

feel appreciated and accepted and supported typically fell more connected to their school community. The evidence is pretty clear that when organization, including schools, gives young people agency and voice and integrate their perspectives into decision-making processes, those organizations are more effective in the work they are trying to do.

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CLOUD BASED EDUCATIONAL SYSTEM: ITS CHALLENGES, OPPORTUNITIES AND ISSUES

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Abstract

Cloud computing applicable for both the applications delivered as services over the internet, hardware and system software. Role of datacenters is important in the world of cloud computing, data centers manages the whole cloud computing system if we see it Practically, cloud computing is extension of grid computing (computers are connected to each other in a grid manner) cum's with smarter tools and

technological platforms, various cloud computing services. Security, flexibility, availability and most valuable things is cost effectiveness these things make cloud computing superior and reliable. And you can Pay-As-You-Go (PAYG) means how much data you used you have to pay only that no more extra cost or monthly cost. cloud computing has many benefits in the various sectors like agriculture business, commerce, health care, hospitality, tourism, Education and training sector, This paper explores the additional features coming in the future of education cloud computing exploring the Education as a Service (EaaS). This paper is focusing on the opportunities in education, challenges and issues, security problems. And this paper focuses on the current issues and the future of education cloud computing by using the EaaS.

Keywords

Cloud computing (cc), Cloud Based Educational System, E learning, Online Education, Hi-tech Education. Software as a service (SaaS). Infrastructure as a service (IaaS). Platform as a Service (PaaS), Education as a Service (EaaS).

1. Introduction

In the world of computing a number of researchers and computer practitioners trying to find new solutions in today's hot topic that is cloud computing this paper is mainly elaborate the current state of cloud computing, main focus in this paper that how in recent days cloud computing is used in education system. Before we go to the cloud computing let's take the short tour of Cluster and grid computing "cluster is a type of parallel and distributed system, which consists of a collection of inter-connected stand-alone computers working together as a single integrated computing resource.[1] "Buyya defined one of the popular definitions for Grids in the Grid Planet conference, San Jose, USA "A Grid is a type of parallel and distributed system that enables the sharing, selection, and aggregation of geographically distributed 'autonomous' resources dynamically at runtime depending on their availability, capability, performance, cost, and users' quality-of-service requirements." [2] Based on this papers best suitable definition of cloud computing is "The practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer" [3] the cloud computing uses various services like Software as a Service (SaaS), Infrastructure as a Service (IaaS), Platform as a Service (PaaS). This papers them

one by one and this paper introduces new service called Education as a Service (EaaS).

1. Cloud Computing

Cloud Computing is an innovative technology that is revolutionizing the way we do computing. The key concept of cloud computing is that you don't buy the hardware, or even the software, you need anymore, rather you rent some computational power, storage, databases, and any other resource you need by a provider according to a pay-as-you-go model, making your investment smaller and oriented to operations rather than to assets acquisition. But there is much more than that, of course, and there are many different ways how this approach can be put in action. [4]

2. Cloud Computing Architecture (CCA)

The biggest and general Challenge is the cloud computing has no standard or single architectural method. When talking about the cloud computing architecture it is divided in to two sections Front End and Back End they connect to each other through network usually internet (Wireless, wired) the front end is for the side of internet user and the back end is cloud section of the system.

The front end includes client computer (or computer network) and the application required to access the computing system some of the system have unique applications that provides the internet access to clients and the back end system have many computers and there servers to provide this whole cloud computing tree and to run this whole theme. In theory, A cloud computing system could include practically any computer program you can imagine, from data processing to video games. Usually, each application will have its own dedicated server. A central server administrate the system monitoring the whole system for example trafficking, client demands, bugs, heat, security and the maintenance related issues to ensure that everything is running smooth or not.

It follows the set of rules called protocols and uses a special software called Middleware the middleware allows the networked computer to communicate with each other, most of the time server doesn't run at the full capacity, and this is the main problem for server system, Server uses more power and most of the servers power is goes waste.

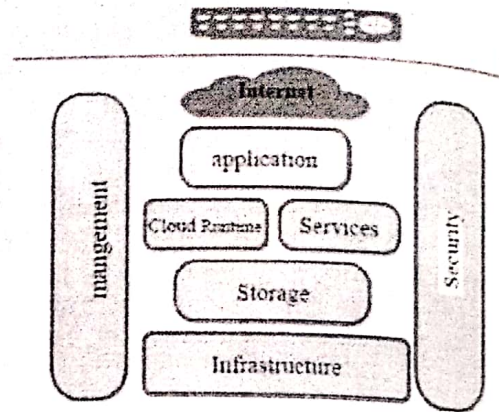


Fig1. Cloud Computing Architecture (CCA)

3. Cloud computing services

Software as a Service (SaaS)

The software as a service is allows the customer to use this service the SaaS mainly used in the public cloud, as this paper elaborates in the three types of cloud computing we see in the public cloud, this service is mainly used by the CSP's like Google Drive, One Drive, and Cloud Stick. Etc... in the SaaS main issue is data is not safe as compare to the other services, and the service providers of SaaS they are maintains hosts, handles all of utilities, individual (end user) no need of license. CSP is handles these all things, the paper figure out what are the cost benefits of moving to cloud by comparing the traditional approach with latest technology.

Infrastructure as a Service (IaaS)

Is mainly gives access to vital web architecture such as storage space, servers, and connections in particular, IaaS allows an internet education a way to develop and grow Both PaaS and SaaS clouds are stabled in IaaS clouds, as the company providing the software as service is also providing the infrastructure to run the software. Amazon EC2 is examples of IaaS.

Platform as a Service (PaaS)

The platform as a service allows to customer to develop their own platform in their own way, they can run, manage this platform by using a simple API's like Google Cloud, Amazon web service (AWS), IBM Cloud, (these companies available the infrastructure) IaaS mainly use for large businesses like Toyota, Hyundai Etc... the big companies can easily take care of their own platform in the IaaS, the IaaS Cost is effective and user have to handle the whole infrastructure, maintains Etc...

4. Types of clouds

2.1 Private cloud

Private cloud is data center owned by a single company for their own purpose the main purpose of creating their own network and to

provide lot of flexibility, scalability, provisioning, and automation and monitoring. The goal of a private cloud is not sell "as-a-service" offerings to external customers but instead to gain the benefits of cloud architecture without giving up the control of maintaining your own data center. Private cloud is kind expensive compare than others this is not the option for the SME (small medium enterprises) or small business, startups school or institution and the private clouds maintenance is very high compare to others Private clouds are driven by concerns around security and compliance, and keeping assets within the firewall.

4.2 Public cloud

Public cloud is basically the internet: everyone is use it's free some companies offering the free data usage limit of 10GB - 20GB public cloud also known as the Software as a Service (SaaS), examples of public clouds are include Amazon Elastic Compute Cloud (EC2), IBM's Blue Cloud, Sun Cloud, Google AppEngine and Windows Azure Services Platform. This service is for common users CSP's provide best economic scale to common users this service is manageable because user paid nothing hardware, maintenance, all covered by the provider itself its pay-as-you-go (PAYG) model. But there is some limitation in public cloud it's not right fit for the organizations the public cloud has low security, in public cloud hard for the organizations secure data.

2.3 Hybrid cloud

Hybrid cloud is the median cloud type of both private and public organizations relay on hybrid cloud when they use the private cloud for instances peak time public cloud died at that time, hybrid cloud help it's to both clouds, that's why hybrid cloud is the emergency cloud hybrid cloud also beneficial during predictable outages, hurricane, warnings, scheduled maintenance windows, rolling brown/blackouts. The ability to maintain an off premises disaster recovery site for organization is impossible due t cost that's why they rely on this hybrid cloud computing system.

5. Objectives

- To learn about cloud computing and its advantages.
- To find cloud computing challenges, issues.
- To find the main applications on E-learning in cloud computing.
- To find the comparison of the traditional learning and online learning.

➤ To find the main solution of cloud computing and allied training and educational services.

➤ To prepare solution to solve E- learning applications and cloud computing.

➤ To include the E-learning applications in cloud computing.

➤ It provide effective and creative service model.

6. Cloud Computing based education challenges issues and opportunities

Cloud computing based education system provides many opportunities and problems which are essential to take attention of that. The online Education system growing rapidly with the help of cloud computing. Educational things is going easy with the education cloud computing like taking online test, student progress, teacher and students collaboration, chats, video lectures, online attendance and main thing in all this process the parents of students are involved in the same as teacher, parents can measure and spy their kids progress easily, However it is important to note that cloud computing installation is not possible to all type of educational programs and degrees and particularly to education system all types of class education its hard task it seems a opportunity for researchers in the cloud system. But you can always use MOOCs, LMSs to your institution like EDX, Courseera. One thing is you have to teach your faculty that haw to attend this course online, how to evaluate them, how to handle the application, the need of today's world is creating such a classroom is a need because of the Indian population is increasing rapidly these traditional schools are not sufficient, That's why E- Education is the answer for all. Opportunity is here we are in the cloud computing world now we found the best solution the term in market is Education as a Service (EaaS) using these service we can tackle all these problems EaaS comes with good security, flexibility, and easy gateway.

7. Findings

- Cloud computing getting more popular in now days in educational system especially in online and corporate education.
- still in India higher educational institutes not moving in such that frequency as like USA, CANADA, KOREA Etc.
- The main issue is the government grants not availability of software's and packages

related to educational field is the important issue.

- The awareness about the virtual memory is lack in the student and teachers.
- Cluster server is the universal truth that is the applicable for all no one need to look at the cloud computing.
- Lack of applications like on android Mac, windows, Symbian, the limited type of applications that's why the cloud based education is poor in India.

8. Suggestions

- Government IT organizations and education houses should co-operate each other for the development of applications.
- Universities should take the initial to the cloud computing in there system.
- Proper funding to the healthy cloud computing planning is needed in that.
- The training and the awareness program is to be included to the cloud computing.
- The rates of cloud computing vendors for the allocation of storage are very cheap and flexible we need to awareness about that among the end users customers.
- Here we are proposing Education as service architecture its answer for all that.

9. Proposed Architecture of Education as a Service (EaaS)

The cloud service for education is mainly a broad thing in it has more services in that we use the platform, software and infrastructure as a services these as different level different ways to use services EaaS is the service that made for the make education simple and long lasting its very flexible and cheap service in the cloud computing the EaaS enhances the effectiveness of education and alleviate constrained lab resources for learning.

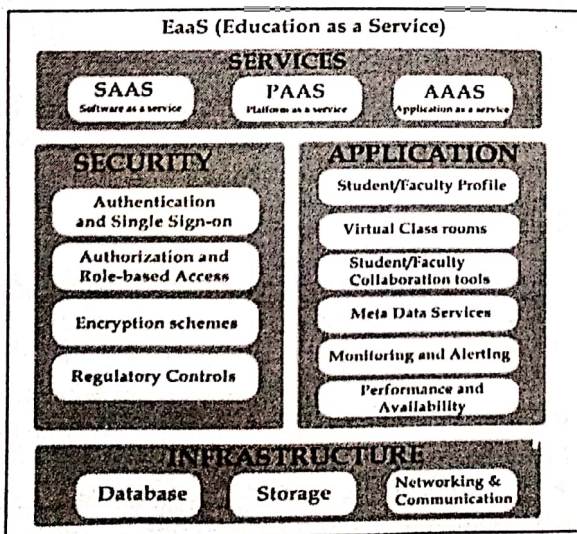


Fig4. Proposed Architecture of Education as a Service (EaaS)

10. Conclusion and Future Scope

This paper illustrated the challenges and the opportunities in the education system mostly the challenges are occurred because of the poor internet speed and the low level of the IT infrastructure in India. When you design the system this thing you can keep in mind. The awareness level about the cloud computing is very less in still 2016, same problems occurs cloud computing is little slow the online education is need of hour in today's world, Conventional pattern also need the cloud computing the traditional education needs total revolution it is possible with the help of cloud computing, the future is the Education as a Service (EaaS) this paper elaborate as above we saw how EaaS works This paper verified that cloud computing technologies can be used to build the next generation of platform-independent tools and scalable data storage e-learning systems to provide smart formal and informal learning. This method of technologies has clear view to distribute applications across a wider set of devices and greatly reduce the overall cost of computing. Also this paper suggests seeing the EaaS in the Education is the need of time now.

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NEW EDUCATION POLICY WITH SPECIAL REFERENCETO GOVERNANCE REFORMS IN HIGHER EDUCATION

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Abstract –

Reforms in higher education reflect the increasing importance and use of knowledge in production, and the role of higher education institutions (HEIs) in training for the production, transmission, and use of knowledge (Varghese, 2012).The concern for the improvement of