INTRODUCTION

The emergence of a relatively new phenomenon called as cloud computing has represented a fundamental shift in ways in which IT(information technology) are scaled, maintained , deployed , developed as well as paid for. Additionally, as the spread of computer services have become increasingly pervasive in organizations, the increased complexity in management of disparate IT architecture along with distribution of software has made the process of computing expensive (Cody et al., 2008). Cloud computing delivers a promise of dramatic reduction of upfront costs in computing and delivery of services (which was considered infeasible before). This eventually helps companies in employment of cutting edge IT technology and services. The other area which proves equally pertinent and relevant is maintenance of service costs, which have proven to be a loss of scarce resources available to business organizations.

LITERATURE REVIEW

Recent literature has suggested that cloud computing is a representation of two existing trends in information technology. The first one is the area of IT efficiency where utilization modern computers are done through the scaling of software and hardware based resources (Agarwal & Lucas, 2005). The other area is business agility, where IT is used as a form of competitive tool through the processes of rapid deployment, use of parallel processing, the usage of business analytics which are computer intensive in nature and other forms of mobile applications which tend to apply real time response to consumer needs (Armbrust et al., 2009). IT efficiency concept embraces ideas which form a part of the green computing concept, since there is dual requirement. The first requirement is location in geographical area which has cheap electricity access, while the power of computing can be accessed over long distances(Cody et al., 2008). However, with the implication of business agility, computing is not only about application of cheap computing. But, it also applies to usage of computational tools which have the ability of rapid scaling as well as deployment (Vouk , 2008). There is also a reduction of upfront investments, which forms a major feature of current IT enterprise set –ups (Buyya et al., 2008).

Research has suggested that most of the espoused ideas are not new in nature as they are similar to the ones espoused by Western Union, which dreamt of becoming a “nationwide level utility”, but was not accepted at that time(Harding & Oswald , 1965). But, the growth of clod computing has been spurred by the onset of an era, where access is possible irrespective of the device and its location.

Cloud computing leads to the lowering of entry level costs for the computer based companies and facilitate the access to analytics in business, which were only available to only very large corporations(Agarwal & Lucas, 2005). The exercises for computation have the involvement of large computing amounts for short periods. Cloud computing also catalyses dynamic resource provisioning. It opens the door to a large number of developing nations, which had remained untouched by the IT revolution (Buyya et al., 2008).

Cloud computing eases the time required form access to a number of hardware resources, with no investments required upfront. This reduces the market entry time for many companies in a dramatic manner. The treatment of IT as an operational expense, rather than capital expense also reduces the costs involved in computing. Many of the start-ups are now being started with investments of a much lower quantum compared to what was seen earlier in the market. The cloud assumes the role of an adaptive kind of infrastructure, which allows multiple users to use in different formats. The users tend to be separate from each other, with the flexibility playing a large part in its success (Armbrust et al., 2009). The flexibility allows loads in computing to be balanced with more number of users joining system. Cloud computing has made the infrastructure setting very standardized, ensuring that addition of computing capacity has become analogous to addition of grids in the system (Kim ,2009) . Also the beauty of the arrangement comes from the fact that system becomes more balanced with addition of users from stochastic view point (Cody et al., 2008). There is also an expansion of economies of scale. The technology virtualization lead to hiding of physical characteristics which form a part of computing platform, but the system is rather abstract in nature representing an emulated platform. The computing platform exhibits behaviour like an independent system, but the configuration can happen based on demand. It can be maintained and replicated in a much easier manner. The related concept can be termed as multitenancy, where there is an instance of software application serving clients (Agarwal & Lucas, 2005). This leads to better utilization of system based resources (seen from memory and processing point of view). These requirements would be different, if the instances of software need duplication of all clients. From the perspective of end user, the computer industry suggests different models for cloud computing (Buyya et al., 2008). These can all be referred to as different layers present in the cloud computing architecture. One of the most common terms used in cloud computing is called as SaaS(Software as a Service). This can be defined as system when application is run in the cloud (Armbrust et al., 2009). There is an elimination of need for installing and running applications on computers of the client (Kim ,2009) . Some of the examples of Saas are enterprise applications like Salesforce or Google Apps. There are also personal applications like GMail, Facebook, or Twitter. PaaS(Platform as a Service) leads to facilitation of deployment along with development. But it is without the additional cost involved in both the acquisition and management of underlying hardware as well as software (Tucker, 2009).

*Figure 1- TYPES OF CLOD INFRASTRUCTURE*

Some of the relevant examples of PaaS are Salesforce’s Force.com, Google App Engine and Amazon’s Relational Database Services. The third model as a part of the cloud computing process is called as IaaS (Infrastructure as a Service). As a part of this, both storage and computing capabilities are offered. Some of the examples are Amazon’s S3 storage service and Rackspace Cloud Servers. Like other computing models in horizon, the technological landscape has been evolving at a very fast pace. There is no possibility for conjecture in terms of changes in technology. But the economic factors shaping the trends are highly logical and inexorable in constitution. But, IT computing also tends to face threats from incumbents entrenched in the industry, whose business is based on more traditional models. This can be due to either the underlying inertia or prospects of job loss (Kim ,2009) .

CONCLUSION

Cloud computing is a revolutionary technology. Although the roadmap of this technology is unclear, but the forces shaping it tend to lead it towards a logical end. Many of the computing applications are generic in nature, which can facilitate application of economies of scale(Armbrust et al., 2009). Although, the research in computer technology has been progressing rapidly, cloud computing represents the business aspect of computing technology. Cloud computing has been progressing rapidly, with impact on multiple stakeholders (Agarwal & Lucas, 2005). Unlike other forms of technology, cloud computing has the requirement of coordinated along with planned response from different governmental agencies. This technology has allowed the entry and growth of a number of smaller firms by eliminating entry level costs (Tucker ,2009). Cloud computing has accelerated growth of the overall IT industry. It can be stated that cloud computing is the representation of a paradigm shift in computing area, with transformational capabilities in business.