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Cloud Computing in Education Success, Its Benefit and Threats and Other Concern

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ABSTRACT: Cloud computing is a new paradigm in the world of information technology. Virtual machine migration is an important part of virtualization, which is considered an essential part of a cloud computing environment. Cloud computing and education sounds ambiguous at first glance. Naturally, this is because very few individuals, publishers and users come from the education sector. Just an introduction as the cloud deserves a place in our current educational institution, it is important to reiterate this education philosophy. Its essence is knowledge. It is this knowledge that brings progress, success andsuccess. However, there are several things that make these parameters unattainable. foul language this is a failure. Small classes, lack of resources, lack of staff, lack of adequate teachers… the list is infinite. One way or another, cloud computing can be used to improve educational standards and activities. The end result will be to reduce the problems mentioned above and increase performance instead.

KEYWORDS:-Cloud Computing, Web service, Virtualization, Grid Computing, Virtual Computing Lab, Higher education institutions, Remote areas

I. INTRODUCTION

Cloud computing refers to services and applications that are available worldwide from data centers. All services and applications are available online. Currently, a significant number of cloud computing technologies are already being used and developed different flavors. Cloud Computing affects the people, processes and technologies of the business. Cloud computing has captured much of the attention of various communities in society, such as research, student, business, consumer and government organizations. Like human needs trimmed and paved path for information digitization, the new buzzword GIG data has evolved. Big data is the main source for the advent of cloud computing in the show, everyday a lot of data in the PETA bytes in size are uploaded in the digital world, which required a lot of storage space and computing resources. Cloud Computing, also known as utility computing, providing a service as software, platform and infrastructure as a service in a pay-as-you-go model for consumers. His just get anything for pay model. Industry surveys refer to these services as “Cloud computing, the long-held dream of computing as a tool has the potential to transform much of IT industry, making software as a service even more attractive.

The education system gradually expanded and the object of education slowly changedsocial staff. Education has evolved from teacher-centered to student-centered .Blooms taxonomy[1](multiple intelligence of the learner) learning is now easy with cloud supportcomputer technology, where you get everything and now teaching methodologies like chalk - black Physical interaction has seen a new transition to online and is growing faster than ever. line a teacher who helps must have a class in any class is a learning advance

II. BENEFITS OF CLOUD COMPUTING

Improved Administration
Online Education Courses
Access to Information
Short time to market
Increased mobility for a global workforce
Scalable and flexible infrastructures
Reduced Time and Costs
No Need For Expensive Hardware
Saving Money on Expensive Textbooks

3. Works related to education:-

The internet has changed the world today and there are drastic changes in the way we use computers.From mail to online shopping, people depend on the computer. But now the cloud has changedthe full meaning of the internet. This

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powerful desktop application is available on the internet and alsoin a database that is accessible from anywhere and anytime with any device. With this new inventionwe are lucky as e-learning, online projects for student teachers [2] and many others.

3.1. Easy access to learning resources and effective sharing

The adoption of the cloud has benefited colleges, institutes and schools. The idea behind it isstudents can share beyond their imaginations. The bottom line is that colleges can spend less on new onesinfrastructure, software, textbooks and improvise the quality of learning by providing all thesepractical. This not only helps the management but also enables the students to gain moreknowledge that leads to the quality of education, development in academics. All of these are greatHowever, management must plan their cloud investments.

3.2. Improve economies of scale

The main problem we encounter in the classroom is that students are afraid to ask questions or waste timelectures that can be solved virtually. Students can use the online space and can participateclass or do their projects through interaction with their guides. The teacher can get everyone's attentionstudents are not only interested in crammed students. With this environment, the workload canbe reduced and may improve the student's abilities. This can take advantage of economies of scaleoutside the classroom.

3.3. Improve rapport and ease assignments

Many schools have already introduced computer and are also following many technologies. Manyschools and colleges assign assignments during the holidays. With cloud computing studentsthey are able to communicate, do tasks as they are on one computer. This process is not onlyeffective, but also saves time and improves quality for students.

IV. PURPOSE OF RESEARCH

Students' learning is no longer confined within the classroom in the era of e-learning 2.0[1]. Theenvironment of IT education could be improved to let student access learning resourcesanywhere. IGNOU (Indira Gandhi national Open University) is the good example of e-learning.The free software can be adopted for constructing the cloud computing service for theenvironment of IT like OpenOffice.org such as word processing, spreadsheets, and presentations.Only a browser is needed for students to connect to the cloud computing service for learning.

Example:-

AICTE - Microsoft Cloud Adoption Project

All India Council for Technical Education (AICTE) has partnered with Microsoft CorporationIndia Pvt.Ltd.to implement cloud based email offering for all its institutes. As part of Cloud Adoptionall institutions will gain access to Microsoft Office 365 for Education.365 for Education, a free suite of communication and collaboration tools includes Following:

Messaging applications: Exchange online (10 GB inbox per student with 18 MB attachment) and Outlookcalendar 25 GB online storage (via Windows Sky Drive) Office web apps – onlinecompanions Microsoft Word, Excel and PowerPoint and OneNote 24/7 online supportstudents and administrators.

V. APPLICATIONS OF CLOUD COMPUTING IN EDUCATION

Educational cloud services represent a growing range of useful services available oninternet and the most innovative and fastest developing element of technology andeducation. It also promises to provide several services that will be very useful for students,teachers and staff [1]. The role of cloud computing in university education should not beunderestimated because it can provide important gains by offering direct access to a wide varietyvarious academic resources, research applications and educational tools [3].Educational cloud computing is quickly taking the education community by stormplatforms, applications and services are developed for academic cloud computing.Some students and researchers are already using a type of application based on cloud computingservices. Moreover, these applications are investing heavily in cloud computingthe future of academic cloud computing [13]. Some of these applications are Microsoft, Google,IBM, HP, Amazon, Sales force, Amanda and Zamanda. A. Amazon Education Cloud Computing. It offers Amazon Web Services (AWS) to help educators deliver cloud computing education.tuition grants supporting free use of AWS for students in eligible courses. There will be grantsprovide educators with free use for each student enrolled in courses with AWS as a componentcurriculum. In addition, AWS provides schools with a highly scalable

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cloud computing platformand universities that include high availability, reliability and flexibilityfaculty, students and researchers to create a wide range of applications. With AWS, studentsand others may require computing power, storage, and other services to access the setelastic IT infrastructure services for educational purposes. Additionally, AWS can be characterizedlike Iaas. This means that Amazon provides the underlying computing capabilities of the virtual machine container,high-performance network-reliable and redundant storage at a remote location [4, 5, 6,7]. AWS provides some educational services for students and faculty: _ Research grantsfor academic researchers who use AWS in their work_ Access to available resources27_ Tutorialand project grants for student organizations using AWS for self-directed learning_ TeachingAWS-Based Faculty Grants_ Efficiency and Cost-Effectiveness in Institutional ITInfrastructure Consequently, the deployment and reliability of educational infrastructurebasically managed by AWS [8, 9, 10].

Google Applications for Educational Cloud Computing:-

GAE (Google App Education) as a new generation web application based on cloud computing
development platform, enables its users such as faculty, researchers and students etcrun web applications within the Google Infrastructure.GAE is available for freeinstitutions, universities and the educational community [12]. Teachers, students and staff canshare ideas faster and do things more appropriately because they are efficienttools for communication and sharing. Google Apps Education Edition enables technical administratorsprovide a collection of web-based messaging tools such as Google Mail, Google Talk, GoogleWebsites , Google Video and Google Calendar for faculty, students and staff for free in additionproductivity and collaboration tools such as the Google Docs Package [13].

Microsoft Education Cloud Computing:-

Microsoft's software and services strategy is about the power of choosing a hybrid modelresources that enable students and researchers to transfer to the cloud. It also allowsresearchers to create workloads across infrastructures to complement their current IT assetswith web services. Microsoft's cloud services enable students and researchersto fully use the same Microsoft technologies in an educational institution [13].

In addition, all services offer educational institutions greater financial flexibility and enablelower costs to develop, scale, operate and migrate systems that are distributed betweencloud and data center.

VI. PRIVACY ISSUES IN THE CONTEXT OF THIRD PARTY STORAGE

Information stored with a third party (including a cloud computing provider) may have less orweaker privacy protections than information held by the information creator.IT managers are likely to be wary of ceding control of their resources to external providerswho can change the underlying technology without the customer's consent. So related problemsto performance and latency can be considered problematic [17]. Government agencies and privatelitigants may be able to obtain information from a third party more easily than from the creatorinformation. Enhanced ability of government and others to obtain informationfrom a third party applies to both businesses and individuals. Loss of notifications for many usersthe government's demand for data represents a significant reduction in rights [16]. In the United States of America, the Electronic Communications Privacy Act of 1986 (ECPA) provides some kindprotection against government access to electronic mail and other computer records held parties (e.g. internet service providers) in the electronic environment. But at the same time,The USA Patriot Act, originally enacted in 2001 and amended in 2005, contains provisions allowingFBI access to any business record by expanding the ECPA by forcing cloud providers tomaking records available. Similarly, the Right to Information Act or Freedom of Information Act 2000the kind of laws allow a private litigant or other party to request records from a cloud providerrather than directly from the user, as the cloud provider would not have the same incentiveas a user to resist a subpoena or other request. So Disclosure to third parties through the cloudthe provider could cause problems with other laws, principles and interests.

VII.THREATS OF CLOUD COMPUTING IN EDUCATION:-

Some examples of threats are:

Dependency to the service provide: -This suggests a dependency on a specific CloudServiceProvider to prepare the service, especially if data portability is not supported.

Failure of Cloud Service:-A lack of funding and immature markets could lead to some cloudproviders out of service and any loss or deterioration in service performance, as well asloss of investment, putting universities and schools at

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risk of having to fulfill their ownduties and obligations, thereby exposing contractual or legal liability to its employees,third parties, students or even the public.

Concurrence regulations :- Due to the increasing number of regulations and the need for traffic transparency, educational institutions are increasingly adopting consolidated and consistent compliance check sets.

VIII. CONCLUSION

Our country's current problem is getting technology to remote schools and educationinstitutes in providing "equal and quality education to all" can be solved with just small tweakssuch as iPads, iPhones, cards, thereby saving on the purchase of computing infrastructure, licenses andpurchasing software and support staff. In the era of "big data", cloud computing hasan immense role in improving the quality and vast educational content available to students andresearchers. Success and high return on investment (ROI) of cloud infrastructuresin the hands of larger organizations and especially the public sector. Cloud successcomputing in education can be attributed to the adoption of cloud computing by all the field of education with great support from the government.

This article introduces educational cloud computing and how universities and institutions are doing are already enjoying its benefits, not only in terms of cost, but also efficiency, safety, reliability and portability. Some general examples of cloud computing in education such as Microsoft, Google Applications,and others were provided and application case studies were presented and explored in more detail.

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