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Evaluation of Information Retrieval in Cloud computing based services

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ABSTRACT

Due to widely use computer, Information Retrieval from various cloud service providers via internet is becoming more important because of the fact that the best, particularly the quickest conveniently available source of knowledge on internet library. Therefore, web search engines are rising as very useful and reliable tools in knowledge finding and research activities. The intention to publish this paper is to focusing to measure effectiveness of information retrieval form libraries using search engines.

Keywords: Information Retrieval, Cloud computing.

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1. Introduction

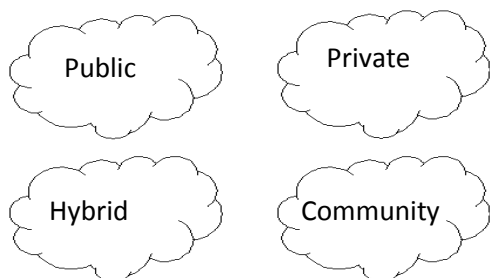
Cloud computing

Is the delivery of computing and storage capacity as a service to a community of end-recipients.

Cloud computing entrusts services with a user's data, software and computation over a network. Using Software as a Service, users also rent application software and databases. The cloud providers manage the infrastructure and platforms on which the applications run. [1].

The Cloud Computing is consider as fifth generation of computing with reference to mainframe, personal computer, client and the web services [9]Cloud Computing is a structure that allow you to access applications that actually reside at location other than your computer or other Internet- connected services. It allows the user to access this remote information on internet.

Deployment models



	Relevant	Non -Relevant
Retrieved	true positives (tp)	False positives (fp)
Non - Retrieved	false negatives (fn)	true negatives (tn)

The deployment model is the purpose of the cloud and the nature of how the cloud is located. The deployment model are as follows.

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

Public cloud : It is the cloud computing in which the cloud infrastructure and services are available for public use or for a large industry group and is owned by an organization itself.

Private cloud : It is the cloud computing in which the cloud infrastructure is available only for use of an organization.

Hybrid cloud : Hybrid cloud is the combination of public and private clouds.

Community cloud : In which it is organized to serve for a common purpose. It is organized by third party.

Information retrieval

Is the activity of obtaining information resources relevant to an information need from a collection of information resources. Searches can be based on metadata or on full-text indexing. Many universities and public libraries use IR systems to provide access to books, journals and other documents. Web search engines are the most visible IR applications.

Evaluation of Information Retrieval

Many different measures for evaluating the performance of information retrieval systems have been proposed. The measures require a collection of documents and a query. Every document is known to be either relevant or non-relevant to a particular query. In practice queries may be ill-posed and there may be different shades of relevancy.

Precision

Precision (P) is the fraction of the documents retrieved that are relevant to the user's information need.

$$P = \frac{| \{ \text{Relevant} \} \cap \{ \text{Retrieved} \} |}{| \{ \text{Retrieved} \} |}$$

Recall

Recall is the fraction of the documents that are relevant to the query that are successfully retrieved.

$$R = \frac{| \{ \text{Relevant} \} \cap \{ \text{Retrieved} \} |}{| \{ \text{Relevant} \} |}$$

Above notions can be made clear by examining the following contingency

Then

$$P = tp / (tp + fp)$$

$$R = tp / (tp + fn)$$

Fall-out

The proportion of non-relevant documents that are retrieved, out of all non-relevant documents available:

$$FO = \frac{| \{ \text{Non relevant Retrieved} \} |}{| \{ \text{Non relevant} \} |}$$

F-measure

A single measure that trades off precision versus F MEASURE recall is the F measure,

The weighted harmonic mean of precision and recall

$$F = \frac{2 \cdot \text{Precision} \cdot \text{Recall}}{(\text{Precision} + \text{Recall})}$$

The general formula for non-negative real β is:

$$F_{\beta} = \frac{(1 + \beta^2) \cdot (\text{Precision} \cdot \text{Recall})}{(\beta^2 \cdot \text{Precision} + \text{Recall})}$$

$$E = 1 - \frac{1}{\frac{\alpha}{P} + \frac{1-\alpha}{R}}$$

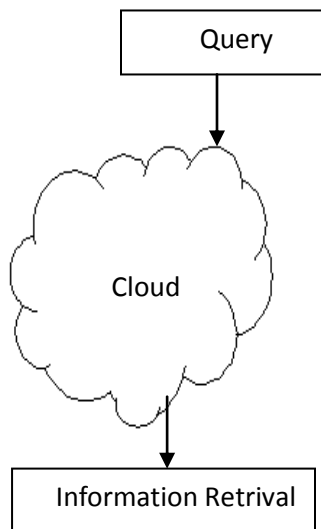
Their relationship is $F_{\beta} = 1 - E$

Where $\alpha = \frac{1}{1 + \beta^2}$.

Cloud Computing in Library

In higher education university library plays important source of knowledge. IT technology has been the driving force of library development. With the rapid development of various IT technologies, users' information requirements are increasingly personalized. And now more and more libraries advocated user-centered services. So librarians should mine and study users' information requirements frequently. And only in this way, they can fulfill the basic demands of their users. And furthermore, library can develop itself according to such information and improve users' satisfaction. University library, as we all know, is famous for its academic and teaching influences. Librarian can keep using new technology to develop library and facilitate library service. With the expansion of Cloud Computing in libraries by establishing a public cloud among many university libraries, it not only can conserve library resources but also can improve its user satisfaction.

Information retrieval in cloud storage



A web search engine is intended for knowledge discovery and information retrieval from data posted on the web. Search engine design takes into consideration scalability, content freshness, speed of service, and relevancy of search results. Performance of search engines is very important as the distribution and the size of web data increases. For example, Google's search process relies on approximately 15,000 Linux clusters while serving over 300 million queries per day. Content freshness is also play an important role to the rapid change in web pages. The update interval to the search engine's database is also most important factor for measure the freshness of the search engine's results.

1. Conclusion:

In this research paper work of information retrieval in cloud computing approach, is concerned with retrieving relevant information to users query from a large collection. The internet is the largest publicly available information repository and a natural source of attention. An immediate consequence for information on web become a current and important task. Relevant information is compared with possible source of evidence that are collected from web pages and evaluated.

References:

1. WWW. Wikipedia.org/wiki/information_retrieval,Cloud Computing.
2. Diana Inkpen. Information Retrieval on the Internet.
3. Online edition (c) 2009 Cambridge University Press.
4. Rupesh Sanchati, Gaurav Kulkarni, [2011] Cloud Computing in Digital and University Libraries by Global Journal of Computer Science and Technology.
5. Pradeep Teregowda, Bhuvan Urgaonkar Cloud Computing: A Digital Libraries Perspective.
6. Matthew Goldner Libraries and Cloud Computing.
7. D Kishore Kumar1, Dr.YSSR [2012] Murthy2, D amakrishna3, A V Rohit4 Application of Cloud Technology in Digital Library IJCSI International Journal of Computer.
8. Anwar A. Alhenshiri Web Information Retrieval and Search Engines Techniques Al- Satil journal.
9. Bechtolseim (2008): Cloud computing Arista Network[online