

# Benefit of Cloud Computing for Educational Institutions and Online Marketing

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**Abstract** Cloud computing as an exciting development in a educational Institute and online marketing perspective. Students and administrative personnel have the opportunity to quickly and economically access various application platforms and resources through the web pages on-demand. Application of storage technology can significantly reduce the amount of cloud storage servers, thereby reducing system development costs; reduce the system caused by the server a single point of failure. Cloud storage services meet this demand by providing transparent and reliable storage solutions In this paper shows that the cloud computing plays an important role in the fields of Educational and online Marketing and it is helpful to provide the data to the Students and online customer respectively. The results show the beneficial of the cloud computing in Educational and online marketing for customers.

**Keywords:** virtualization, security, cloud computing, web based storage, distributed data base

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## 1. Introduction

Cloud Computing is accessing the services thru internet. Apart from IaaS, SaaS, PaaS, XaaS is possible in case of cloud. Users will be charged based on utility computing. Cloud uses virtualization as its key technology [1]. When end user submits their requirement a separate Virtual Machine is created to run their specific application. In a single host machine itself multiple Virtual Machines can be run to utilize the resources.

Cloud computing is becoming an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. Cloud storage is provided storage services, storage services through the network data stored in local storage service provider to provide online storage space [2]. Furthermore, most of today's smart phones and tablet devices have good support for diverse networks and protocols. Thus, connectivity can be established between mobile participants via 4G, Wi-Fi, and Bluetooth [6]. And the generation of youth are almost sixty percent and they are used tablet, samrtpnone etc. So in E-Commerce play an emerging role for on demand and online shopping site through customers. Physical machines may be dynamically allocated to virtual machines (VMs) which in turn may be migrated to other physical machines in case of machine faults. While this kind of flexibility increases availability and reduces cost, the highly dynamic nature in which VMs are allocated and migrated raises security concerns. Actually, Cloud computing is not a completely

new concept. It has similar features as Grid computing that has been investigated for more than a dozen of years.



Figure 1. Virtualization Technique

## 2. Cloud Computing Challenges

The reason for the success of Cloud computing lies in its easy-to-use computing model and the benefits it brings to the users. Cloud computing has emerged as an important solution offering enterprises a potentially cost effective model to ease their computing needs and accomplish business objectives. Some features of cloud computing are:

### 2.1. Optimized Server Utilization

As most enterprises typically underutilize their server computing resources, cloud computing will manage the server utilization to the optimum level.

## 2.2. On-Demand

Cloud computing provides users with customized environments that are tailored to individual requirements. This feature is more user-friendly than Grid computing where the application has usually to be adapted to the target architecture.

## 2.3. Dynamic Scalability

Many enterprises include a reasonably large buffer from their average computing requirement, just to ensure that capacity is in place to satisfy peak demand. Cloud computing provides an extra processing buffer as needed at a low cost and without the capital investment or contingency fees to users.

## 2.4. Disaster Recovery

It is a concern of enterprises about the resiliency of cloud computing, since data may be commingled and scattered around multiple servers and geographical areas. It may be possible that the data for a specific point of time cannot be identified. Unlike traditional hosting, the enterprise knows exactly where the location is of their data, to be rapidly retrieved in the event of disaster recovery. In the cloud computing model, the primary CSP may outsource capabilities to third parties, who may also outsource the recovery process. This will become more complex when the primary CSP does not ultimately hold the data. The Cloud technology is currently still in the development phase. As the sensitive applications and data are moved into the cloud data centers, run on virtual computing resources in the form of virtual machine. One of the most significant advantages to cloud computing is how it changes disaster recovery, making it more cost-effective and lowering the bar for enterprises to deploy comprehensive DR plans for their entire IT infrastructure.

Cloud Computing delivers faster recovery times and multi-site availability at a fraction of the cost of conventional disaster recovery. With cloud computing, warm site disaster recovery becomes a very cost-effective option where backups of critical servers can be spun up in minutes on a shared or private cloud host platform. Applications and servers that are deemed less critical in a disaster can be tuned down with less resources, while assuring that the most critical applications get the resources they need to keep the business running through the disaster.

And many more applications of cloud computing work but the above applications and the challenges in it.

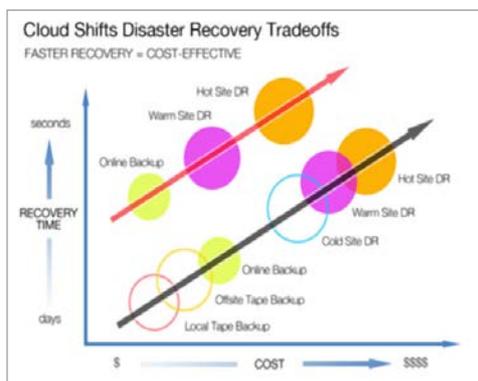


Figure 2. Cloud Disaster Recovery

## 3. Assistance of Cloud Computing

Cloud computing is becoming more and more popular, especially for businesses and organizations. A lot of enterprises are shifting to the clouds because it offers a lot of benefits. With cloud computing, small organizations no longer have to maintain software and servers on their premises. There is no need to employ highly technical personnel to maintain the IT infrastructure. One of such benefits is:

### 3.1. Cost Saving

IT infrastructure costs are almost always substantial and are treated as a capital expense. However if the IT infrastructure usually becomes an operating expense. In some countries, this results in a tax advantage regarding income taxes. Also, cloud computing cost saving can be realized via resource pooling. There is no need to invest on hardware and not use it fully. With cloud computing, small organizations can pay only for what they have utilized. They have the option to choose the kind of service level they require. Cloud computing service providers take care of IT support, licenses, and costly equipment. They also ensure that they have the newest software versions installed on their systems. Thus, small organizations need not worry about software installations and updates.

### 3.2. Reduce Spending on Technology Infrastructure

Maintain easy access to your information with minimal upfront spending. Pay as you go (weekly, quarterly or yearly), based on demand. Small organizations can save up to 70% of IT costs if they move to the clouds because they are charged only for what they have consumed monthly but the best infrastructure, platforms, and software are offered for their use.

### 3.3. Improve Accessibility

You have access anytime, anywhere, making your life so much easier i.e. Google doc is an application of cloud computing provide the best way to others without cost.

### 3.4. Less Personnel Training is Needed

It takes fewer people to do more work on a cloud, with a minimal learning curve on hardware and software issues like it is easy to deploy and development like java and other languages platform. Cloud computing offers many advantages today in the small industry and IT firm but the above is categorized in every field for clouds.

## 4. Educational Usage of Cloud Computing

There was a time when, to use files (word processing files, spreadsheets, etc.) on different computers. Cloud computing is a new business model wrapped around new technologies like virtualization, SaaS and broadband internet. The safety, stability, and ease-of-use of cloud computing in education is resulting in widespread adoption in educational institutions of all sizes and types.

Cloud computing entails using a network of remote servers hosted on the internet as opposed to a local server. This helps cut IT costs as well as simplifies content management processes for schools and educational systems. The results of a survey that have been completed in 2009 by Gartner analysts (Figure 1) about the IT trends (especially cloud computing) show that it is being used more in the areas of finance and business when compared to other sectors.

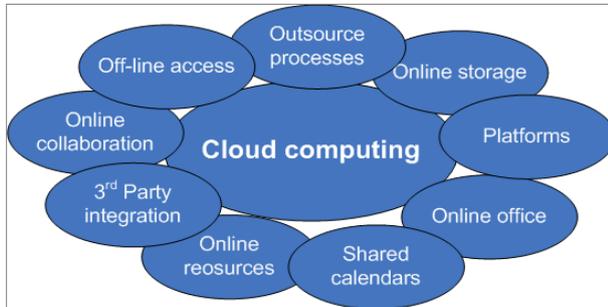


Figure 3. Cloud usage

#### 4.1. Back Up

An important function of the Cloud is that it automatically saves content, making it impossible to lose or delete any valuable material. This means that even if a computer crashes, all documents and content will remain safe, saved, and accessible in the cloud.

#### 4.2. Storage

The Cloud allows its users to store almost all types of content and data including music, documents, eBooks, applications, photos, and much more. We share the information of Attendance and Assignment in our Institute of students in Google doc and share all the information of students on doc via using an ERP Software and utilize the cloud resources.

#### 4.3. Accessibility

Any data stored in the Cloud can easily be accessed from almost any device including mobile devices such as phones or tablets. In our institute an URL provide to the students for accessing the data inside the campus or outside the campus.

#### 4.4. Collaboration

The Cloud allows multiple users to work on and edit documents at the same time, it enables effortless sharing and transmission of ideas. It also provides the security to edit only those people who gain the right from admin. With this feature, group projects and or collaborative lesson plans can be optimized for both teachers and students.

#### 4.5. Resource and Time Conscious

With the availability of content online, it is no longer necessary for teachers to spend time and resources printing or copying lengthy documents or lesson plans. Now, students are able to access homework assignments, lesson notes, and other materials online like ERP Systems

of education institute and parents also see the details of the students. Cloud can be used in underdeveloped or emerging countries creating a way of being able to teach children who would not ordinarily have access to education. Students and teachers can share their work without having to use paper. Using paper is costly both to the environment and in monetary terms and is therefore no longer a viable way to educate.

## 5. Advantages of Cloud Computing in E-Commerce

For describing the different aspects of an online commerce systems, digitally enabled commercial transactions between and among organizations and individuals. Cloud computing is now evolving like never before, with companies of all shapes and sizes adapting to this new technology. The Figure 4 shows a high-level view on an E-commerce system's architecture. If used properly and to the extent necessary, working with data in the cloud can vastly benefit all types of businesses. Industry experts believe that this trend will only continue to grow and develop even further in the coming few years. While cloud computing is undoubtedly beneficial for mid-size to large companies, it is not without its downsides, especially for smaller businesses.

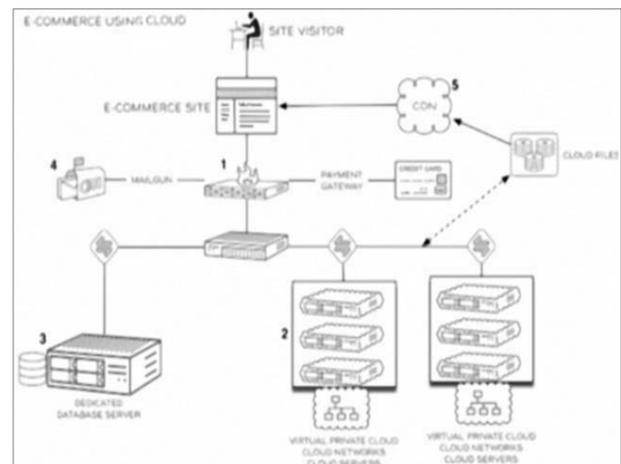


Figure 4. E-Commerce system architecture

#### 5.1. Unlimited Accessibility

Developing a business means being constantly connected. With Cloud, you can manage your online shop from anywhere and at any time. A browser and an Internet connection are all it takes to process orders, interact with customers, schedule deliveries or generate invoices.

#### 5.2. Security and Stability

Security is one of the most important advantages of the Cloud technology. In the Cloud system, the data of each client is completely partitioned, so that none of the areas interferes with the others. The connection to the servers is secured according to the highest standards, making sure that you are the only one with access to your data. It's like having your own server, without paying considerable amounts of money.

### 5.3. Full Scalability

Your business grows, so will your technical requirements. Unlike open source ecommerce solutions, which would normally require new investments for extending the technical infrastructure, a Cloud ecommerce system will always be ready to efficiently sustain your new volume of clients, orders, traffic and continuously growing product catalog.

### 5.4. Minimal Costs or No Costs

Cloud solution for E-Commerce, you don't need to worry about the initial investments. You don't need to buy your own server or pay for a separate hosting service. Depending on your business needs, you can always increase or limit the amount of resources you use and also optimize your costs thanks to the scalability of the system.

Cloud computing is probably the most cost efficient method to use, maintain and upgrade. Traditional desktop software costs companies a lot in terms of finance. Adding up the licensing fees for multiple users can prove to be very expensive for the establishment concerned.

### 5.5. Quick Deployment

Lastly and most importantly, cloud computing gives you the advantage of quick deployment. Once you opt for this method of functioning, your entire system can be fully

functional in a matter of a few minutes. Of course, the amount of time taken here will depend on the exact kind of technology that you need for your business.

## 6. Conclusion and Results

This paper introduces the benefit of cloud computing in educational organizational and online advantages provided by cloud, there is a great advantage for university IT staff to take them away the responsibility of the maintenance burden in the university. Cloud provides instant global platforms, elimination of H/S capacities and licenses, reduced cost, simplified scalability marketing through cloud services. 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. The integration of cloud-based services in various domains is already quite common: payment services and user tracking are widely used in online commerce. Particularly new payment services with their user base help retailers to enter new markets. The below figure shows the results of this research work that how cloud used in educational and E-Commerce system in future.

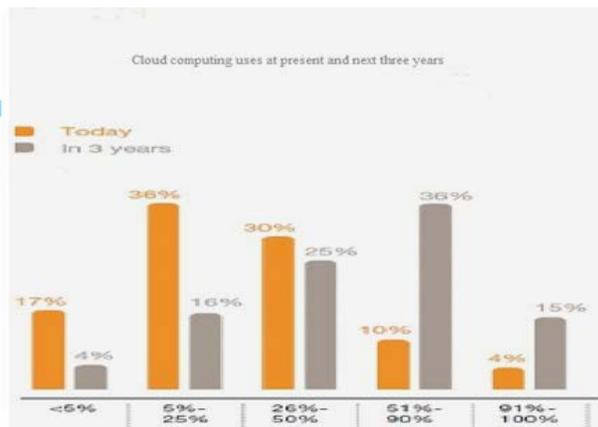
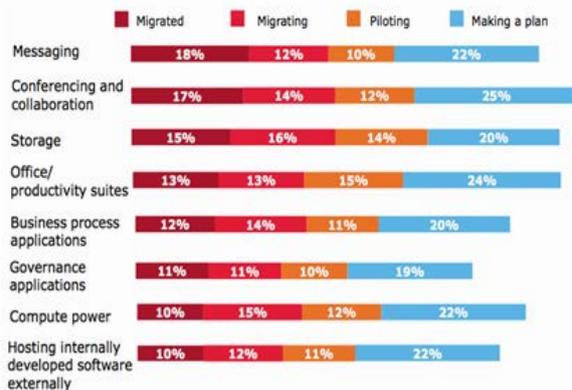


Figure 5. Results

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