

Role of Cloud Computing in Big Data Handling in Context with Library Science – Theoretical Aspects

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Abstract:

Now a days there is a lot of changes take place in the environment, library is known as a storage house of knowledge and people does not ignore the importance of library but now a day's people doesn't have a time because of their busy schedule life, so they does not come at place where library is established but they access knowledge by using virtual source. Cloud is a technology which gives numerous benefits to the users just like large scale data storing, back up storing capacity, prevention from uncertain event. Big data can be stored at library websites and their virtual resource and that data is to be safely stored with the help of cloud computing technology. Cloud computing technology is a technology which provides a virtual platform on the library websites and manages all the data which is accessible promptly by using internet. Cloud services provider provides services to client and payment is according to "pay as peruse " so in big data handling is easy with the help of using cloud computing technology in library science. Now a day's library are very powerful in their E- content and therefore E- content can also upload and manage with the help of cloud computing services. Cloud computing gives numerous benefits to library sciences.

Introduction:

Cloud computing is define by National Institute of Standard & Technology (N.I.S.T) "cloud is define as a model for enabling ubiquitous convenient on demand network access to a shared pool of configurable computing resource (e.g. network, server, storage, and applications) that

can be rapidly provisioned and released with minimal management effort or service provider interaction ‘‘

Cloud computing is now a day’s new buzz word that was used in various field, cloud computing provides services in three forms, there are as under infrastructure as a service, platforms as a service and software as a service.

Cloud computing is a technology which is a virtual platform where big data can be stored and access from anywhere with configure resource (internet and I.T resource)

Literature review:

- Belfo and Trigo (2013) suggested that some of the new trends in future that affects to library science just like (cloud computing). Some of the benefits and risk that are already supported by new technology and some are identified as web services, data storages services, cloud computing, managing E- content, virtual resource management etc. some of the benefits that are provided by cloud services provider at lower cost to their client. Data storing is a big problems faced by library and management of those resource in online. That solution is provided by cloud computing to library.
- Marston et al. (2011) revealed that cloud computing gives tremendous height to library science by big data storing, so using of cloud computing require understanding of various issues relating to it by both the party client and service provider. Here we do SWOT analysis of cloud computing, so study finds the various issues that will affects to stakeholder or users. That issue which affects the users is data stolen or theft by cloud service provider. We give various recommendations for cloud service provider and user. Here some of the areas are remaining or untouched here the study or research required and facing by governmental agencies.
- Tarmidi et al. (2014) studied level of awareness and adoption of cloud computing among the academic and library sector from the professor and librarian. The study concludes that only one-third of the respondents are aware of cloud computing. The main reason for adoption is cost and time saving while the reason for non-adoption is lack of perceived benefits and security.
- Dimitriu and matei (2014) advocated that globalization gives expansion in transaction so also together with rapid changes in technology, rise in data maintain and storage.

Digitization of E- content, increasing virtual reality, all changes take places and new technology takes into places which is known as cloud computing. Data management and storing is essential of any library. This articles focused on impact of cloud computing on academic branch, what are the benefits by using cloud computing to library and also risk associated with using cloud computing to library . Our focused on that what are the pricing policy of cloud service provider and what are the key aspects for switching in traditional library and go for online virtual resource on platform.

Implication that are provided by cloud computing to library science

- **Big Data storing:** in cloud computing technology data storing features are available as you want. Data are stored on virtual platform and it is to be stored as rent space from cloud services provider and pay only that use from anywhere with configurable resource (internet). Library stored data through rent space on cloud from service provider
- **Big data Manage& control:** cloud service provider maintains data which is provided by client and it is depends on space that was rented by client. Cloud services provider maintains big that which is very difficult to manage by institution because lack of resource.
- **Manage E-content:** today's library are hub of E- content and management of all the resource are very difficult. It is very difficult to maintain E- content in proper management and useful for people when they required so that problems are solve by cloud computing service through cloud services provider. Management of E- content are provided by cloud agent in very cheap cost
- **Safe from uncertainties:** many a time's possibility is there that data will be cruse and corrupt by virus and other uncertainties (fire at place). There are many problems associated with Data and due to this data is destroyed. All the resources are destroyed from uncertainties then cloud services provide backup service to their client according to their requirement. Cloud services provide safe service of data from uncertainties
- **Back up service:** cloud computing service provides back of data that was stored in cloud and according to their requirement without any extra cost of their resource. It provides numerous benefits like safety from circumstances

- **Automatic update:** cloud services provider are also provide automatic update to their client according to available resource
- **Low cost :** cloud services are provides all those services with low cost because pay what you use and big things that save from costly infrastructure that is necessary for data services and all those above services

Associated risk of cloud computing

- **Data migration by service provider:** in many case it is seen that service provider are very selfish and they use data of client for money making and take undue advantage from data handling because ultimate handling in the hand of service provider because data is to be stored on remote server which is controlled in the hand of service provider
- **Highly costly for big data:** in most of the case cloud service provider are charge according to the use of resource or stored capacity and it is quite difficult to big data handling institution because big data require huge space and capacity so charge is very in terms of total amount because it is rented capacity and huge resource are applicable. It is very costly in comparison to that option about build infrastructure is less costly
- **Leakage of sensitive data:** many times it is seen that cloud service provider are leak information or data which is very important and very sensitive for his personal interest and its loss the trust ship between client and cloud provider .
- **Lack of legal provision:** in this field contract of cloud computing between cloud service provider and client are not regulated by any controlled authority and it is quite difficult when dispute arise, so in this field strict rules and regulation are to be implement by govt.
- **Poor quality service:** Some of the cloud service providers are very cheap and they do not provide service according to standard. It provides poor quality of service to their client and not to solve any problems regarding it. So problems arise between cloud service provider and client.

Finding and conclusion:

When analysis are done from both the side then it find that there are some advantages to field and along with some of the limitation are also affects but many a times are adopting a new arena and lets accept a new challenges that's result is growth and therefore ignore the limitation that discussed above and adopt all the benefits that give rise to library science. Cloud computing provides numerous benefits like that handling of big data, safe security of data, manage E- content, provide virtual resource to users and from anywhere.

So benefits are more in compare to limitation therefore adoption of cloud computing technology gives new arise to library science and to stand up in new arena with other institution in modern world.

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