

TITLE: CLOUD COMPUTING-APPROACH FOR ENTERPRISE APPLICATIONS

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Abstract - Innovations are necessary to ride the inevitable tide of amendment. Most of enterprises are pains to scale back their computing price through the suggests that of virtualization. This demand of reducing the computing price has junction rectifier to the innovation of Cloud Computing. Cloud Computing offers higher computing through improved utilization and reduced administration and infrastructure prices. Cloud Computing is that the total of package as a Service (SaaS) and Utility Computing. Cloud Computing continues to be at its child stage and a awfully new technology for the enterprises. Therefore, most of the enterprises aren't terribly assured to adopt it. This analysis paper tackles this issue for enterprises in terms of price and security. During this paper I discuss the advantages and downsides AN enterprise will have whereas they adopt Cloud Computing in terms of price and Security. In the end, last that Cloud Computing is healthier for medium and little sized enterprises as compared to massive enterprises in terms of each price and information security

Key Words: Cloud Computing, Cost Model, Data Security, Data Availability, Resource Pooling

1. INTRODUCTION AND BACKGROUND

Paragraph comes content here. Paragraph comes content here. Cloud Computing has become one in all the foremost talked about technologies in recent times and has plenty of attention from media also as analysts due to the opportunities it's offering. The research and analysis firm IDC suggest that the marketplace for Cloud Computing services was \$16billion in 2008 and can rise to \$42billion/year by 2012 (Gleeson, 2009). it's been estimated that the price advantages of Cloud Computing to be three to 5 times for business applications and over five times for consumer applications (Lynch, 2008). In keeping with a Gartner announcement from June 2008, Cloud Computing is going to be "no less influential than e-business" (Gartner, 2008). Enterprises are striving to scale back computing costs and for that reason most of them start consolidating their IT operations and later using virtualization technologies. For the great of the enterprises there's a replacement technology to assist them during this i.e. Cloud Computing. Cloud Computing claims to require enterprises search to a replacement level and allows them to further reduce costs through

improved utilization, reduced administration and infrastructure cost and faster deployment cycles (Boss et al., 2007, p2). Cloud Computing may be a term won't to describe both a platform and sort of application. As a platform it supplies, configures and reconfigures servers, while the servers can be physical machines or virtual machines. On the opposite hand, Cloud Computing describes applications that are extended to be accessible through the net and for this purpose large data centres and powerful servers are wont to host the net applications and web services The cloud could be a metaphor for the web and is an abstraction for the complex infrastructure it conceals. There is some small print within the definition to be discussed regarding Cloud Computing. Cloud Computing differs from traditional computing paradigms because it is scalable, will be encapsulated as an abstract entity which provides different level of services to the clients, driven by economies of scale and the services are dynamically configurable (Foster et al., 2008, p1). There are many benefits stated of Cloud Computed by different researchers which make it preferable to be adopted by enterprises. Cloud Computing infrastructure allows enterprises to realize more efficient use of their IT hardware and software investments. This is often achieved by breaking down the physical barrier inherent in isolated systems, automating the management of the group of the systems as one entity. Cloud Computing may also be described as ultimately virtualized system and a natural evolution for data centers which supply automated systems management (Boss et al., 2007, p4). Enterprises must consider the advantages, drawbacks and the effects of Cloud Computing on their organizations and usage practices, to form decision about the adoption and use. Within the enterprise, the "adoption of Cloud Computing is the maximum amount dependent on the maturity of organizational and cultural (including legislative) processes because the technology, per se" (Fellowes, 2008). Many companies have invested in Cloud Computing technology by building their public clouds, which include Amazon, Google and Microsoft. These companies are often releasing new features and updates of their services. as an example, Amazon Web Services (AWS) released a Security2 and Economics3 center on their website to own academic and community advice regarding these issues (Khajeh-Hosseini et al., 2010b, p2). This shows that there are still

many doubts about the prices and security for enterprises to adopt Cloud Computing. Hence, the problems of economics and security in Cloud Computing for enterprises must be researched

As giant organizations are inherently advanced thus, it's vital for Cloud Computing to deliver the important price instead of simply be a platform for easy tasks like application testing or For this reason, problems around migrating application systems to the cloud and satisfying the wants of key stakeholders ought to be explored.

The stakeholders embrace technical, project, operations and money managers further because the engineers' United Nations agency are attending to be developing and supporting the individual systems.

For enterprises political economy or price issue is very important however at an equivalent time client relationships, public image, flexibility, and business continuity and compliance are of same importance (Khajeh-Hosseini).

Hence, enterprises got to perceive however Cloud Computing effects of these however; I shall discuss the subsequent specific problems during this paper.

2. LITERATURE REVIEW

2.1 Definition

There have been many definitions of Cloud Computing by different researchers. Barkley RAD defines Cloud Computing as:

"Cloud Computing refers to both the applications delivered as services over the Internet and the hardware and systems software in the datacenters that provide those services. The services themselves have long been referred to as Software as a Service (SaaS). The datacenter hardware and software are what we will call a Cloud. When a Cloud is made available in a pay-as-you-go manner to the general public, we call it a Public Cloud; the service being sold is Utility Computing. We use the term Private Cloud to refer to internal datacenters of a business or other organization, not made available to the general public. Thus, Cloud Computing is the sum of SaaS and Utility Computing but does not include Private Clouds. People can be users or providers of SaaS, or users or providers of Utility Computing." (Armbrust et al., 2009, p6)

The summary of the features of Cloud Computing described by Stanoevska-Slabeva and Wozniak is (Stanoevska-Slabeva and Wozniak, 2009, p50):

Cloud Computing is a new computing paradigm. Infrastructure resources (hardware, storage and system software) and applications are provided in X-as-a-

Service manner. When these services are offered by an independent provider or to external customers, Cloud Computing is based on pay- per-use business models. Main features of Clouds are virtualization and dynamic scalability on demand.

2.2 Essential Characteristics of Cloud Computing

There are 5 essential characteristics of Cloud Computing which explains there relation and difference from the conventional computing.

- On-demand-self-service

Consumer can provision or un-provision the services when needed, without the human interaction with the service provider.

- Broad Network Access

It has capabilities over the network and accessed through standard mechanism.

- Resource Pooling

The computing resources of the provider are pooled to serve multiple consumers which are employing a multi-tenant model, with various physical and virtual resources dynamically assigned, depending on consumer demand.

- Rapid Elasticity

Services are often rapidly and elastically provisioned.

- Measured Service

Cloud Computing systems automatically control and optimize resource usage by providing a metering capability to the sort of services (e.g. storage, processing, bandwidth, or active user accounts) (Cloud Security Alliance, 2009, p15).

2.3 Cloud Deployment Models

- Public Cloud

The cloud infrastructure is available to the general public.

- Private Cloud

The type of the cloud, that is available solely for a single organization.

Community Cloud

In this type of cloud deployment model, the infrastructure of the cloud is shared by several organizations and supports a specific community with shared concerns.

Hybrid Cloud

This is a cloud infrastructure that is a composition of two or more clouds i.e. private, community or public (Cloud Security Alliance, 2009, p17).

2.4 Cloud Computing Adoption

Cloud Computing is additionally about how it's provisioned and used and not only about technological improvements of information centers (Creeger, 2009, p50). Enterprises must consider the advantages,

drawbacks and other effects of Cloud Computing on their enterprises and usage practices before adopting and using Cloud Computing (Khajeh- Hosseini et al., 2010b, p2). In enterprises, the adoption of Cloud Computing is far obsessed on the maturity of organizational and cultural processes because the technology per se (Fellowes, 2008). Some predict that adoption of Cloud Computing isn't visiting happen overnight, rather it could take 10 to fifteen years before typical enterprise make this shift (Sullivan, 2009, p1). Hence, we are currently at the beginning of a transition period during which many choices have to be made with relation to adoption of Cloud Computing in the enterprise Paragraph comes content here.

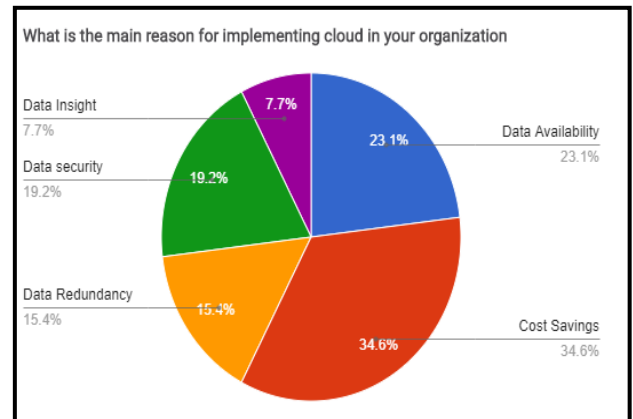


Chart -1: Reasons for Cloud Computing

3.DATA ANALYSIS

In this part of paper, I want to discuss about the survey conducted on cloud computing for enterprise applications ,Where I tried to answer the question i.e. “what are the benefits and drawback regarding cost and data security for Enterprises applications to adopt Cloud Computing for an Organization” To answer this question the most suitable and appropriate contacts were employees which are using Cloud Computing in their organization

As the survey was conducted, there was various questions related to cloud computing and the uses and opinion about cloud computing. Using this question, I was able to summarize how cloud computing would affect an given organization and is it really valuable for ordinations.

3.1 Main reasons for implementation of Cloud

Survey was conducted with IT base employees, it was analyzed that most of the IT based employees do find cloud computing a place in their origination, where there were various points added by individuals. As it was analyzed that Cost savings due to cloud, Data security in cloud and Data Redundancy where the major factors of implementing cloud computing ,many of them thought cloud computing would be best to migrate their enterprise applications to cloud as it would increase their productivity ,As system being on cloud the enterprise would minimize the cost of running indigenus server to host their applications ,where cloud computing would help organization to add up or reduce servers according to the network traffic .

3.2 Fears of Cloud Computing

In survey it was also analyzed that IT base employee agree on factors which should be against implementing cloud in their organization, which where network related issues, where their concerns were regarding that cloud computing would increase the traffic in the network, which would eventually slow down the process. The second concerns was trusting 3rd party vendors for their data, where data privacy and data leakage.

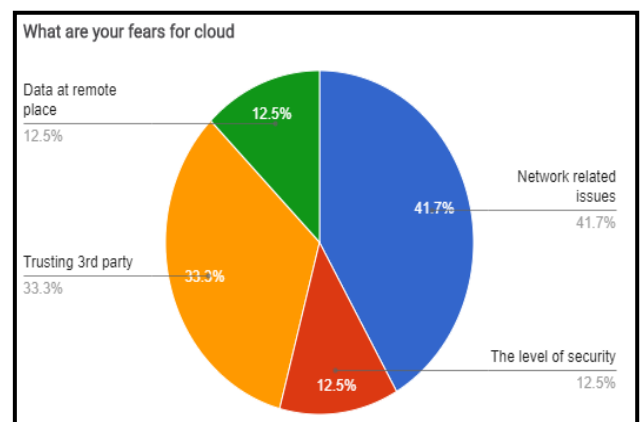


Chart -2: Fears of Cloud Computing

3.3 Cloud services suited for organizations

IT base companies prefer software as service in their organization which helps them to reduce the cost for the production and freedom to discontinue whenever required , they also prefer platform as service for their organization as cloud computing solution ,which would leverage them to select platform and specifications for their needs,

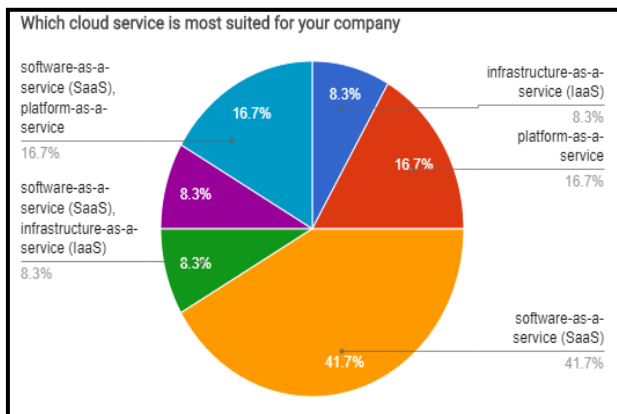


Chart -3: Preferred Cloud Computing Services

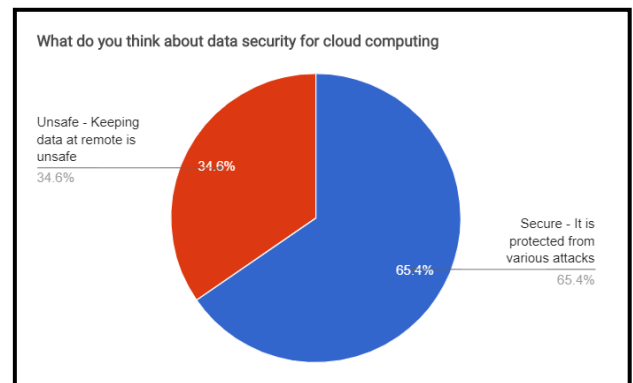


Chart -5: Data security of Cloud Computing

3.4 Cost effect of Cloud Computing

In survey it was analyzed that most of the employees think that cloud computing would reduce the cost of the process and it would be beneficial to improvise cloud computing in the origination ,it was also analyzed will improve the productivity of the product rather than deploying in managing in house

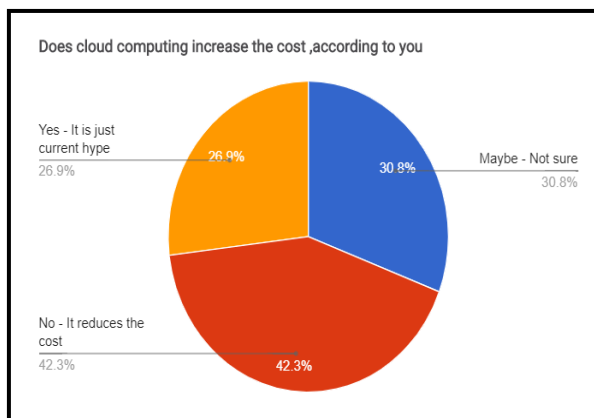


Chart -4: Cost effects of Cloud Computing

3.5 Data security of Cloud Computing

In the survey it was analyzed many different IT base employee think cloud computing is the future in IT industry. Where many people think cloud, computing is secure for their organization, in which 65.4% think cloud is a safe platform for storing the data, where they believe cloud storage is safer than the tradition storage practices. There are also employees who think it is not safe to store data in cloud, where 34.6% employees think it is unsafe. But as a result, majority of employee's cloud is a safe platform for data storage.

4. CONCLUSION

In this research work, I tackled the effects of Cloud Computing in the enterprises. The specific areas I researched during my study were cost and security. I have found that Cloud Computing is a very hot topic now days and many enterprises are interested in it.

The enterprises which are in the process of making a decision to adopt Cloud Computing face real dilemma as they hear different (positive and negative) views from different sources. The first characteristic that tends enterprises to think about Cloud Computing is the cost effect. There are many factors or characteristics which affect the integration of Cloud Computing for enterprises. The Cost Savings is the biggest factor to make Cloud Computing integrated for enterprises and most of the enterprises moved to cloud because of this characteristic of Cloud Computing. I have concluded that enterprises save their capital by not building their data center and not hiring employees for managing them. Along with that flexibility and different pricing models makes Cloud Computing more cost effective for enterprises.

In a nutshell, I will conclude that Cloud Computing is emerging as a big and beneficial technology of present day and future. Much of work is being put in it and one can expect more progress in Cloud Computing technology.

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