CLOUD COMPUTING& ITS INITIATIVES

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INTRODUCTION

Too many companies and individuals used computers to work alone, within a business or at home, until recently, and today too many organisations and individuals use computers to work alone, inside a business or at home, by investing in hardware, software, and upkeep. This situation is gradually changing as a result of the introduction of a new breed of Internet services known as Web 2.0, through which one may now access the power of computers from a completely other place, a phenomenon known as 'in the cloud' or 'cloud computing.' Cloud computing is also known as "on-demand computing," "software as a service," "information utilities," "the internet as a platform," and other terms.

Cloud computing is the use of the internet for computer purposes, such as using software programmes, storing data, obtaining processing power, or developing applications on a platform. Products that live in the cloud, such as e-mail, word processing, photo sharing, and video sharing, are safe, backed-up, and available from any Internet connection. Gmail, which is increasingly utilised by businesses and people to operate their e-mail services, is the finest living illustration of this. Because Google Apps is free for educational institutions, it is commonly utilised to operate many programmes, particularly email services, which were formerly hosted on their own computer systems.

This has saved organisations money since they pay per usage for apps and services, as well

as time for computer personnel, which they can use to operate other services. They also don't have to worry about server upgrades, backups, compatibility, or maintenance because Google takes care of it. Libraries use computers to run services like Integrated Library Management Software (ILMS), websites, portals, digital libraries, and institutional repositories, among other things. These are either managed by the parent organization's computer staff or by library employees. It requires an investment in hardware, software, and personnel to maintain these services, as well as backup and update when new software versions are released. Without the assistance of IT employees from inside or outside the organisation, library professionals who are not educated in server maintenance find it impossible to do some of these tasks. Now that cloud computing has become a new term in the library world, it's a gift in disguise since it allows libraries to offer various ICT services without much difficulty because third-party services will maintain servers, do upgrades, and backup data. Despite some reservations about using cloud services, such as privacy and security, some libraries have already adopted this new technology to power some of their services.

WHAT IS CLOUD COMPUTING

A network or the internet is referred to as a cloud. To put it another way, a cloud is anything that exists at a faraway location. Cloud services can be delivered across a network, such as a public network or a private network, such as a WAN, LAN, or VPN. E-mail, online conferencing, and customer relationship management (CRM) are all cloud-based applications. Cloud computing is a new IT service delivery paradigm that many businesses and people are adopting. It helps users to avoid hosting and managing numerous servers locally via an organization's network, as well as dealing with hardware failure, software installation, updates, backup, and compatibility concerns, as well as saving money. In other terms, it refers to "the delivery of computing as a service rather than a product, whereby shared resources, software, and information are delivered as a metered service to computers and other devices through a network, generally the internet." Rather than investing in hardware and software, businesses acquire and pay for services as required in this approach. Cloud computing also makes it easier to scale up IT requirements fast and easily to meet changing demand. In other words, it allows businesses to add or remove hardware/software as needed by just asking it from the service provider.

TYPES OF CLOUD COMPUTING

Cloud computing IT model has wider meaning as it essentially has three different types of services viz. SaaS, PaaS and Iaas.

CLOUD COMPUTING INITIATIVES

Amazon, Google, and Microsoft are among the companies that have launched cloud computing projects to provide various sorts of cloud

computing services to businesses and people. Some services offered by these initiatives are:

Amazon Web Services (AWS)

Amazon is regarded as one of the industry's key participants, providing a variety of notable cloud computing services such as elastic compute cloud (EC2), simple storage service (S3), simple database, and simple queuing service (SQS). It offers a cloud-based infrastructure platform that is dependable, scalable, and low-cost, and it powers hundreds of thousands of enterprises in nations all over the world.

Google Apps

When compared to on-premises, hosted, and software plus services technologies8, Google Apps cloud services, a multi-tenant, internet-scale infrastructure, provides faster access to innovation, greater reliability and security, and maximum economies of scale. Individuals and organisations (limited to 10 user accounts), educational institutions, and US non-profit organisations can use Google Apps for free, but corporations and organisations must pay a fee. Gmail, Google Docs, Google Sites, Google Video, and other cloud-based services are available through Google applications. Google Apps enables businesses to migrate their e-mail, web, and office applications to the cloud.

Microsoft Windows Azure

Windows Azure is a Microsoft cloud platform that allows businesses to create and execute applications with unrestricted scalability and simplicity of usage. With this adaptable platform, you can simply scale up or down to fit your business's needs.

Rackspace Cloud

Rackspace Cloud is a cloud computing platform that provides three sorts of services to businesses and organisations. Cloud servers, cloud files, and load balancers are all examples of cloud computing. Cloud servers come in a variety of sizes and are determined by the amount of physical memory allotted for an instance, which may range from 256 MB to 30 GB on their preferred operating system to operate various online services.

ADVANTAGES AND DISADVANTAGES OF CLOUD COMPUTING

Advantages

Cost savings Easy installation and maintenance Increased storage Highly automated Flexibility Better mobility Shared resources are just a few of the benefits of cloud computing.

Disadvantages

Data security and privacy Network connectivity and bandwidth Dependence on other agencies Limited flexibility Cost Knowledge and integration are only a few of the major drawbacks of cloud computing.

CONCLUSIONS

Due to their skill levels, lack of assistance from IT departments, or the lack of IT facilities inside their organisations, library professionals frequently find it challenging to handle technology. This type of circumstance always makes it difficult for library professionals to automate library activities, develop digital library services, and so on. In this case, cloud computing may be able to assist libraries in carrying out current ICT operations without having to worry about the technical aspects, with the exception of adding material to resources. Libraries have made significant progress in embracing this technology, particularly in the West, but it will undoubtedly expand to underdeveloped nations over time. According to the literature, certain service providers have already stepped forward to assist libraries in automating and establishing cloud-based digital libraries.

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