

Cloud Using E-Learning And ERP-Educational

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Abstract- cloud computing is coming of computing service over the internet to provide web base services, is a rapidly growing technology. ERP is more expensive so not easy to give educational institutions have limited budgets. ERP is an industry term for Enterprise Resource Planning. So web based provided Pay as You Go service can be using the cloud based Educational ERP or E-learning also more costly but the cloud computing challenges in education and E-learning is currently traditional learning system should be implement on the cloud. Cloud computing can provide universities and research centres with powerful and cost- effective computational infrastructure. E- learning has been defined as "pedagogy empowered by digital technology", so more benefits of common applications for educational institutions and for all employees.

Index Terms— E-learning, Educational-ERP, Cloud services, Web services, Cloud computing, PAYG, IAAS, SAAS, PAAS.

I. INTRODUCTION

The Internet provide an environment for learning? How the web is being used as a medium for learning? Learning has become a vital business function, but old-style training can't keep pace with Internet time. Training has grown too important to be delegated to training departments. Cloud computing services range from full applications development platforms, to servers, storage, and virtual desktops .Cloud computing is a topic that received a great deal of attention by individuals and organizations from different disciplines in the last decade.E-learning environment can be a boom for the society and green computing infrastructure can be used for E- learning purpose.

General services in different application areas such as business, education and governance are provided to the customers online and are accessed through a web browser, while data and software programs are stored on the cloud servers located in the data centres.E-learning is attractive to corporations because it promises better use of time, accelerated learning, global reach, fast pace, and accountability.

This new environment implies great flexibility and availability of computing resources at different levels of abstraction at a lower cost. Cloud Service Providers (CSPs) (e.g., Google, Microsoft, Amazon) are vendors who lease to their customers cloud computing resources and services that are dynamically utilized based on customer's demand according to a certain business model It's manageable and it cuts paper work as well as administrative overhead.

Our Education ERP has been developed after an in-depth analysis of the requirements of various education institutes and in close coordination with the educationists, chartered accountants and quality management personals of

distinction, to help you to run all your Institute related functions in more efficient, productive and comfortable manner.

The cloud makes it possible for you to access your information from anywhere at any time. While a traditional computer setup requires you to be in the same location as your data storage device, the cloud takes away that step. The cloud removes the need for you to be in the same physical location as the hardware that stores your data.Today most of the books are digitized because of which its possible to keep the contents updated. Hence it is possible to impart updated knowledge to the teachers and students. System design is thorough requirements analysis, expert technical review, Alignment with organizational goals, Best practice guidance.

PAYG allows a user to scale, customize and provision computing resources, including software, storage and development platforms. Resource charges are based on used services, versus anentire infrastructure. Some of the international book companys easily provied in cloud services.

II. AN ARCHITECTURE OF CLOUD TECHNICAL EDUCATION

Enhance the safety of the software platform. Security system includes identity authentication and authorization, single point login, virtualization software and hardware access control and audit, the education middleware and open API access control.

CLOUD COMPUTING SERVICES

a. software as a service (SaaS):

Software as a service (SaaS) run on distant computer “ in the cloud ” that are owned and operated by others that connect to users computers via the internet and usually, a web browser. The customer views the SaaS model as a web-based cloud) applications interface where services and complete software applications are delivered over the internet and are accessed via a web browser such as Gmail and Google Docs through different client devices such as laptops, ipads and cell phones.

b. Platform as a Service(PaaS):

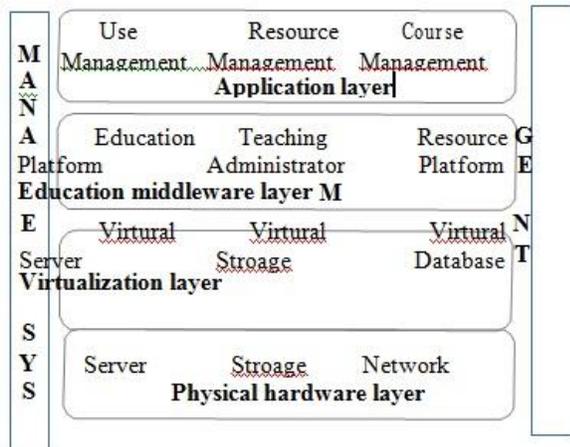


Figure :1 Architecture of Cloud Education model Platform as a service provides a cloud-based The model contains physical hardware layer, virtualization layer, education middleware layer, application program interface layer, management system and security certification system. Physical hardware layer is a basic platform model, including servers, storage equipment's, And network equipment's. Virtualization layer with the feature: dynamic configuration, distributed deployment, fee measurement realizes the five characteristics of cloud computing. The goal of virtualization layer is to break completely information is lands based on existing regional through the distributed technology and virtualization technology. This layer also consists of three parts: virtual servers, virtual storages, and virtual databases. Education middleware layer is the core layer, because it is the basic business platform. This layer is different from existing, and all information attached to it on different computing node including

ordinary file and database. So, all application systems on the middleware layer have Application program interface layer can guarantee model's scalability. Because of the diversity of the existing application system and an application system cannot satisfy all the needs of customers. In this layer also provide the necessary interface beside, and still need to be able to provide hosting service.

Management system mainly watches physical condition, virtualization software, hardware and software, open API. Management system can environment with everything required to support the complete lifecycle of building and delivering web-base applications, without the cost and complexity of buying and managing the underlying hardware, software, provisioning and hosting.

CLOUD CLIENTS:

software and hardware, it provides flexibility in installing software on system, scalability is a another Advantage.

c. Infrastructure as a service(IaaS):

Infrastructure as a service provides companies with computing resources including servers, networking, storage and data centre space on a pay-per-use basis. This service is offered either as raw computing power or storage or both. Some examples of services offered in this category include Amazon's EC2 and S3, Mozy, GoGrid, ...ect. These services are generally classified into three classes known as cloud service models and using to E-learning is an Internet-based learning process, using Internet technology to design, implement, select, manage, support and extend learning, which will not replace traditional education methods, but will greatly improve the efficiency of education.

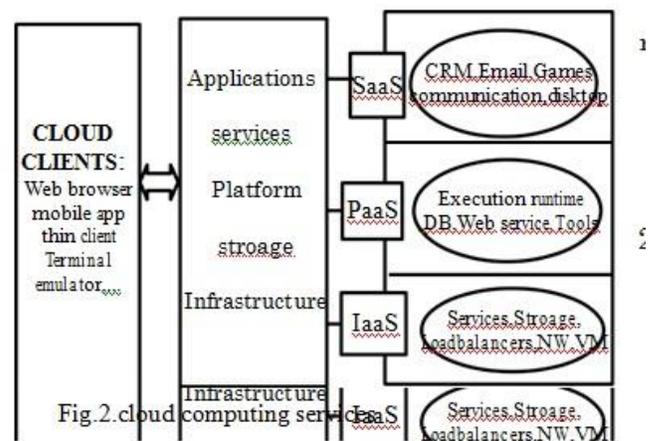


Figure 2: Cloud computing services

As e-learning has a lot of advantages like flexibility, diversity, Measurement, opening and so on, it

will become a primary way for learning in the new century[2]. In traditional web-based e-learning mode, system construction and maintenance are located in interior of educational institutions or enterprises, there left a lot of problems such as significant investment needed but without capital gains for them, which leads lack of development potential. In contrast, cloud-based e-learning model introduces scale efficiency mechanism, i.e. construction of e-learning system is entrusted to cloud computing suppliers.

1) **Finance Account:** a. Teachers Salary b. Students Fees c. Scholarship

2) **Academic:** a. Student Admission b. Teacher recruitment

Types of Clouds

There are different types of clouds that you can subscribe to depending on your needs. As a home user or small business owner, you will most likely use public cloud services.

1. **Public Cloud** - A public cloud can be accessed by any subscriber with an internet connection and access to the cloud space.
2. **Private Cloud** - A private cloud is established for a specific group or organization and limits access to just that group.
3. **Community Cloud** - A community cloud is shared among two or more organizations that have similar cloud requirements
4. **Hybrid Cloud** - A hybrid cloud is essentially a combination of at least two clouds, where the clouds included are a mixture of public, private, or community.

IV. CLOUD SERVICES AND E- EDUCATIONAL ERP

Our educational ERP software is a web based application system & user can easily access from anywhere by login user ID & password. With the help of our school software, school administration can keep a close watch on the staff member's work function & brings transparency in the system. This complete concept is designed to contribute Electronic Care to the care of parents, teachers, school management are called E-Care.

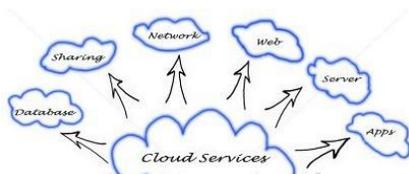


Fig.3 .cloud service

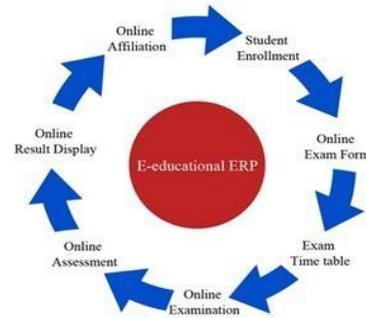


Fig.4. E-educational ERP model.

E-LEARNING CHALLENGES SOLVED BY CLOUD APPROACH

E-Learning's challenges can be solved in this paper with the use of some benefits of cloud computing they are as follows:

1. Digital curricula

The major challenge in any E-Learning program is curriculum. Impact of cloud in this obstacle of E-Learning can be measured from two aspects, 1. Teachers and for the students to any time, the saved money to develop more content.

2. Change management

The very first aspect of change is learning and training which give its audience its own custom training that addresses its current job routine, Ease of access is the third aspect. We can increase the time spent on the system and hence reduce the change resistance in the organization.

3. Training and Awareness

Training and awareness plays an important role to the full launch and can determine the success of the system. Organizations are now capable of building a cost effective training and awareness systems with the help of cloud technology.

The Cloud services for E-learning and ERP will provide a service-based tool which will enhance higher education. It will provide a collaboration model, which will help in integration of the various features. All the modules of E-learning will be Web Services hence then it's easy to integrate and plugin modules as and when required by the end users.



Fig.5. e-Educational solutions

4. ERP Solutions Benefits

1. Provides transparency between students, teachers and parents
2. Introducing new experimental ideas and methods
3. Provides best administration to their school organization
4. Quick access of online school registration portal
5. A dedicated network which makes students reporting more reliable at one place.
6. ERP School software is an online web based software.
7. Easy access through internet
8. Provides bulk SMS services for sending alerts to their parents and school staff
9. Online school registration provides all related data at a common place for easy access
10. Better understanding between school management, student and their parents
11. Provides high level security for their confidential data
12. Academic calendars, Examination, School notices and various exercises are integrated at single place.

BENEFITS OF CLOUD COMPUTING SERVICES

Cloud computing services offer numerous benefits to include:

1. Faster implementation and time to value
2. Anywhere access to applications and content
3. Rapid scalability to meet demand
4. Higher utilization of infrastructure investments
5. Lower infrastructure, energy, and facility cost. Enhanced security/information assets.
6. Greater IT staff productivity and across organization

CONCLUSION

The Cloud services for E-learning and ERP will provide a service based tool which will enhance the higher education.

It will provide collaboration model, which will help in integration of the various features all the module of E-learning will be Web Services hence then its easy to integrate and plugin modules as an when required by the end users. Cloud based learning will help students, trainers, teachers, institutions also and students from the rural parts or any part of the world can gain knowledge shared by different teachers and professor on any part of the world. There will be an online survey to collect the required data for the use of cloud computing in the universities and other governmental or private institutions in the region the cloud computing services needed to deliver the majority of IT services needed by customers do not yet exist.

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