

## Objectives:

- To know about Cloud Computing and its difference from previous paradigm.
- To figure out why certain companies must become Cloud Computing providers.
- To observe about Cloud Computing economic model.
- To figure out the preferences of utility Computing over private Cloud.
- To figure out the obstacles, tackle them and find opportunities for growth of Cloud Computing.

## Finding

Cloud Computing is an emerging topic, which is still in its larva stage. With the advantage like dynamic resource management as per required to the user, it is questioned for its security clauses, and more over what the prior need to go cloud as we already have datacenter to handle huge storage and processing. The datacenter hardware and software is what we call a Cloud. It is generally quoted that *“Cloud is a mystery; no one knows what and where it is”*. Even top companies doesn’t seem to have the exact idea about cloud computing. But with the proper implementation it is bound to grow and provide an easy to use platform for both user and provider, while holding a promising market for the near future and being an upmost new revolution in computing world. As a Cloud user, we are relieved of the dangers of over-provisioning and under-provisioning our datacenters. The main goal in this paper is to clarify terms, provide simple formulas to quantify comparisons between of cloud and conventional Computing, and identify the top technical and non-technical obstacles and opportunities of Cloud Computing.

Cloud Computing is a new term for a long-held dream of computing as a utility, which has recently emerged as a commercial reality. Like development of semiconductor gave a new revolution on hardware sector, cloud computing could do the same.

## Summary:

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). When a Cloud is made available in a pay-as-you-go manner to the public, it is Public Cloud; the service being sold is Utility Computing and Private Cloud refer to internal datacenters of a business or other organization that are not made available to the public. Cloud Computing is the sum of SaaS and Utility Computing, but does not include Private Clouds. We argue that the construction and operation of extremely large-scale, commodity-computer datacenters at low cost locations was the key necessary enabler of Cloud Computing. Technology can't stuck at a point so one needs to change along time. Cloud Computing benefits such as elasticity and is economical to move from datacenter-hosted service to the Cloud. Migrating to Cloud can be a good option to any organization as no issues have been recorded against the security of Cloud. It always can be a safer option. In the growth of Cloud Computing several obstacles has been addressed. The obstacles to the adoption, growth, policy and business of Cloud Computing has been adopted. The future of Cloud Computing requires the need of software that will run on clients and a piece that runs in the Cloud. Cloud Computing allows deploying SaaS and scaling on demand without building or provisioning a datacenter.

From a hardware point of view, three aspects are new in Cloud Computing:

- The illusion of infinite computing resources available on demand.
- The elimination of an up-front commitment by Cloud users
- The ability to pay for use of computing resources on a short-term basis as needed.

These factors, combined with statistical multiplexing to increase utilization compared a private cloud, meant that cloud computing could offer services below the costs of a medium-sized datacenter and yet still make a good profit.

## Review:

This paper influences why one should move to Cloud because of never-ending needs of human and the growth of technology. The paper provided a good knowledge about Cloud, their foundation and identifying problems with it. The "*10 Obstacles and Opportunities for Cloud Computing*" really fascinates one with the opportunities that might influence the world in coming time and

how to tackle the hindrances. It also points out the possible economic profit from cloud computing over using private cloud i.e. traditional datacenters.

## **Conclusion/Suggestion:**

From the cloud provider's view, the construction of very large datacenters at low cost sites using commodity computing, storage, and networking uncovered the possibility of selling those resources on a pay-as-you-go model below the costs of many medium-sized datacenters, while making a profit by statistically multiplexing among a large group of customers. From the cloud user's view, it would be as startling for a new software startup to build its own datacenter as it would for a hardware startup to build its own fabrication line.

Given the typical utilization of medium-sized datacenters, the potential factors of 5 to 7 in economies of scale, and the further savings in selection of cloud datacenter locations, the apparently low costs offered to cloud users may still be highly profitable to cloud providers. Second, these companies may already have the datacenter, networking, and software infrastructure in place for their mainline businesses, so Cloud Computing represents the opportunity for more income at little extra cost.

In short, cloud computing takes in account less infrastructure than datacenter and returns higher benefit with the expenditure of very low budget. Cloud computing is future of computer and IT world