**IT Technologies: Clouds, Services, Servers:**

**What does it do?**

While clouds, services and servers are three separate technologies, they fall under the same category. Physical servers and the services they provide were the most prominent for many years as they were the only option. These servers are powerful computers, most often stored in data centers for businesses. They help the company by running operating systems and applications off of the relevant internal hardware. One of their biggest drawbacks, in this case, is the fact that each of these setups can only be used by a single tenant, as the resources cannot be distributed.

Over the last decade, the world has slowly begun to shift to utilizing cloud computing and servers virtually over the former option. Therefore, there must be some benefits to taking this approach. Cloud servers list a host of advantages in comparison to its counterpart, some of which include reliability, availability, mobility, speed, efficiency, and affordability.

Cloud servers take a new approach to storing data and providing services. They instead act as a software-based representation of a physical server, with all data being sent to a virtual space that runs in a cloud computing environment. This allows all information to be accessed online and run as independent units.

Cloud computing can be found in many forms, the most important utilization of them for businesses is commonly seen around the world. Infrastructure-as-a-Service (IaaS) or Platform-as-a-Service (PaaS) are two fundamental types of this product. IaaS lets consumers purchase infrastructure which can be accessed and utilized online. PaaS is very similar; it offers the same features as IaaS but also the firmware and development tools for selling their services. These two alike allow companies to save on the cost of expensive physical hardware.

One of the more impactful negatives of physical servers was the complexity of backing up data, and in turn, restoring it if something was to go wrong. Disaster recovery also runs in a similar vein. The benefits of using the Cloud to store, backup and recover data are the cost and time-efficient compared to their previous counterpart.

Another important form is the ability to buy and sell big data analytics, this is seen within companies who desire to extract and use information derived from customers and their data. Companies that are usually interested in this form of the Cloud would be social networking platforms or suppliers that wish to learn more about how they should be marketing and advertising.

The concept of cloud computing launched around the mid-20th century but only became mainstream in the early 2000s. Since around 2020, most up to date companies will utilise a hybrid of both physical and cloud-based servers. The split will depend on the said company, which can either be equal in usage or skewed more towards all virtual. A 2019 IDC study did however show that physical servers are still an important part of the data center, they just are not receiving the same advancements as their counterpart.

The future lies within the services that cloud computing can provide and increase its cost efficiency, performance, and reliability. There is no doubt that the many attributes that makeup cloud computing like its storage capacity, security enhancements or networking speed will see vast increases over the next few years. It is not the real benefactor of this state-of-the-art technology. However, the disadvantages of the cloud should not be overlooked. Any downtime in network connections will make accessing its services and data very difficult.

The advancements in virtualization technology are one of the biggest components in making cloud computing what it is today. Virtualization at its core is the ability to let software simulate hardware and create a virtual computer system. Cloud computing is simply one of the consequences of this process.

There is no denying that the monetary increases found within the IT industry have also helped to further push and advance cloud computing. Of course, many other technologies helped with this development such as enabling faster broadband internet access, networking infrastructure and increases in storage devices.

**What is the likely impact?**

The greater impact of cloud computing and servers, in general, is the way that they allow end-users. Empowering businesses and companies to work from anywhere and the hew of other new outlooks it has created. Giving the ability to access these features to not only those who could afford the hardware, but now everyone with an internet connection can access those that were previously inaccessible.

For example, in recent years the possibility to stream video games from a cloud computing device onto your own was made possible. This alleviates the lack of expensive hardware that one may have and allows you to stream any game to your device and play it from the cloud. While this is a relative innovation, it still has a long way to go with most of the world’s internet not being able to provide a strong enough connection. The advancements of these streaming services along with developments of the cloud itself will hopefully strengthen the quality of streaming video games without having to spend thousands on a computer itself. The likely changes over the next few years will line up with that above. Changes in performance, cost efficiency, internet speeds and reliability and the likes are more common than any changes in how cloud computing or servers infrastructure work.

The reconstruction of servers and the implementation of cloud computing came to fruition. Only a small percentage of the jobs lost in this period were attributed to the cloud. In reality, cloud computing reconfigured the workforce. While it did remove some of the previously required occupations, it also created many new jobs and job opportunities. The short-term negatives are far outweighed by the many big picture positives. Providing people and small businesses with the ability to create start-up businesses and sell their ideas for minimal investment has been a huge addition to the industry. After all, companies that utilise a hybrid of both forms of technology or a majority of physical hardware still need those occupations that were caught in the fire.

**How will this affect you?**

Cloud computing and the services it provides have affected the average person’s day to day life immensely. It may go unrecognized by some but a large percentage of everyday life activities such as banking, shopping, education, and media streaming services all use the Cloud. Not only does it affect personal endeavors, but cloud computing also runs the business side of many of the world’s most famous industries and workplaces as well.

The increase in possibilities for students within the cloud is one of the largest advances in education for a long time. Being able to send, receive and access information from anywhere at any time gives students and teachers the ability to store their data securely without the need for complex and expensive hardware. While most first-world countries did have access to those physical servers and such previously, less developed areas can now reap the same rewards without the need for them.

Another daily life advancement cloud storage introduced was the advanced navigational systems seen in modern vehicles. Cloud computing can store such a large amount of data and automatically update it accordingly has allowed the way we drive to be superior to its previous iterations. The cloud also has changed the way people interact with their cars entirely. This is most commonly seen in the plethora of third-party applications like music software, phone calls and payment tools.

Unlike some other new technological innovations, the way that Clouds, servers, and services affect us is all the same. It may be utilized differently in some regards and help each person differently. Overall, it helps every category and group of individuals as a whole in the same way. A lot of these advancements are simply a result of evolving previous technology and were possible beforehand. They are now provided us with far greater efficiency, reliability, comfortability, and usability in the way it lets people perform tasks.