the Internet. It is an authentic and communicative demeanor of most of the data and cultural operations such data, local computers to remote servers (Bar *et al*., 2002).

Theoretical foundations: Although, these remote computing operations had yet have an economic motivation for corporations this text will not analyze the economic, obvious impact on the other hand, techniques that have implemented cloud computing dramatically in recent years. Clearly, the decisive growth of these techniques in business organizations or institutions is motivated by economic considerations of energy, aerospace or infrastructure and saving human and material resources (Bar *et al*., 2002; Baumol, 1972; Buyya *et al*., 2008).

By contrast in this study we propose only establish a first taxonomy of these practices and services related to remote computing, delving into the ontology of these techniques. A second objective of this study is to promote rapid internalization of their communicative uses and possibilities for the scientific community. The semantics of cloud computing brings a conception of old and new architectural concepts of service-oriented network in that regard (Buyya *et al*., 2008).

The classification methodology used is based on the analysis of the services provided, since the technology is basically similar in each proposed section: each step in the classification will develop answers to the sum of one or more services remote computing which equivalent to increasing levels of communicative and cultural abstraction.

So, we pass simple data storage semantics and contextual communication management. We also propose to unravel some of the communicative uses of cloud computing and highlight their specificities since often come from the common trunk of the most recent uses of web applications.

They implement new forms of social interaction and communication and information while existing ones modified. Perceptual and communicative modifications

naturally include our notions of time, space and ourselves: each new interaction network (cloud computing, widgets and web services) that establish power as to spotlight various researchers before the development and current use of the internet, a multiple subject, collective, formed by the accumulation of opinions and identities, so we are no longer one we contain multitudes (Che and Kim, 2009; Deek *et al*., 2011; Yaniv *et al*., 1992)

As a concept, cloud computing or cloud computing is not new: we remember the idea that in a prehistoric in terms of internet, suggested Goossens from which it emerged, so pioneering and still embryonic, a proposal computing as a public utility, public service also relevant technical and commercial history of computing and networking company Sun Microsystems referring to the end of the last decade to the network itself would become the computer, visionary transforming the focus of home computing.

Literally then this cloud computing is as noted a "cloud computing" since it is only the transformation of computing resources such as computers themselves and all they contain including programs, especially the storage in a web service more. It is a concept of American origin linked to the marketing of computer resources that takes years to develop and be part of what they called utility computing: it is a form of access, modification and exchange in many ways is analogous to services traditional carriers such as electricity or water. Naturally here the difference and not a minor feature is that we talk about the development, access and distribution of cultural communications (Buyya *et al*., 2008; Hajiaghayi, 2005).

Obstacles to cloud computing in Latin America

Limited access and poor quality of Broadband Internet: For fixed or mobile broadband penetration is very low in some countries such as Honduras, Nicaragua, Paraguay, Guatemala and the Plurinational State of Bolivia. Countries with higher penetration rates (e.g., Chile, Brazil and Uruguay) have a better chance of successfully migrating cloud services. Even in cases where the adoption of cloud computing services is technically viable their diffusion may be hampered by uncertainty in the legal framework or inadequate regulatory systems (Buyya *et al*., 2008).

Weak legal and regulatory frameworks: These frameworks are often absent in many countries and in the few cases where they exist they are clearly insufficient. According to the Business Software Alliance, Mexico and Argentina are above the ratings of the media in a group of 12 countries analyzed while Brazil ranks ninth in the same group. A worrying aspect is the minimal attention given to the fiscal rules, both from the point of view of the use's supplier. The location of the server between different countries may have strong fiscal consequences that have not yet been perceived by cloud users and providers (Hajiaghayi *et al*., 2004).

Incomplete Service Level Agreements (SLAs): While service providers do not offer SLAs that properly include considerations about security and portability, many ski companies will migrate completely to the cloud. The main points of SLAs should cover the adaptation service, system security and latency, service reliability, data security (including backups), compliance with existing laws (e.g. which governs the protection data), data migration and standardization and technical support to customers (Deek *et al*., 2011).

Privacy and security limited: The security of cloud computing in Latin America is the main concern faced by many companies considering cloud migration which is related to the following risk areas (Hajiaghayi, 2005):

- The external storage of the data
- Dependence of internet
- Multiclient
- Lack of integration with internal security systems

MATERIALS AND METHODS

The present study is characterized as descriptive, it seeks to explain the storage, processing and distribution of information and communication: characteristics of cloud computing. In this sense, Hajiaghayi *et al*. (2004) and Klemperer (2002) note that "descriptive research is to describe situations and events that is specify how and certain phenomenon occurs, i.e., measure and evaluate various aspects, dimensions or components of the phenomenon to investigate".

From this point of view, it is inferred that descriptive studies seek precision in the singularities of the reality studied in institutions of higher education; highlights the features of a particular community or situation, looking for more accurate results, minimizing the inclinations and increasing the degree of reliability.

Similarly, research is located within the so-called field because it is aimed at obtaining information on the current status of the variable social innovation. In this regard, he says Ballestrini (2015) cited by Klemperer (2002), Lavi and Nisan (2014) "are those that relate to the methods to be used when data are collected information directly in reality", i.e., allows observation in direct contact with the

object of study and the collection of testimonies that allow confront theory with practice in the search for objective truth.

RESULTS AND DISCUSSION

The cloud computing, from a chronological point of view were developed for first enterprise networks and utilities individual information and entertainment after as many of those linked to web 2.0 but in any case for desktop computers. One wonders, especially in the case of desktop devices with increased capabilities the reasons why some companies and many individual users have started using these services.

If not essentially about the operational capacity and whether access to complex technologies is resolved and is affordable, look for causes, especially for large companies, linked to economic profitability in the long term (Lavi and Nisan, 2005; Nisan *et al*., 2016). One should think then simply the need for devices, maintenance costs, investment in software and hardware in energy costs over time resulting from operation and cooling physical space.

The economic profitability that emerges from hiring these services must be added other causes of proliferation which are sensitive small businesses or organizations or individual users. Including the flexibility to be able to use and share information and complex communication from multiple geographic locations and multiple devices.

Not surprisingly, companies initially and then individually users started using these services as a second storage as backup for some documents, i.e. was used only as secure data storage. Through mashups that is based on the combination of already existing services, creating new features created from product assembly, always emphasizing efficient and custom applications associated with mobility. That is going storage and remote database to social communication and personalized information in context of mobility and virtual community.

CONCLUSION

Based on the generic uses that demand and despite its breadth it is possible to establish some anatomy and type of cloud computing. First, among the different services to which we referred we find the use of the infrastructure simply as a service: it is the rental of the computing infrastructure resources, data storage and cloud computing service. This would be the most basic level only hired, rented a remote storage. Illustrative examples include services offered by Amazon S3, IBM blue cloud or sun grid. Especially Amazon, the popular company selling books on the internet, has the so-called Amazon Elastic Compute cloud (EC2) where many startups, companies laboratory that start on the network, rent time, space and communication skills on their servers priced very low (at time of writing in March 2009, of 15 cents per gigabyte per month) (Che and Kim, 2009).

Meanwhile, Google has Google App Engine to include in the popular search engine and Web services applications. The result is an environment that emulates and includes the basic functions (create, edit, store, retrieve and distribute communicative content) of an operating system. Their services are totally free within certain limits: currently service applications can use up to 500 MB of storage and are also limited to the Python programming language (Deek *et al*., 2011) although, these ends will be extended. With all the number of applications that can be transferred to the nub and is growing rapidly.

The growth of services based on public cloud, predicting that in the next five years will grow at a rate of 19.4%, making this market exceeds 141 billion dollars in 2019, i.e., practically the double what it achieved during 2015.

"This tells us that these services are essential in today's IT industry and market, not only in terms of cost but because they are necessary to meet the technological requirements of big data and mobility which opened a new business scenario".

The great moment of cloud-based solutions not beyond our regional reality. In fact, it was recently included as one of the top ten trends for Latin America in 2016 and the following years by IDC.

IDC estimates that investment in cloud-based, public and private services will grow this year by 40%, representing a market of 3.6 billion dollars. And I anticipated that by 2018>40% of total business spending IT infrastructure, Software, services and technology is based on cloud solutions, a figure that would reach half in 2020.

REFERENCES

Angel, E., E. Bampis and F. Pascual, 2006. Truthful algorithms for scheduling selfish tasks on parallel machines. Theor. Comput. Sci., 369: 157-168.

Awerbuch, B., Y. Azar and A. Meyerson, 2003. Reducing truth-telling online mechanisms to online optimization. Proceedings of the 35th Annual ACM Symposium on Theory of Computing, June 09-11, 2003, ACM, San Diego, California, ISBN:1-58113-674-9, pp: 503-510.

Bar, Y.Z., K. Hildrum and F. Wu, 2002. Incentive-compatible online auctions for digital goods. Proceedings of the 13th Annual ACM-SIAM Symposium on Discrete Algorithms, January 06-08, 2002, ACM, San Francisco, California, ISBN:0-89871-513-X, pp: 964-970.

Baumol, W.J., 1972. On taxation and the control of externalities. Am. Econ. Rev., 62: 307-322.

Buyya, R., C.S. Yeo and S. Venugopal, 2008. Market-Oriented cloud computing: Vision, Hype and reality for delivering IT services as computing utilities. Proceedings of the 10th IEEE International Conference on High Performance Computing and Communications, September 26-28, 2008, Houston, USA., pp: 5-13.

Che, Y.K. and J. Kim, 2009. Optimal collusion-proof auctions. J. Econ. Theory, 144: 565-603.

Deek, L., X. Zhou, K. Almeroth and H. Zheng, 2011. To preempt or not: Tackling bid and time-based cheating in online spectrum auctions. Proceedings of the 2011 IEEE International Conference on INFOCOM, April 10-15, 2011, IEEE, Santa Barbara, California, ISBN:978-1-4244-9919-9, pp: 2219-2227.

Hajiaghayi, M.T., 2005. Online auctions with re-usable goods. Proceedings of the 6th ACM Conference on Electronic Commerce, June 05-08, 2005, ACM, Vancouver, British Columbia, Canada, ISBN:1-59593-049-3, pp: 165-174.

Hajiaghayi, M.T., R. Kleinberg and D.C. Parkes, 2004. Adaptive limited-supply online auctions. Proceedings of the 5th ACM Conference on Electronic Commerce, May 17-20, 2004, ACM, New York, USA., ISBN:1-58113-771-0, pp: 71-80.

Klemperer, P., 2002. What really matters in auction design. J. Econ. Perspect., 16: 169-189.

Lavi, R. and N. Nisan, 2005. Online ascending auctions for gradually expiring items. Proceedings of the 16th Annual ACM-SIAM Symposium On Discrete Algorithms, January 23-25, 2005, ACM, Vancouver, British Columbia, ISBN:0-89871-585-7, pp: 1146-1155.

Lavi, R. and N. Nisan, 2014. Competitive analysis of incentive compatible on-line auctions. Theor. Comput. Sci., 310: 159-180.

Nisan, N.T., E.T. Roughgarden and V. Vazirani, 2016. Algorithmic Game Theory. Cambridge University Press, Cambridge, England,.

Yaniv, E.R., A. Fiat, R. Karp and G. Turpin, 1992. Competitive analysis of financial games. Proceedings of the 33rd Annual Symposium on Foundations of Computer Science 1992, October 24-27, 1992, IEEE, Ontario, Canada, ISBN:0-8186-2900-2, pp: 327-333.