Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management
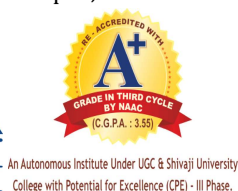
Cloud Computing in Academic Libraries: A Review

Vichare Dattatray. T

MA, MLIS, M.Phil, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:

ABSTRACT

Now in the age of information and communication technology Cloud Computing is the most popular technology used to deliver the library services in the effective manner. Various types of technologies like Web 2.0, utility computing, grid computing etc are included in the Cloud Computing. Libraries are able to give their services promptly with the help of Cloud Computing technology. Now libraries using Cloud Computing technology to attract their users. Due to explosion of information, problems in accessing the information, need of cloud computing is increasing day by day.

KEYWORDS*: Information communication Technology, cloud computing, Web 2.0*

1. INTRODUCTION

Computer technology has become a part and parcel of our life. This technology is playing an important role in today's era of information dissemination. Libraries are getting inter connected through web and in gaining access to Internet. They are providing different services to users like e-Books, e-journals, database etc. but computerization may prove expensive in certain ways,. Hence, to curtail the expenses, a new technology, i.e. Cloud Computing is gradually becoming popular in usage. Cloud Computing means using a remote or outside computing system to monitor or perform computer-related tasks within an organization, without using its own computing system. This entails using computing sources and systems from the cloud server located at a place. Here 'Cloud implies a server- community which is located at a remote place where the entire computing system, sources, command, word processing and data storage system is available.

With the access to internet, one can use the system from anywhere. Cloud Computing means using the sources of computing with the help of cloud server by means of computer, net books, laptop or smart phone future services provided by libraries will become more user centric, more professional and more effective etc. And we all believe that libraries will create more knowledge benefits for our country with the help of Cloud Computing.

2. NEED FOR CLOUD COMPUTING IN LIBRARIES

Library is a most important academic and scientific research base, charges for providing information services for its users. In the past, most libraries insisted that their service is based on their own library resources. So librarians scarcely considered users demands. But today, digital libraries have changed this view point and librarians usually need to collect as much information as they can according to users.

Requirements Then they will analyze the information and sort out them. Finally, they will provide them for users in some certain technical methods. However services in digital libraries will increasingly focus on users, demanding in future .And the ultimate goal of digital library is to offer appropriate, comprehensive and multi-level services for its users. With the introduction of cloud computing to digital library, services of libraries will have a new leap in the near

3. ROLE OF CLOUD COMPUTING

Cloud computing is a computing new in technology and it is known as 3rd revolution after PC and Internet. Cloud computing has large potential for libraries. Libraries may put more and more content into the cloud. Using cloud computing user would be able to browse a physical shelf of books, CDs or DVDs or choose to take out an item or scan a bar code into his mobile device. Many libraries already have OPAC and share bibliographic data with OCLC. More frequent online catalogues are linked to consortium that share resources. Data storage cloud is a main function of libraries, particularly those with digital collection storing large digital files can stress local server infrastructures. Moving data to the cloud may be a leap of some library professionals. Cloud computing or IT infrastructure that exists remotely. Often gives users increased capacity and less

need for updates and maintenance, and has gained wider acceptance among librarian.

4. Advantages of Cloud Computing Libraries
➤ Cost saving, flexibility, User centric, openness and transparency
➤ Anytime anywhere availability
➤ Connect, Converse and create and collaborate Lower software cost, Improve performance
➤ Fewer maintenance issue, instant software updates, Increased data safety
➤ Enterprise grade Service and management, Flexible and resilient in disaster recovery Reduces hardware and maintenance cost, Compliant facilities and processes
➤ Faster provision of systems and applications, high secured infrastructure

5. Examples of Cloud libraries:
1. OCLC
2. Library of Congress (LC)
3. 3 Ex-libris
4. Polaris
5. 5 Scribe
6. Discovery Service
7. Google Docs/Google Scholar
8. World-Cat
9. Encore

Cloud services free business from having to invest in hardware or install software on their devices. They reduce maintenance and hardware upgrading needs because the solutions are all web-based

6. Models of Cloud Computing
I. Infrastructure as a Service (IaaS)
This service model comprises a wide range of features, services and resources which support to build an virtual infrastructure for computing. Organizations can be developed entire infrastructure on demand. E.g. Amazon Web Services with wide variety of options to choose other examples are Library of Congress and ExLibris.

II. Platform as a Service (PasS)
Platform as a Service model helps in generating the computing platforms to run the software and other tools over the internet without managing the software and hardware at the end of user side. Amazon Elastic Cloud, EMC Atoms, Astana and Go Grid are the examples of PaaS model which providing platforms to users in maintaining and supporting their IT infrastructure without spending huge amount for buying hardware, software and related technology

III. Software as a Service (SasS)
In this service a user do not own the software but uses it as and when required the access via cloud computing either on a pay-per-usage basis or by the way of annual subscription. The software is owned by the service provider.
E.g. A typical example of Sass is the Google Apps, Microsoft Share Point, Koha, Google Scholar, Biblios net

7. Types of Cloud Computing
I. Public Cloud: A public cloud is one based on the standard cloud computing model, in which a service provider makes resources, such as applications and storage, available to the general public over the Internet.

Public cloud services may be free or offered on a pay-per- usage model. The main benefit of using public cloud is no wasted resources because you pay for what you use.

II. Private Cloud: This kind of development model solely developed and managed by a single organization or a third party regardless whether it is located in premise or of premise. There are several reasons behind the development of private cloud for an organization some key reasons include optimize utilization of existing in – house resources, security concerns including data privacy and trust also make private cloud an options for many firms, data transfer cost from local IT infrastructure to a public Cloud is still rather considerable, organizations always require full control over mission critical activities that reside behind their firewalls and for research and teaching purposes.

III. Hybrid Cloud: A hybrid cloud is a cloud computing environment in which an organization provides and manages some resources in house and others provided externally. Hybrid cloud is a composition of two or more clouds that remain unique entities but are bound together offering the benefits of multiple development models.

IV. Community Cloud: The cloud infrastructure is shared between the companies of the same community, For example, all the government organization in a city can share the same cloud but not the non-governmental organization.

8. Conclusion
Cloud computing technologies promises new opportunities and service offerings for the library and information service practices. The reward of cloud based library services are really worth to the future of libries. They can help companies achieve more efficient use of their. It hardware and software investments and provide means to accelerate the adoption of innovations. Library is one of the service areas where cloud computing techniques will be fully enforced.

References
[1] Dubai, sangria Shankar (2012). Cloud Computing and beyond, New Delhi : I. K. International Publishing House

[2] Gosavi, Nandkishore and Shinde Seetal (2012) : Use of cloud computing in Library and Information Science Field. International Journal Digital Library Services Vol. 12 No-3, Sept .2012

[3] Khan, S. Khan. S & Galibeen, S (2011). Cloud Computing an emerging technology: Changing way of libraries collaboration. International Research: Journal of Library and Information Science.

[4] Mitchell, Eric T. (2011) Cloud based services for your library. New Delhi: Ess Ess Publications

[5] www.Cloudcomputing.com on dated 21/01/2019