



Published on: 29-03-2014

Miss. Saknure Seema Bapusaheb

Assistant Professor,
Rajarshi Shahu Institute of
Management,
Aurangabad (MH) India..
seemasaknure@gmail.com



QR Code for Mobile users

**MPGI International
Conference 2014
(MPGIIC-2014)**

International Conference
"Interdisciplinary approaches
in Commerce and Management"

On
28th & 29th March-2014



Conflict of Interest: None Declared

Cloud computing- The rising technology.

Miss. Saknure Seema Bapusaheb

Assistant Professor, Rajarshi Shahu Institute of Management, Aurangabad (MH) India.

ABSTRACT

This Paper discussed the emerging new technology "Cloud computing". Cloud computing is a new technical platform for various innovative, creative uses. Cloud computing is sometimes also used in references to a class of distributed data processing platforms that do not rely on shared memory nor share storage. It also provides a low barrier to entry for system administration, providing an easy interface to manage multiple computers. Exactly meaning of cloud computing? Suppose when you store your personal information online instead of on your home computer, or use web mail or social sites like Facebook you are using "Cloud computing" services. Cloud computing refers to the delivery of computing resources over the internet to give rise to certain privacy implications. Cloud computing is very popular because it can reduce the cost & complexity & operating computers, networks since cloud users do not have to invest in information technology infrastructure, purchase hardware, or buy software licenses, customization, flexible use & solutions that can make use of new innovation. This paper also discussed the concept of cloud computing, deployment of cloud services, three types of cloud computing, benefits of Cloud computing, Virtual organization and cloud computing.

Keywords: Cloud Computing, Technology, computer, resource, Service.

Cite this article as:

Miss. Saknure Seema Bapusaheb,
Cloud computing- The rising technology.
Asian Journal of Management Sciences.
02 (03 Special Issue); 2014; 152-155.

Introduction

Cloud computing is the transmission of computing service over the internet. Cloud services allowed using of software and hardware that are managed by third parties at remote locations. For example: Online file storage, face book, twitter, web mail & online business applications. The following definition of cloud computing has been developed by the U.S. national Institute of Standard & Technology (NIST); “Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (Ex.- Network, servers, storage, applications & services) that can be rapidly provisioned & released with minimal management effort or services provider interaction”.

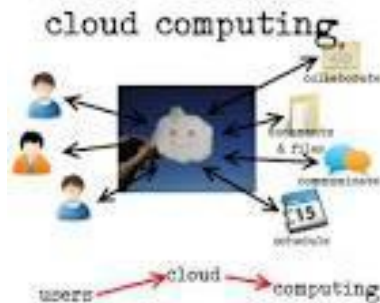


Figure 1. Cloud Computing

Above cloud computing figure shows how the users to cloud and computing interact. Cloud computing means a type of where different services such as servers, storage & application are delivered to an organization computers and devices through the internet. Working of cloud computing is to provide conventional super computer or high performance computing power normally used by research facilities in consumer-oriented applications such as financial rang of investment to deliver personalized information, to provide data storage.

1) Main Characteristics of cloud computing:



Figure 2. Cloud Computing

- a) On demand self service allows self services means that organizations can demand their own computing resources.
- b) Broad network access allows services to be offered over the internet.
- c) Resource pooling means that customer draw from a pool of computing resources.
- d) Rapid elasticity & measured service can be scaled large or smaller.

2) Deployment of cloud services:

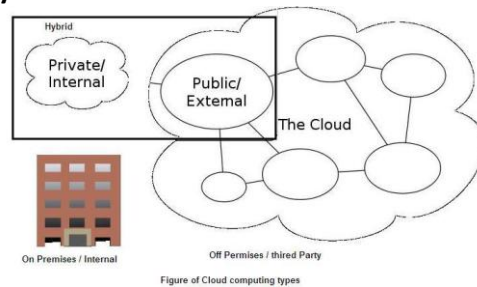


Figure 3. Cloud computing types

Cloud computing offered different types for computing public, private, community, and hybrid. Following table1 shows brief idea about deployment.

Different forms	Use of cloud
Public cloud	Public clouds are run by third parties, and applications from different customers are Likely to be mixed together on the cloud's servers, storage systems, and networks. Public clouds are most often hosted away from customer premises.
Private cloud	Private clouds are built for the exclusive use of one client, providing the utmost Control over data, security, and quality of service. The company owns the Infrastructure and has control over how applications are deployed on it.
Hybrid cloud	Hybrid clouds combine both public and private cloud models. They can Help to provide on-demand, externally provisioned scale. The ability to augment a private cloud with the resources of a public cloud can be used to maintain service Levels in the face of rapid workload fluctuations.

Table 1: Computing on the cloud services:

3) Using cloud computing services:

The following Table 2 shows the different technologies used in different cloud computing service types.

Service Type	IaaS	PaaS	SaaS
Service category	Vm Rental, Online storage,	On line operating environment	Application and software Rental
Service customization	Server template	Logic resource template	Application template
Service provisioning	Automation	Automation	Automation
Service monitoring	Physical resource monitoring	Logical resource monitoring	Application monitoring
Service level management	Dynamic orchestration of physical resources	Dynamic orchestration of logical resources	Dynamic orchestration Of application

To Be Continued...

Service resource Optimization	Network Virtualization server, virtualization storage	Large-scale Distributed file system, database middleware	Multi-tenancy
Service security	Storage encryption & isolation, Vm, Isolation VLAN, SSL/ SSH	Data isolation, operating environment isolation, SSL	Data isolation, Operating environment isolation, SSL, web authentication & authorization

Table 2: Architectural layer of Cloud computing

4) Cloud computing as a service:

a) Software- as- a- service (SaaS) application served over the internet like Google document. SaaS model is something referred to as “On demand software” and priced on the basis of pay-per-use .Cloud provide install and operate application software in the cloud and cloud users access the software from cloud client. Load balancers distribute the work over the set of virtual machines this process is transparent to the cloud user, who see only one access point. To accommodate a large number of cloud users, cloud application can be multitenant, that is, any machine serves more than one cloud user organization. It is common to refer to special types of cloud-based application software with a similar naming convention: Desktop as a service, business as a service, test environment as a service, communication as a service.

b) Platform- as- a- Service (PaaS) specialized APIS for building applications on the internet like Google application engine. In the pass model, cloud providers deliver a computing platform usually include operating system, programming language execution environment, database and web server. Application developers can develop and run their software solution on cloud platform without the cost and complexity of buying and meaning the underlying hardware and software layers. PaaS offers storage resources scale automatically to match application demand so that the cloud user does not have to allocate resources manually.

c) Infrastructure as- a- service (IaaS) low-level service for basic storage and computing. Verities of service are now available. Ex. Google compute engine. Infrastructure as- a- service offer additional resources such as virtual machine disk image library, raw and file based storage, firewalls, load balancers, IP address, virtual local area network and software bundles. IaaS-cloud providers supply these resources on-demand from their large pools installed in data centers. For wide area connectivity, customers can use either the internet or carrier clouds.



Figure 4. Cloud computing service types

5) Virtual organization and cloud computing:

☐ Social networks like face book, twitter examples of platform that use some what definition of organization similar to virtual organization.

☐ Virtual organization can form in variety of ways usually as a function of roles played in interaction

Figure 5. Cloud Computing

☐ A virtualization might be start up company that uses an infrastructure could to deploy its computing service because the economic model is right.

☐ A network of thousand of supply chain partners could be considered to be a virtual organization.

☐ A virtual organization could be composed of scientists who collaborate from their labs across the globe in compute & data intensive interaction hosted in a cloud.

II. Cloud computing Advantages and disadvantages:

Every technology has their benefits and limitation. Let’s take a look Advantages of cloud computing as bellow.

1. Cloud Computing Advantages:

- ☐ Lower software cost.
- ☐ Improved quality.
- ☐ Familiar with World Wide Web.
- ☐ No maintenance issue.
- ☐ Unlimited storage capacity.
- ☐ Increase data security.
- ☐ Universal access to document.
- ☐ Instant software update.
- ☐ Do not need to purchase software.

2. Cloud Computing Disadvantages:

- ☐ Low speed might corrupt the data or make a trouble.
- ☐ Can be security problem.
- ☐ Not much more feature.
- ☐ Required internet
- ☐ Can be slow speed.

III. Acknowledgement :

I especially thankful to our institute R.S.I.M. Aurangabad, for providing me all the resources required for this paper. Thanks to my family and colleagues for all the support. I would like to thank all those individuals without their help the creation of this paper would not have been possible.

IV. References :

1. Lijun Mei, W.K. Chan, T.H. Tse, "A Tale of Clouds: Paradigm Comparisons and Some Thoughts on Research Issues", To appear in Proceedings of the 2008 IEEE Asia-Pacific Services Computing Conference (APSCC 2008), IEEE Computer Society Press, Los Alamitos, CA
2. M.A. Vouk, "Virtualization of Information Technology Resources", in Electronic Commerce: A Managerial Perspective 2008, 5th Edition y Turban, Prentice-Hall Business Publishing, to appear.
3. GoogleAppEngine, <http://appengine.google.com>
4. Wikipedia, "Cyberinfrastructure"
"<http://en.wikipedia.org/wiki/Cyberinfrastructure>
5. Virtual Computing Laboratory (VCL), <http://vcl.ncsu.edu>
6. <http://www.youtube.com/watch?v=0FacYAI6DY0>
7. <http://www.networkworld.com/news/2008/111208-private-cloudnetworks.html>
8. GoogleAppEngine, <http://appengine.google.com>
9. Wikipedia, "Cyberinfrastructure"
"<http://en.wikipedia.org/wiki/Cyberinfrastructure>
10. Virtual Computing Laboratory (VCL), <http://vcl.ncsu.edu>
11. <http://www.youtube.com/watch?v=0FacYAI6DY0>
12. <http://www.networkworld.com/news/2008/111208-private-cloudnetworks.html><http://arstechnica.com/microsoft/news/2009/10/voice-recognitiongets-cloudy-will-soon-rivalhumans.ars>
13. http://en.wikipedia.org/wiki/Cloud_computing