

RESEARCH

CLOUD COMPUTING

**Cloud computing**

Cloud computing is the on-demand access of computing resources physical servers or virtual servers, data storage, networking capabilities, application development tools, software, AI-powered analytic tools and more over the internet with pay-per-use pricing.

The cloud computing model offers customers greater flexibility and scalability compared to traditional on-premises infrastructure.

Cloud computing plays a pivotal role in our everyday lives, whether accessing a cloud application like Google Gmail, streaming a movie on Netflix or playing a cloud-hosted video game.

Cloud computing has also become indispensable in business settings, from small startups to global enterprises. Its many business applications include enabling remote work by making data and applications accessible from anywhere, creating the framework for seamless omnichannel customer engagement and providing the vast computing power and other resources needed to take advantage of cutting-edge technologies like generative AI and quantum computing.

A cloud services provider (CSP) manages cloud-based technology services hosted at a remote data center and typically makes these resources available for a pay-as-you-go or monthly subscription fee.

### The cloud delivers more flexibility and reliability, increased performance and efficiency, and helps to lower IT costs. It also improves innovation, allowing organizations to achieve faster time to market and incorporate AI and machine learning use cases into their strategies.

**There is some of the keys cloud computer :**

### **1.Economical**

Typically, it is not economical for an individual to host their own cloud servers because of less use and high maintenance. However, if your data is hosted on third-party servers that provide your Storage as a service. It will be a lot cheaper and cost-effective. It is not effective for end-users but also the cloud hosting businesses.

**2.Disaster recovery**

This is one of the most important benefits of cloud computing. Think of a situation if your laptop has inhale water or was burnt in a fire. All your data will be fade and almost impossible to recover. Like some of the coastal regions in the world are prone to cyclones and tornadoes. Disaster recovery servers allow users to access their data even if physical servers are destroyed due to any natural disaster or catastrophic failure as it will always have a backup server which may be sitting at a different location.

**3.Secure**

Security doesn’t always mean privacy but also refers to damage protection. Cloud computing being operational directly from servers, it has multiple diaper of security and encryption protocols that make it a private and full proof system. Other benefits of cloud computing include spam and virus protection using different software on the server.

**4.** **Sharing information**

One of the greatest benefits of cloud computing is that you can share the data or information with anyone in any part of the world. That too with full security. Some of the examples of sharing info on the cloud that you already know are google drives, box, git, etc.

### **5.Scalability**

When it comes to changing motherboards, processors, RAM or SSDs in your laptop or computer, you have to purchase the resources based on what you already have. However, in the case of cloud computing, it allows you to ladder all the resources easily in comparison to traditional computers.

**6.Flexible storage**

As cloud computing refers to big servers that can[***store terabytes of data***](https://talkroute.com/is-it-a-good-idea-to-use-cloud-backup-services/)on a single unit. It is very flexible to increase or decrease storage volume based on user needs. It allows the end-users to add more space or reduce space if in abundance.

**7.Redundancy**

It may sound like a technical term but it simply means that if one server goes down due to any unforeseen circumstances, there are other servers connected within the network which will provide you the data. This method allows the user to access the data without any problem even if the resources fails as it automatically switches the thread from non-operational data request to operational data request.

**8.Less maintenance**

There is multiple software that works on top of this expensive hardware. Therefore, it reduces the maintenance cost because the system will automatically update itself to the latest version of security or antivirus. Plus, when the hardware is brought to host data on the cloud in the first place, the server hosting companies make sure that it comes with the latest tech that can be easily scalable and requires less maintenance.

In the end, we can say that the benefits of cloud computing have revolutionized the entire IT industry. The cloud-based solutions in today’s world are very crucial in our daily lives. Cloud computing is the only way to expand businesses as it allows caring and sharing the data at the same time.

References :

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