

STUDY OF E-VERIFICATION SYSTEM USED IN PAST ERA

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ABSTRACT

Document verification of any candidate or student is compulsory to verify that the experience certificate, academic certificates and degrees submitted by the same are original or authenticated by concerned company, board of education or university respectively. According to our current verification system this process is going on manually and this is not very easy task. Therefore a system is required to solve this problem and my proposed work will be the remedy for this problem. This will provide the facility to verify the documents through online verification using cloud computing without consuming any time.

Key Words: *Verification System, online verification, distributed verification system, cloud computing, university verification*

I. INTRODUCTION

As per the latest statistics from the website of HRD ministry of India as of 2014, there are 677 universities and 37,204 colleges and 11443 stand-alone institutions in India.

India has mainly four board of school education, namely CBSE, ICSE, IB and state boards. Brief introductions about these boards are given below:

CBSE Board: Central board of secondary education (CBSE) is the most popular school board in India with over 9000 CBSE affiliated schools in the country and presence in 21 nations across the globe. The stress in this board is on application of Science and Maths related subjects. Main benefits of going for a CBSE affiliated school are:

- Easy to find new schools in any area, even abroad, due to wide prevalence of the board
- Wide recognition of board results across all colleges in India, as compared to other boards
- Recent overhaul of teaching approach and curriculum has made the content relevant
- Easy to find tutors, books and activities for all classes
- Focus on Science and Maths as well as application based subjects. [6]

ICSE Board: It is a private body that was founded in year 1956 to set and adapt University of Cambridge's examination system to India. This body now conducts 3 examinations, namely

- ICSE (Indian certificate secondary education) exam for class 10
- ISC (Indian school certificate) exam for class 12
- CVE (Certificate for vocational education) exam for class 12. [6]

IB: International Baccalaureate (IB) is a non-profit educational foundation that was founded in 1968 and now works with over 3000 schools in 141 countries. The board is gaining prevalence in high end new schools in India. Currently limited to the metro and large Tier-I cities in India. As per them, their vision is on all round development of the student into an inquiring, caring and knowledgeable young individual. IB offers innovative learning program and teaching approaches to achieve its stated objective. The main benefits of this are

- Innovative curriculum
- Very different and stress free teaching methods
- Focus on all round development rather than pure academic performance
- Wide acceptance across the world

State Board: As the name suggests, each state has its own board of education that conducts certificate examination for class 10 and class 12. Some state boards, such as Rajasthan board also conduct exams in class 8. The benefits are:

- Reasonably prevalent within the state
- Topics and content of local relevance
- Usually cheaper schools [6]

As we know that a large number of universities and educational board are working in India and a lot of students passed out every year. Currently manual verification has been done in all of these universities and boards except some universities which are using a “direct verify system”. This system is working only for 9 states in India [according to website - <https://www.directverify.in>]. [7]

Therefore “Distributed E-Verification System using Cloud Computing” will provide the facility to verify documents all over India and globally. It will completely free of cost and it will cover all the institution of India.

Privacy of student is most important for us therefore only registered or authenticated user can verify the academic details.

According to current system a number of employee of university and educational boards are engaged every day to verify the documents manually. But “Distributed E-Verification System using Cloud Computing” will overcome this problem. Because universities and boards have to entered data only once and this will be very easy task for them because this system will provide the simple format in MS Excel where from universities and board and upload their existing data through a single click.

II. DISTRIBUTED SYSTEM

A distributed system is a network that consists of autonomous computers that are connected using a distribution middleware. They help in sharing different resources and capabilities to provide users with a single and integrated coherent network.

- Components in the system are concurrent. A distributed system allows resource sharing, including software by systems connected to the network at the same time.
- The components could be multiple but will generally be autonomous in nature.
- A global clock is not required in a distributed system. The systems can be spread across different geographies.

- Compared to other network models, there is greater fault tolerance in a distributed model. [8]

III. CLOUD COMPUTING

Cloud computing is the delivery of computing services—servers, storage, databases, networking, software, analytics and more—over the Internet (“the cloud”).

The first cloud computing services are barely a decade old, but already a variety of organizations - from tiny startups to global corporations, government agencies to non-profits—are embracing the technology for all sorts of reasons. Here are a few of the things you can do with the cloud:

- Create new apps and services
- Store, back up and recover data
- Host websites and blogs
- Stream audio and video
- Deliver software on demand
- Analyses data for patterns and make predictions

Benefits of Cloud Computing:

- Cost
- Speed
- Global scale
- Productivity
- Performance
- Reliability [10]

IV. REVIEW OF LITERATURE

Some published research papers of related topics with their objectives and literature reviews are given below.

✓ *A Web Services-Based Distributed Information Retrieval Model:*

J. Meng et al provided information that how a website works on distributed system in his paper in a IEEE conference held in Dalian, China in 2008. According to this paper distributed computing model allows applications to communicate with each other, regardless of where or how they are implemented. Thus, Web services-based distributed systems technology facilitates the development of distributed service-oriented information retrieval system over the heterogeneous Internet. This paper presents a Web services- based model for information retrieval across different platforms. [1]

✓ *Scheduling algorithms for distributed Web servers:*

M. Colajanni et al (2002) explained that a distributed Web system, consisting of multiple servers for data retrieval and a Domain Name

Server (DNS) for address resolution, can provide the scalability necessary to keep up with growing client demand at popular sites. However, balancing the requests among these atypical distributed servers opens interesting new challenges. Unlike traditional distributed systems in which a centralized scheduler has full control of the system, the DNS controls only a small fraction of the requests reaching the Web site. This makes it very difficult to avoid overloading situations among the multiple Web servers. We adapt traditional scheduling algorithms to the DNS, propose new policies, and examine their impact. [2]

✓ **Cloud Computing: Distributed Internet Computing for IT and Scientific Research:**

M. D. Dikaiakos et al described that Cloud computing is a disruptive technology with profound implications not only for Internet services but also for the IT sector as a whole. Its emergence promises to streamline the on-demand provisioning of software, hardware, and data as a service, achieving economies of scale in IT solutions' deployment and operation. This issue's articles tackle topics including architecture and management of cloud computing infrastructures, SaaS and IaaS applications, discovery of services and data in cloud computing infrastructures, and cross-platform interoperability. Still, several outstanding issues exist, particularly related to SLAs, security and privacy, and power efficiency. Other open issues include ownership, data transfer bottlenecks, performance unpredictability, reliability, and software licensing issues. Finally, hosted applications' business models must show a clear pathway to monetizing cloud computing. Several companies have already built Internet consumer services such as search, social networking, Web email, and online commerce that use cloud computing infrastructure. Above all, cloud computing still unknown "killer application" will determine many of the challenges and the solutions we must develop to make this technology work in practice. [3]

✓ **Enhancement of Cloud Computing Security with Secure Data Storage using AES:**

Vishal R et al explained that Cloud computing makes the major changes in computing world as with the assistance of basic cloud computing service models like SaaS, PaaS, and IaaS an organization achieves their business goal with minimum effort as compared to traditional computing environment. On the other hand

security of the data in the cloud database server is the key area of concern in the acceptance of cloud. It requires a very high degree of privacy and authentication. To protect the data in cloud database server cryptography is one of the important methods. Cryptography provides various symmetric and asymmetric algorithms to secure the data. This paper presents the symmetric cryptographic algorithm named as AES (Advanced Encryption Standard). [4]

✓ **Cloud Computing: A Survey on Cloud Simulation Tools:**

Kiran Gupta et al described that Cloud computing is the trendy topic all over the world. As there are so much service providers of the cloud are available in the competitive world. A decision has to be taken that which service provider's services are more advantageous to the organization. The conceptual cost for buying the services of different services providers may lead to increase in budget or wastage of money and time. So the solution to this problem is trying out the simulation tools. these tools may include the different algorithms used by different service providers. The use of simulation tools leads to decrease in overall conceptual or operational cost of the organizations. There are different simulation tools available in the market. [5]

V. PROPOSED WORK

After study of "directverify.in" (a system which provides online verification of some universities of six state of India) we would provide the system which will be able to provide facility of online document verification. It will cover all the educational boards, independent institutions and universities of India. It will help the government recruitment agencies as well private recruitment agencies and other private firms (should be member of concerned education board and university).

This System will works as a centralized system which store information (record of certificates, provisional degrees and degrees) of all the educational board and university using cloud computing.

VI. CLIENT-SERVER MODEL

Characteristics:

- There are processes offering services (servers).
- There are processes that use services (clients).
- Clients and servers can be distributed across different machines.

- Clients follow request/reply model with respect to using services.

Servers:

Generally provide services related to a shared resource:

- Servers for file systems, databases, implementation repositories, etc.
- Servers for shared, linked documents (Web, Lotus Notes).
- Servers for shared applications.
- Servers for shared distributed objects

Clients:

Allow remote service access:

- Programming interface transforming client's local service calls to request/reply messages.
- Devices with (relatively simple), digital components (barcode readers, teller machines, hand-held phones).
- Computers providing independent user interfaces for specific services.
- Computers providing an integrated user interface for related services (compound documents) [8]

Application Layering: Traditional three-layered view:

- User-interface layer contains units for an application's user interface.
- Processing layer contains the functions of an application, i.e. without specific data.

Data layer contains the data that a client wants to manipulate through the application components.

Observation: This layering is found in many distributed information systems, using traditional database technology and accompanying applications. [8]

I. CONCLUSION

To reduce the human efforts and time in lengthy and time consuming manually document verification, this system "distributed e-verification system using cloud computing" will use distributed system architecture for better functionality and speed; and cloud computing to store database.

VII. REFERENCES.

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