# CLOUD COMPUTING AND LIBRARIES

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**Abstract -** *Technologies have brought the whole world together. Each and every field has adopted the technological development for the betterment of its use. In this case, Libraries are not any exception for this. Libraries do have technological impact on it. It's travelling from the physical collection to the virtual collection. All these efforts are taken only for the user's satisfaction. Advent of cloud computing in the libraries has formed a new technological path for the betterment of the libraries and its users. This paper highlights the cloud computing and its uses in the library.*

*Key Words***:** Cloud computing, Google drive, OCLC, World cat, Library of Congress.

## 1.INTRODUCTION

Cloud computing is a kind of Internet-based computing that provides shared processing resources and data to computers and other devices on demand. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in third-party data centers It relies on sharing of resources to achieve coherence and economy of scale, similar to a utility over a network.

Today we are living in the age of information. Information technology plays a very vital role in handing library resources ranges from collection, storage, organization, processing, and analysis of information dissemination. Library field facing many challenges in the profession due to applications of information technology.

## 2.OBJECTIVES OF THE STUDY:

1. To define the concept of cloud computing.
2. To understand cloud computing and its channels and models.
3. To discover the relationship between cloud computing and Libraries.

## 3.WHAT IS CLOUD COMPUTING

The term "cloud computing" is everywhere. In the simplest terms, cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive. Cloud computing is the way to offer various services on the virtual computer or machine where large amount of data can be stored and with the access of internet one can access the required data anytime and anywhere.

Cloud computing is a server which is placed on the cloud. It is not like a local server which has a limitation in order to store data, share resources, space problem etc. cloud storage has a huge amount of space available to store large amount of data. Users can retrieved the data anytime and anywhere with the help of internet connectivity. There is no possibility of losing the data once it is stored on cloud. Local storage servers can get crashed due to technical errors but cloud servers are always back up enabled.

Cloud computing offers its services and resources to its users over the internet. Services and resources are provided to the users on demand and user is charged only for the used services.

## 4.CHANNELS OF CLOUD COMPUTING

There are various channels by which different companies/organizations/Libraries are offering its resources and other material on cloud. Whether it is commercial or non-commercial purpose, the objective is to be beneficial for end user. Some of the channels of cloud computing are as follows.

### 4.1.Google Drive:

This is a pure cloud computing service, with all the storage found online so it can work with the cloud apps: Google Docs, Google Sheets, and Google Slides. With the help of internet connectivity, one can access his/her personal data anytime. It's like your backup storage. Even if the data is lost from the computer hard disk, one can easily take back up from the Google Drive.

### 4.2.Apple iCloud:

Just like Google Drive, Apple iphone company has also given facility to its users to store their data on cloud by using its iCloud. Apple's cloud service is primarily used for online storage, backup, and synchronization of your mail, contacts, calendar, and more.

### 4.3.Hybrid:

Hybrid services like Box, Drop box all say they work in the cloud because they stored a synced version of your files online, but they also sync those files with local storage. Synchronization is a cornerstone of the cloud computing experience, even if you do access the file locally.

### 5.MODELS OF CLOUD COMPUTING:

There are number of models are operating but the following three models are highly used to deliver cloud based services. These models are as follows.

### 5.1.Software as a Service (SaaS):

In this application, user or customer can access and use any software available on the cloud with the help of vendors. There is no compulsion for the user to buy the software and to follow the installation procedure. Users can make changes in the configuration. Different users can have different settings in the configuration. Personal customization is allowed.

### 5.2.Platform as a Service (PaaS):

Various cloud vendors are offering computing services over the internet. These vendors provides platform to operate or run software and other technical tools without managing it. This platform enables users to maintain its infrastructure over the web without purchasing software, hardware and other technology. Some of the vendors are Google, Amazon etc.

### 5.3.Infrastructure as a Service (IaaS):

This model offers various technologies, services and resources. It helps users to build its virtual infrastructure over the web. Companies/Organizations/Institutions can build their infrastructure on demand with customization. IBM, HP, Google Base are some of the examples of it.

### 6.CLOUD COMPUTING AND LIBRARIES:

Now cloud computing has become the vital source for sharing resources virtually, Libraries are also not lagging behind in order to take advantage of cloud services. Many libraries in the world started adopting the cloud services for its users. Earlier, due to physical, geographical barrier, sharing resources and information was quite a tough job for the libraries. But now with the help of cloud services, all the resources are kept on cloud storage so that users can get anytime, anywhere access of the required resources without any physical and geographical barriers. Now, most of the functions of the libraries are on cloud based like, OPAC, Acquisition, Cataloguing etc. it saves the time of the user as well as it is cost saving. The most important thing for the libraries is huge amount of space is saved.

Cloud computing can be applied to digital library resources to improve information sharing capabilities, improve resource utilization. Cloud computing service provider is best library automation solution provider in terms of acquisition and processing modules. The software is compatible with various library standards such as MARC21, Z39.50.

### 7.CLOUD OPAC AND CLOUD ILS (INTEGRATED LIBRARY SYSTEM):

The past year, more and more ILS vendors have started offering cloud-hosted versions of their products. OCLC joined several other vendors last year when they began offering a cloud-based ILS tools that complement their existing cataloging tools (e.g. World Cat)

OCLC, Web OPAC World Cat and Library of Congress is one of the best example for making use of cloud computing for sharing libraries data for years together. For instance, OCLC, Web OPAC World Cat service is one of the popular service for searching library data now is available on the cloud. OCLC is offering various services pertain to circulation, cataloguing, acquisition and other library related services on cloud platform through the web share management system

### 8.ADVANTAGES OF CLOUD COMPUTING IN LIBRARIES:

### 8.1.Cost saving:

Compare to commercial databases and software's, cloud computing is much more cost saving in this regard.

### 8.2.Flexibility and innovation:

It is flexible in nature. One can access information anytime, anywhere and any place.

### 8.3.Openness:

Cloud computing is always beneficial because of its openness and transparency.

### 8.4.Transparency:

It maintains transparency. Nothing is hidden from the users.

### 8.5.Interoperability:

Its interoperability always makes it most reliable amongst its users.

### 8.6.Representation:

Cloud computing is the representation of such a services where users can demand and pay as per their requirement.

### 8.7.Availability anytime anywhere:

One can get the required information anytime and anywhere as it is 24X7 available.

### 8.8.Connect and Converse:

Cloud computing connects the people with each other. People don't have to face any kind of barrier while sharing their resources.

### 9.EXAMPLES OF CLOUD LIBRARIES:

Some of the examples of the cloud enabled libraries are as follows.

1. OCLC
2. Library of Congress (LC)
3. Scribd
4. Discovery Service
5. Google Docs/Google Scholar
6. World cat

### 10.Conclusion:

This study provides cloud computing concepts and implications of cloud based applications in library Services. Advantage of Cloud based services is digital library, social networking and information communication. Cloud computing has become the vital source in the world of advance technology. Gradually, libraries have also started adopting this technology in order to manage, preserve and share its resources to the users and to provide better and quick services to the users. Users are also taking advantage of the virtual libraries to save their time. Library and information science professionals should take the advantage of cloud computing technology to provide better library services to its users.

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