



## CLOUD COMPUTING AND LIBRARIES

**P. N. Dhote**

Mahatma Gandhi Arts and Commerce college Parseoni, Dist.-Nagpur (India)  
pradeep.dhote256@gmail.com

### Abstract:

Cloud computing system is an important aspect for the colleges and universities. This technology offer ample opportunities for the users. The user using cloud by the means of different useful sites on internet they are engage. Today numbers of applications are hosted in the cloud, services like Flickr, Dropbox and Google Docs. These services use the huge and being accessed by millions of people over the web, around the world. This is the evolution not revolution in the libraries of universities and colleges around the globe. Cloud computing technology is beneficial for libraries as it offers various opportunities for libraries to connect their services with clouds. Likewise other sectors with different background and economy take much utilization. This paper presents an overview of cloud computing and enhance its resource building capacity with the evolution in the IT sector.

**Keywords:** Computer, internet, cloud, students and librarian, libraries, Information Communication Technology

### Introduction:

The libraries play an important role in universities and colleges offering one of the best services for the librarian as well as students (Dakhole 2012a). The term 'cloud computing' is nothing but use of software as a service which is hosted by cloud. Cloud Computing can be defined as "A model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction." Fundamentally cloud computing is based on Shared resources, on-demand, elasticity, networked access, and usage-based metering.

1. Shared resources: These are nothing but the shared pool of IT resources, such as applications used, processors, storage and databases.
2. On-Demand: This allows users to use require resources as per the requirement. As the requirement is finished user may be self service fashion.
3. Elasticity: This includes the user for their demand permitting them for cloud to satisfy peak demands and then release resources when demand subsides.
4. Networked access: This allows the cloud to be accessible widely, primarily though the internet.
5. The usage-based metering: Allows users of the cloud to pay for the services when needed and used and to release them when they are no longer need, resulting in many benefits including cost and storage efficiency.

### Cloud Computing:

As the information system develop with time the computing system is also evolved starting from client server, Internet, Web

services, Grid computing, Network computing, Utility computing and now Cloud computing. This is nothing but the service through cloud to provide shared resources, software and other information to user as per requirement. The use of information technology in libraries is today's need (Dakhole 2014). With the advancement in this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly. Cloud computing has practical approach to experience direct cost benefits. Data center from a capital intensive set up to a variable priced environment (Goyal and Jatav 2012).

Cloud computing is the use of computing resources (hardware and software) that are delivered as a service over a searching information as well as in identifying users' needs should work hand in hand with software professionals in organizing the so-called 'anarchy' of the Internet network (Kumar and Mandal 2013).

Buyya (2009) defined 'Cloud computing is a parallel and distributed computing system consisting of a collection of inter-connected and virtualized computers that are dynamically provisioned and presented as one or more unified computing resources based on Service Level Agreements (SLA) established through negotiation between the service provider and consumers.

The concept of cloud and libraries has generated a new model called cloud libraries. Though the usages of cloud computing may vary with the libraries nature, services and information needs but most common usages of cloud computing with in libraries can be development of digital libraries, corporate cataloging, acquisition, storages and sharing the resources on virtual environment on the web.

The need of cloud computing may occur due to the information explosion, problems in accessing the information, save the time of the users and staff, resource sharing problems, problems in library resources management, complex demand of users and attraction of users towards cutting edge technologies (Kaushik and Kumar 2013).

**Advantages of cloud computing:**

1. It is delivered over a telecommunications network.
2. Users can trust fully on the service for data access and/or data processing
3. The data used is under the legal control of the user.
4. Increased storage.
4. Most of the resources are virtualized as there is no need of any awareness about the technology used and its way of working. This is acquired under relative flexibility.

**Characteristic of cloud computing:**

1. Measured service.
2. Universally network access, using any device like computer, notebook, mobile etc.
3. Resource according to demand.
4. Rapid elasticity as per demand.
5. User's On-demand self-service
6. Service oriented
7. Virtualized
8. Flexible

**Types of cloud computing:**

1. Private cloud
2. Public cloud
3. Hybrid cloud

These types of cloud computing has several benefits like reduced cost, increased storage and flexibility (Goyal and Jatav 2012)

**Cloud Provider:**

There are several cloud providers such as Rackspace, IBM, Google, Amazon, Microsoft etc. for different category offering several services.

**Future aspects of cloud computing:**

Though the cloud computing is the emerging trend in library and information science, there will be need of new users for its sustenance in future competitive streams of IT sectors. For this need of users there is need of –

1. Free Training
2. Support
3. Account Security
4. Integration
5. Updates alert
6. Regular messaging for updates and events
7. Reminders
8. Webinars
9. Optimum return for users.

10. Users oriented and centered development in the service.

11. Base plan Charges after specific level

**Discussion:**

69

Today's era is of digitalization in every sector, so libraries also to get digital by using computational technologies (Dakhole and Dhote 2015) Despite the fact that cloud computing has lot of advantages it is dependent upon network connectivity, security, legal issues (ownership of data), latency etc. which needs to be carefully reviewed. Library plays an important role in educational career of student so the implementation of advance computation is necessary (Dakhole 2012b) and can be done by using the cloud computing. In a study shown that librarians in Indian central universities are engaged in various cloud computing activities. This represents strong willingness to adopt cloud computing technology in the libraries (Yuvaraj 2013)

**Conclusion:**

This study is helpful in identifying and generating cloud based services for libraries. Digitalization of the libraries has been already started by means of open access to the publications, web technology, and e-publishing facility. This is important that libraries chosen solution improving service as well as ensuring its choice for long term development. Cloud computing technology has much more advantages for the libraries which provide more efficient and save economy and time of the users.

**Acknowledgement:**

Author is thankful to principal Prof. L.B. Jadhav, Principal, M.G. College Parseoni, for his kind motivation during the present research work. Thankfulness is due to Prof. V. A. Dakhole, Librarian Shri Shivaji Science college, Congress Nagar, Nagpur for his help during the data collection and interpretation of data.

**References:**

- Buyya, R., Yeo, C.S., Venugopal, S., Broberg, J. and Brandic, I. (2009).** Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility. *Future Generation Computer Systems*, 25, 599-616.
- Dakhole V. A. and Dhote P. N. (2015)** The Changing Role of Library Professional in Challenging Digital Era. *International Journal of Research in Social Science and Information Studies*, Sp. Issue 1 30-33

**Dakhole V.A. (2012a)** Role of Library Professionals in the Future Educational and Corporate Environment” “International Conference Journal of Biological and Physical Science Paper” Publish On “ Global Change : Impact On Biodiversity Culture and Technology” on Dated 03, 04 and 05 November 2012. ISSN No. 2319-636

**Dakhole V.A. (2012b)** Usage Role of Library Professionals in the Future Educational and Corporate Environment” “International Conference Journal of Biological and Physical Science Paper” Publish On “Global Change : Impact On Biodiversity Culture and Technology” on ISSN No. 2319-636X.

**Dakhole V.A. (2014)** Usage of Information and Communication Technology in College Libraries” Research International Journals Lokavishkar International E-Journal Vol.III / Issue I/ Jan-Feb-Mar 2014 ISSN : 2277-727X Page No. 73-77. Impact Factor 1.864

**Goyal L. C. and Jatav P. K. (2012)** Cloud Computing: an Overview and its Impact on

Libraries. International Journal of Next Generation Computer Applications ISSN 2319-524X **1 (1)** 9-15

**Kaushik, A. and Kumar, A. (2013).** Application of cloud computing in libraries. *International Journal of Information Dissemination and Technology*,3(4), 270-273. 70

**Kumar and Mandal (2013)** Development of cloud computing in integrated library management and retrieval system. International Journal of Library and Information Science, Vol. 5(10), pp. 394-400, November, 2013 DOI: 10.5897/IJLIS2013.0367 ISSN 2141 -2537 ©2013

**Yuvara M. (2013)** Cloud Computing Applications in Indian Central University libraries: A study of librarians` use. *Library Philosophy and Practice (e-journal)*. Paper 992. 2-20.