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Leader interview

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TheCloudTutorial has tutorials on Hadoop, force.com development platform, Virtualization, Multitenancy, Cloud Computing and SOA, Cloud Computing Types and technologies related to Cloud computing. The site has interviews with leaders of cloud computing vendors - Marc Benioff (Salesforce), Rick Jackson (VMWare) and Raju Vegesna (Zoho invoicing software) and with authors George Reese, Michael Miller, Tim Mather and Toby Volte. Also included is analysis of cloud computing vendors, free cloud computing applications, online storage space providers.

Cloud Computing makes computer infrastructure and services available "on-need" basis. The computing infrastructure could include hard disk, development platform, database, computing power or complete software applications. To access these resources from the cloud vendors, organizations do not need to make any large scale capital expenditures. Organization need to "pay per use" i.e. organization need to pay only as much for the computing infrastructure as they use. The billing model of cloud computing is similar to the electricity payment that we do on the basis of usage. In the description below vendor is used for cloud computing service provide and organization is used for user of cloud computing services.

Cloud Computing has the following characteristics:

A. Availability of large computing infrastructure on need basis: Cloud vendors provide appearance of infinite computing infrastructure availability. This is available to organizations on need basis. This ensures that organizations do not need to set up servers for their peak requirements. As an example consider the official Wimbledon site. The site gets extremely high traffic in the two weeks when the championship happens. For this two weeks period this site will have high server usage. For rest of the year the site will need to only pay for the reduced usage. In general organizations do not need to bear the cost of computing infrastructure for their peak loads. The usage of computing resources can be increased or reduced on need basis, is called elastic computing.

B. Cloud computing uses a "pay-per-use" billing model. Cloud billing model are very different when compared to traditional IT billing techniques. Typical billing models include per user billing, per GB billing or per-use billing (i.e. an organization is billed on each usage of the computing service).

C. Cloud computing typically does not involve long-term commitment to use the computing infrastructure. The vendor does not enforce long-term usage of services.

D. Cloud computing does not involve any significant capital expenditure for the organization. Unlike traditional IT infrastructure, in cloud computing organizations just use the computing services without procuring it. In some sense cloud computing involves renting the computing resources instead of buying them. As the figure below displays, unlike traditional computing model, Cloud computing requires no capital expenditure to acquire initial computing resources. The figure below is from cloud computing wiki.

[Toby Velte](#)
[Raju Vegesna](#)

Cloud Computing Economics
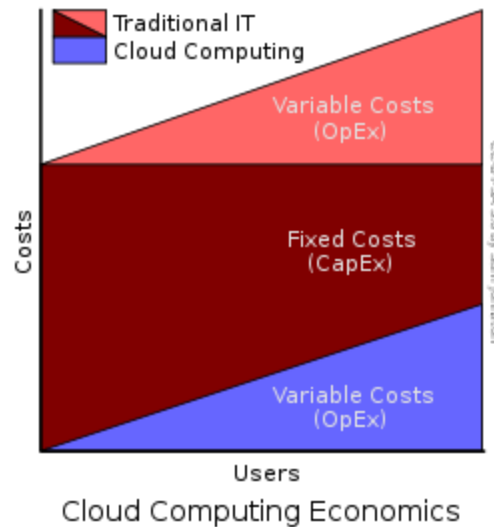
E. Since the cloud computing vendor provides services over the web, these are available from any location.
F. Cloud computing can be ordered online without detailed formal contracts.

Cloud computing provides a level-playing field for smaller organizations. It allows smaller organization access to computing infrastructure without making any significant initial investment. As an example [Mozy online storage](#) provides online backup using cloud computing model.

Many experts believe that cloud computing will lead to increased commoditization of computing resources.

Origin of term

Cloud traditionally depicts the internet. Since cloud computing is built using internet, hence the name.

Examples of Cloud Computing applications

[Hotmail.com](#) was launched in 1996, It is widely considered as the first cloud computing application. The data is stored at the vendor servers, and users could pay incrementally to increase disk space usage. Many other services have emerged in the last decade that allows users to store information (or perform processing) without paying any upfront charges. These are typically consumer oriented services. Twitter, myspace, Wikipedia, youtube, facebook, linkedin, Google docs and blogger all have the characteristics explained above and are examples of cloud computing. Companies that provide [Hosting services](#) for diskspace storage, images, emails are all examples of cloud computing

[Salesforce.com](#), founded in 1999, was the first successful example of providing software as a service in the business to business domain. Salesforce is a CRM tool for sales executives providing features like managing customer details, running promotions etc.

[Google](#) and [Microsoft](#) provide development platforms that can be accessed with "pay-per-use" billing model. All these services are examples of Cloud computing.

[Amazon.com](#) was one of the first vendors to provide storage space and computing resources following the cloud computing model.