

## **CLOUD COMPUTING: A NEW REVOLUTION IN INFORMATION TECHNOLOGY SECTOR**

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### **Abstract**

‘Cloud’ is a set of different types of hardware and software that work collectively to deliver many aspects of computing to the end-user as an online service. Computing is being transformed into a model in which water, electricity, gas, and telephony are delivered and distributed in a manner similar to utilities. In such a model, users can use services based on their needs without hosting services. Several computing paradigms have promised to deliver this utility computing vision and include grid computing, P2P computing and more recently cloud computing. The term refers to an infrastructure as a cloud in which businesses and users are able to use applications from anywhere in the world on demand. Cloud provides infrastructure, platforms, and software (applications) in the form of computing services, which are made available to consumers as subscription-based services in a pay-as-you-go model. In the industry these services are referred to as Infrastructure as Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) respectively. The exact advantages will vary according to the type of cloud service used, but, fundamentally, the use of cloud services means that companies do not need to buy or maintain their computing infrastructure. This study tries to explore the importance of cloud computing in the era of information technology.

**Key Words: Cloud, Computer, IT, Software, Internet.**

### **Introduction**

The name Cloud Computing has been heard since 2007-2008, but in 2013 Cloud Computing has become more popular. If we understand its meaning in ordinary language, it means cloud. Cloud Computing is such a modern technology that you can develop your IT capabilities according to your wish or your business needs and use them in places like Office, Home because Cloud through a network like internet. Moves It provides "as a service" to IT, such as software application, storage, network, infrastructure etc. Cloud is used to store data. This name of Cloud Computing is because it provides a cloud or virtual

space remotely to hold information or data. Cloud service providers allow users to store files and applications in remote servers.

Cloud computing offers a variety of computing services via the Internet, including servers, data storage, databases, networking, software, analytics, etc. Cloud Computing is a better computing network. In order for our data to be processed properly, we need a good computing network. Cloud Computing Network is very popular network, this technology is increasing rapidly in the world. For cloud computing, large companies such as Google or Microsoft create very large data centers. Data center is the place where data on a very large scale (such as your video, photo or document) store. This is done, they are connected to a network and the data is delivered instantly through the Internet wherever needed, for example take the Facebook Data Center. It is also connected to the cloud, the photos and videos you upload to Facebook are safe here and you can use this data from any place in the world through Facebook's application or website, all you need is Facebook's application and user Id password. With the help of cloud computing, many such services can be used, which can be very difficult and expensive to source themselves. That is, sources like High Performance Processor, Ram, SSD, GPU etc. are shared through cloud computing. Cloud computing allows the application to be run from anywhere in the world with ease from anywhere. In this technology, applications and data are not tied to any one device. It can be used from anywhere and by the remote team simultaneously in real-time.

### **Importance of Cloud-Computing in IT Sector**

Cloud computing is used to deliver various services via the Internet. It includes various resources such as tools and applications such as data storage, servers, databases, networking and software. This makes it possible to keep files secure in remote databases of cloud-based storage rather than being stored in a hard drive or local storage device. It is a popular choice for people and businesses due to factors such as cost savings, increased productivity, speed and efficiency, performance and safety. Cloud Computing is not a latest technology. Cloud computing has evolved (develop gradually) through a number of phases which includes Grid Computing, Utility Computing, Application Service Provision, and Software as a Service etc.

**Cloud Computing** is defined as storing and accessing of data and computing services over the internet. It doesn't store any data on your personal computer. It is the on-demand availability of computer services like servers, data storage, networking, databases,

etc. The main purpose of cloud computing is to give access to data centers to many users. Users can also access data from a remote server. Considering the numerous benefits that cloud computing offers to organizations, a fair case can be made that cloud computing is increasingly becoming the new normal. Cloud computing is helping the society to cope with future problems such as managing big data, cyber-security and quality control. In addition to this, emerging technologies such as Artificial Intelligence, distributed ledger technology, and many other capabilities are becoming available as services through cloud computing.

Cloud computing enables you to reduce and increase your resources demands as per your requirements. For e.g. if you have heavy traffic on your site you can increase your resources and vice versa. Cloud computing gives you the flexibility to work from wherever you want and whenever you want all you require is an internet connection. Cloud computing helps in reducing a considerable amount of CAPEX (Capital Expenditure) & OPEX (Operational Expenditures) an organization does not need to invest in expensive hardware's, storage devices, & software's etc. and you only have to pay for the resources you utilize.

Cloud computing operates on a similar principle as web-based email clients, allowing users to access all of the features and files of the system without having to keep the bulk of that system on their own computers. In fact, most people already use a variety of cloud computing services without even realising it. Gmail, Google Drive, TurboTax, and even Facebook and Instagram are all cloud-based applications. For all of these services, users are sending their personal data to a cloud-hosted server that stores the information for later access. And as useful as these applications are for personal use, they're even more valuable for businesses that need to be able to access large amounts of data over a secure, online network connection. Cloud computing is effectively just taking stuff that was traditionally done onsite and moving it to a hosted environment with a structure around it that allows people to consume the servers on a usage basis. The technology behind cloud computing is really just about allowing people to access information on their computers via a remote data centre or from a hosting environment somewhere else.

## Conclusion

Cloud computing will become even more prominent in the coming years with rapid, continued growth of major global cloud data centres. All of citizen can use cloud computing in daily lives. Apart from using cloud computing from small start-ups to global corporations, from government agencies to non-profit organizations. Cloud computing is a popular choice for many people and for many reasons in businesses such as low spending, high productivity and fast. The future of the cloud is far from certain. The rapid pace at which technology has changed in the last five years. However it must be said that ultimately the cloud is growing exponentially and will continue to do so for some time to come. In the future, edge computing will be the most prevalent after cloud computing. The global edge computing market is estimated to exceed \$ 8 billion by 2025.

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