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CLOUD COMPUTING IN ACCOUNTING: LET'S STEP INTO THE FUTURE

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Abstract

Cloud Computing in Accounting is a need of tomorrow. Everything is getting digitalized and that's what the future requires. This paper attempts to give a brief outline on the history of cloud computing accounting, their services, the benefits derived, the challenges faced in its implementation with the limitations therein. It also highlights the key points on how Cloud Computing in Accounting differs from traditional accounting systems.

Keywords: *Cloud, Accounting on Air, Services under Cloud Computing Accounting*

INTRODUCTION

Cloud Computing Accounting is a kind of accounting software that is based on remote servers. It is an internet based accounting system which records, stores, processes, interprets & safeguards various types of accounting data. Through the usage of this software, organizations are getting digital to operate their business. The highlight of the software is that one can operate it from "Anywhere Anytime" on any device with internet connectivity. Moreover, it has relatively lowercost efficiency that can be afforded by every organization.

Meaning:

Cloud Computing is a kind of Internet based computing that provides servers, storage, applications and data transfer services to its end users. It is different than data saving in computer system. It is a digital means of saving a company's accounting data based on remote software. Cloud computing is the path where its consumers can avail the services at "Anytime, Anywhere" for sharing data more easily and keep their data stored safely. Cloud Computing is the combination of both software and hardware based computing resources delivered as a network service on a remote server. Under Cloud computing service users can access database resources via internet from anywhere, for as long as they need, without worry about any maintenance of actual record.

Definition:

- Cloud Computing Model can be simply defined as the storage, processing and use of data to be accessed over the Internet on different located computers. This means that users can request to have almost unlimited computing power that do not require significant capital investment in order to meet their needs and that they can access their data from any location where they are connected to the Internet.
- Cloud Computing refers to both the applications delivered as services over the Internet and the hardware & systems software in the data centers that provide those services. The services themselves have long been referred to as Software as a Service (SaaS)."

History of Cloud Computing:

Cloud Computing is believed to have been invented by ***Joseph Carl Robnett Licklider***in the 1960s with his work on APPANET to connect people and data from anywhere at anytime.

- Since the sixties, cloud computing has developed along a number of lines, with web 2.0 being the most recent evolution. Cloud computing for the masses has been something of a late developer.
- One of the first milestones in cloud computing history was the arrival of sales force.com in 1999, which pioneered the concept of delivering enterprise applications via a simple website.
- The next development was Amazon web services in 2002, which provided a suite of cloud based services in storage, computation and even human intelligence through the Amazon Mechanical Turk.
- Then in 2006, Amazon launched its Elastic Compute Cloud (EC2) as a commercial website.
- Another big milestone came in 2009, as 2.0 hit its stride and Google and other started to offer browser-based enterprise application, through services such as Google Apps.
- "The most important contribution to cloud computing has been the emergence of "Killer apps" from leading technology giants such as Microsoft and Google when these companies deliver services in a way that is reliable and easy to consume."

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Why is it called the Cloud?

- When we talk about the use of internet banking, the moment we access or search this data, we're using the cloud. The cloud area is one of the common platforms which makes data and software accessible using internet anytime, anywhere and most importantly from any computer device. Your hard drive is not longer than a central hub.

Cloud Accounting Software: Key Highlights

- There are a numerous key points showing how cloud accounting is better than traditional site accounting.
- For one, cloud accounting is much better from flexibility point of view. Data of business accounting can be searched or accessed from anywhere in all over the world, on any device with Internet connectivity, rather than limited on some select on-premises computers.
- Secondly, it differs from traditional accounting software, software of cloud accountingupdates financial information within a short moment automatically and supplies the financial reporting data in real-time as per our need, it means balances of business account are always correct & accurate and less errors take place as compared to manual data entry process. Cloud accounting software also easily handles multiple-currency and multi-company transactions more competently.
- On the world of premises, every time the firm growth rate is increasing, they bump into big software license and service costs which are always very high and new licenses fees for managing database system and other supportive relevant software. The firm always has to make a provision of heavy capital investments/costs for purchasing new hardware, like servers. But by using cloud solutions, businesses do not get fixed with permanent, high cost equipment and licenses, when your business deals are over and, similar like, there are no big spikes in costs when it elaborate a little.
- Also, cloud accounting requires far less costly maintenance than its conventional matching part. The cloud provider provides complete backups and updates features automatically. There is no requirement to download or install it on a company desktop.

Services Provided Under Cloud Computing:

1. **Infrastructure as a Service (IaaS):** This service provides business access to essential web infrastructure such as servers, connections, storage space without the need to buy or manage internet infrastructure themselves. The economies of specialization and scale are beneficial to the managed service provider and the business that is using the infrastructure. For eg.: IaaS allows an internet business an opportunity to develop and grow in an instant. Both PaaS (Platform as a Service) and SaaS (Software as a Service) clouds are grounded in IaaS clouds since the company that is providing the software as a service is also maintaining the infrastructure to run the software in the first place. By choosing an IaaS cloud, a company might have to deal with some complexity, but with it comes flexibility, too. In Iaas cloud clients install operating system, images and their application software on the cloud infrastructure.IaaS providers are Amazon EC2, Azure, Google compute Engine, etc.

2. **Software as a Service (SaaS):**This service offered by cloud computing is relatively mature. Cloud applications permit the cloud to be leveraged for software infrastructure. This reduces the burden of support, maintenance and operations because the application is run on computers that are owned by the vendors. SaaS provides large variety of applications over the internet where a user can make his own word document in Google docs online and without installing any editing software he can edit his document and photo online on pixlr.com and here are many more software service providers Google, Microsoft, Word Press, Sales force, etc.

3. **Platform as a Service:**PaaS clouds are created, often times inside IaaS clouds by specialists to deliver the scalability and distribution of any application and to aid making a company's expenses predictable. The main benefit of this service is that for very little money, one can start the application that too without any stress. Its design allows for a lot of scalability since it is based on cloud computing. In PaaS one can make application and software on other's database. Thus, it gives a platform to create, edit and manage the application programs we want. The only limitation of a PaaS cloud is that these services may come with some restrictions that might not work for every product in each given situation.Its providers are Cloud Foundry, Heroku and Force.com, etc.

Cloud Computing Accounting V/s Traditional Accounting: Where do they mainly differ?

Sr. No.	Base of Changes	Cloud Computing Accounting	Traditional Accounting
1.	Accounting Storage	Cloud Computing software utilizes the cloud to share accounting data, making financial information accessible to owner and employees anywhere where internet is	Company has one dedicated hard drive on which accounting software is installed and financial data is recorded.

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		available	
2.	Affordable	Cloud Computing software tends to be a more affordable than traditional accounting.	Need of hard drive and staff to operate, it can be unaffordable.
3.	Cost	Since the software has been using cost is always less.	To manage and records data it is more costly. Require to run hardware always need to operate a employee.
4.	Back Up	Automatically back up option it has the best and secure forever.	It is hardware based accounting so get back up of all the data it will take lot of time.
5.	Platform	This software service can be work on different applications and users at the same time.	Based on hardware device it can be work only one platform.
6.	Data Stealing	Data Stealing chances is less as compared to Traditional accounting.	Data Stealing may be happens when company use the hardware based accounting.
7.	Location	Accounting data are available on Cloud.	Availability of data chosen by the company.
8.	Numbers of Users	Numbers of Data users are Unlimited.	Numbers of data users are limited.
9.	Accounting Software License	The company is the tenant.	The company is the owner.
10.	Security and Privacy	Most of the companies are adopting this software for privacy and security for data	Security and privacy is less as compared to Cloud Computing Accounting.
11.	Flexibility	Cloud Accounting is more flexible in searching/ accessing data as compared to Traditional Accounting as one can access data from anywhere all over the world, at anytime and most importantly from any device having internet connectivity.	Searching/Accessing data under Traditional Accounting is limited to specific records at particular place only.
12.	Transactions	Cloud accounting software easily handles multiple-currency and multi-company transactions more competently.	Traditional Accounting demands special provision and experts in order to handle multi-currency and multi-company transactions.

Data Security with Cloud Accounting:

Cloud accounting solution system ensures high security (and we can say it more secured than our expectation) method of saving and storing important financial data than traditional software of accounting. For example a company Desktop or laptop with vital financial information may be damaged or stolen or trapped by virus, which could lead to the loss of any crucial information. Cloud accounting solution, however, leaves no tracking of important financial data on the desktop of company, and use to that data in the cloud and this data are encrypted and totally protected with password which is sent to the end user and not publicly accessed.

Data transfer/mobility is also an easy task in cloud accounting, more than one people simply require access rights to the same desktop with their unique confidential passwords. Traditional methods often require spark drives to move data, which could be damaged or stolen.

Lastly, cloud providers generally have backup servers in two or more locations. If one server network go downhill, still one can access to the important data. If the important information related to finance are kept on-premises than it may be destroyed or damaged by fire or natural disaster, and may never be restored or recovered.

Cloud Accounting: Cost Effectiveness:

Those companies who use the system of cloud accounting need only less initial server infrastructure to save or store data, and Technical person have no need to maintain it or update the cloud accounting system quickly. There would be less additional expenses to be incurred and also, there won't be a need to purchase new software frequently, it means huge savings for businesses. For the on-premises world (traditional accounting), it is the completely opposite. Every time a firm grows, there is an urge to incur costs into big software license and service costs as well as new licenses and other fees for database management system and other relevant software.

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Role/Benefits of Cloud Computing in Accounting:

Developing accounting reliability and increasing awareness for accounting traditional storage system, only cloud computing can operate it in the most effective way. Cloud Computing service providers are deploying their services to both the small and medium size of business systems. If a company takes a step to go modern and want to safeguard their business for a longer period of time, they can easily consume this service. Cloud computing provides a suitable path to make the business innovative and successful.

Why the Cloud Computing is better option for a company's bright future?

1. **Scalability:** Being a quality of scalable is very important feature of accounting. It is a routine operation of a company. Management is bound to be aware of his company's market position and growth. Cloud Computing service provides a standard to make it scalable for all like management, investors, internal environment, etc.

2. **Cost Reduction:** Here we have a very big example of Cost Reduction benefit that, a 70% Cost Reduction has been observed since adopting Amazon web service as the cloud vendor. Amazon Web Service (AWC) has also reduced their prices a couple of time, in the past three years, in spite of the absence of competitive forces.

3. **Reliability:** Today more and more businesses are turning to cloud computing specially small and medium business of around the world are getting more benefits from this software. Accounting reliability, financing, management and sharing facilities are the most important part of every business. This software provides reliable data which can be very useful. A reliable data in turn plays a crucial role to make decision for a company's growth.

4. **Sharing and Collaboration:** If a company adopts Cloud Computing Software for storing their accounting details, it will be easy to storage and even share them further to the end users. By adopting this service, company's data can be shared from "Anywhere at Anytime". Without building their own infrastructure, investors easily get a company's data whatever they want. It has a mode where multiple users and applications can work more efficiently with cost reduction.

5. **Easy to Use:** Data users and company who have adopted cloud accounting system can easily connect to this service and avail benefits from it. It is very flexible model and not that expensive too. Even small and medium enterprises can afford this service.

6. **Storage and Security:** In this system, storage availability is almost unlimited. Though the service providers are still working on the storage space to make them enough. Security directly contributes to the reliability of the system. A reliable software system is a system with reliable security. Hence, designing a highly secure cloud system is very important.

Cloud Computing in Accounting: Challenges while adopting

Adoption of cloud computing software is good step to get digital but, there are few challenges too. Many companies are still thinking to adopt this software.

Following challenges of Cloud Computing Accounting:

1. **Data Stealing:** Cloud computing is a software which provides us a data sharing facility. Due to this facility and legal issue, users data are not safe completely. It can be operated from anywhere by anyone. So there is no surety that data would be safe or not.

2. **Confidentiality:** Cloud Computing has a very good feature of data sharing, but with it comes a challenge of keeping confidentiality for data. Data should be disclosed for authorized users with protected passwords which should be changes during regular intervals.

3. **Audit:** Auditing is the process of checking records. Accessibility of data might not be possible every time because it will work only when server is available.

4. **Security and Privacy:** Data stealing and confidentiality are major reasons of loosing privacy and security. Therefore, it depends on the design of the software. Hence, it should be designed with full of privacy and security.

5. **Hackers:** The base of using this software is internet. Every social sites and web sites are facing hacking problems. If someone hacks the software for doing any fraud, users can be affected very badly.

Top 10 Cloud Computing Service Providers in India for 2024:

1. Amazon Web Services (AWS)
2. Microsoft Azure
3. Utho
4. Google Cloud Platform (GCP)
5. IBM Cloud
6. Oracle Cloud Infrastructure (OCI)
7. Tata Communications
8. NTT Global Data Centers and Cloud Infrastructure, India
9. HCLTech Cloud Services
10. CtrlS Datacenters

(Source: https://utho.com/blog/top-cloud-service-providers-in-india/)

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