

CLOUD TECHNOLOGIES AND THEIR SIGNIFICANCE IN THE EDUCATIONAL SYSTEM

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Abstract. *The article discusses to what extent cloud technologies are used in the educational system of our country and its role.*

Keywords: *Cloud technologies, Microsoft Outlook, Cloud technology, IBM, Dropbox, Google Docs, Celes Force, Google, Ziyonet.*

One of the main factors of the process of the educational system is that it is very important to provide young students with fundamental knowledge and to develop them based on the formation and determination of their thinking. Including, the role of information technologies in the process of education is incomparable. There is a lot of information in our Republic today technologies are developing rapidly. Especially information development of professional pedagogical training of future informatics teachers based on technologies and enough level learning and that's it in the field intellectual thinking ability great importance is attached to formation .

Also, The Law of the Republic of Uzbekistan "On Informatization", The Law "On Electronic Commerce", The resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On Measures for Further Development of Computerization and Introduction of Information and Communication Technologies", Decree of the President of the Republic of Uzbekistan "On further development of computerization and introduction of information and communication technologies", Decisions of the President of the Republic of Uzbekistan "On the establishment of ZyoNET, the public educational information network of the Republic of Uzbekistan" are taken as a basis in increasing a number of practical works on the application of information technologies in the educational system. As stated by the President in the aforementioned laws, decisions and decrees, "...advanced education based on the acquisition of modern computer and information technologies and their active use in the educational process of schools, vocational colleges, academic lyceums and higher educational institutions lim systems introduction" tasks are defined. That is why it is important for every specialist to use modern information technologies in their professional fields. As we develop the educational system based on technologies, we definitely use cloud storage (cloud technologies). Let's first have information about cloud technologies.

Cloud storage is a space that is separated from large servers by a service provider (cloud storage sites) where your files are located on different servers. You can extract the files you need from the "cloud" and set the right to use it personally or publicly.

The essence of cloud technologies is that with their help it is possible to provide comprehensive access to any configuration of computing resources. This applies to servers, networks, applications, storage, and more. All of these can be easily and quickly deployed. Management is absolutely simple and does not require direct contact with the provider.

The operation of cloud technologies can be explained by a simple example: not long ago, computers had Microsoft Outlook (email client) designed for reading e-mail. Now its location is

remote server. You can use the program from any device, you just need to pre-authorize it in the browser (outlook.live.com/owa/).

Of course, cloud technologies are used in a wide range of fields, and only one generalized example is given here.

In simple words, it is the space allocated to you from the Internet to prevent your computer and phone memory from filling up with files, or to share files with others easily and conveniently, and technologies that allow users to use computer resources online.

The process of emergence of cloud technologies - this model presents information technologies to the consumer as a service through the Internet. The importance of "virtualization" technologies in the emergence of cloud computing is very great. Virtualization technology was first proposed by IBM Corporation in 1960, but the term "virtualization" was long forgotten after the transition from expensive mainframe computer technology to inexpensive x86 processor computer servers. From 2000, the situation started to change, until these years, VMware won the monopoly in x86 discharge virtualization. In 2005, the VMware company introduced virtual machines as VM (software supply) applied for free using . In 2006, Microsoft launched the Windows version of Microsoft Virtual PC.

In 2006, Amazon created the Amazon Elastic Compute Cloud by expanding virtual servers on its own devices. One of the main reasons for this was the emergence of cloud technologies by renting virtual servers to other devices (consumers).

At the same time, there was an idea that it was possible to integrate computing systems and use it as a single resource when using the program. A personal computer must meet the minimum system requirements for the program to work to its full potential. Since 2008 (Cloud technology), the word "Cloud technologies" has spread widely around the world. At first glance, the term "Cloud technologies" may seem incomprehensible: this model provides a quick, convenient and efficient use of any system (servers, applications, storage systems and services). The data stored in the cloud can be used by anyone, for this only your computer, tablet and mobile phone should be connected to the Internet. The use of cloud technologies offers several advantages in information technology.

Cloud technologies have the following capabilities:

Access to files anywhere: You can access your files in the cloud anywhere you have an internet connection. It is possible to save space on the memory of your computer or phone. You can copy pictures or videos to the cloud.

Availability of high speed for file sharing: files can be transferred at high speed due to the fact that "cloud" servers are widely distributed around the world.

Unlimited file capacity: Computers don't need large memory and large disk drives to run at peak performance. Because all data and all programs are stored on cloud servers. Consumers can access the cloud through PCs, laptops, and netbooks with massive storage capacity.

Services provided by cloud infrastructure. When the word "cloud" is used by information technologies, it means the technology and infrastructure that provides services via the Internet. When data is sent from one computer to another in another country, it travels through many networks to reach the data. In this case, the information goes from the sender's computer to his provider, from the provider to other networks along his networks, travels through the vast Internet network and reaches the intended computer. A cloud infrastructure consists of many interconnected network devices, such as switches, routers, servers, and various other devices. This

entire infrastructure is collectively called the cloud. The cloud is not only used to send information, but the exchange of information is only one of the possibilities of using the cloud. In addition, there will be special programs running on servers located in the cloud, that is, in the infrastructure.

They offer cloud-based application services. The most common cloud services are Dropbox - file storage service, Google Dosc - office applications, Salesforce - CRM and ERP systems. To use cloud services, in most cases, the user only needs an Internet connection and a browser, and sometimes special software applications are installed on the user's device to make it convenient to use this service. For example, work done in Word , Excel programs can be easily done through Google Dosc, for which there is no need to have office applications on the computer.

Another service provided by cloud infrastructure is data storage. Examples of such services are Dropbox, Microsoft's Skydrive, and Google Drive.



Figure 1.1

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1	Dropbox	2 Gb	Windows, macOS, Linux, iOS, android
2	Google Disk (Drive)	15 Gb	Windows, macOS, iOS, android
3	Mega	15 Gb	Windows, macOS, Linux, iOS, android, windows phone
4	Яндекс.Диск	10 Gb	Windows, macOS, Linux, iOS, android
5	OneDrive	5 Gb	Windows, macOS, iOS, android, windows phone, Xbox
6	Облако Mail.Ru	8 Gb	Windows, macOS, iOS, android
7	iCloud	5 Gb	Windows
8	iDrave	5 Gb	Windows, macOS, Linux, iOS, android, windows phone

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Figure 1.2

Figures 1.1 and 1.2 above show the popular cloud technologies in the world and the free space they provide to their customers.

In addition to these services, for example, the computer's resources may be insufficient to perform any complex process.

The quality of computer performance for consumers has increased. Consumers should use fewer applications to make computer programs, files, and remote operations less burdensome.

For example, Panda Cloud Antivirus is an antivirus program that can be used as a web service. Panda Cloud Antivirus allows you to remotely scan for viruses on powerful server data. Running this program on a consumer computer will double the performance or increase the efficiency of using the IT infrastructure and reduce the number of outputs. For example, if we take the average server load estimate for a company, it is 13%. In some cases, the company has to use the power of its additional resources, but in other cases, the computing resources are idle and not used. In this case, the spending of money will be invalid. If the company uses remote cloud servers for computing resources, then the company's expenses will be reduced by half.

Due to this, the flexibility of unstable economic production increases. When the reliability of storing its data in other organizations is lost, the company itself can create a private cloud and use virtualization infrastructures to their full potential;

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