

«Сейфуллин окулары-18(2): «XXI ғасыр ғылымы – трансформация дәуірі» Халықаралық ғылыми-практикалық конференция материалдары = Материалы международной научно-практической конференции «Сейфуллинские чтения – 18(2): «Наука XXI века - эпоха трансформации» - 2022.- Т.І, Ч.ІІІ. - Р.44-46.

INFORMATION TECHNOLOGIES IN THE TELECOMMUNICATIONS SECTOR

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Application of information technology in the telecommunications sector. Server and network equipment for telecommunications.

The rapid development of telecommunications is one of the hallmarks of the modern economy. It is believed that the doubling of the amount of information transmitted through all means of electrical communication occurs recently in 2-3 years. In virtually all countries, the telecommunications sector is growing at a faster rate than the growth of the economy as a whole. Today, information is perhaps the most important economic resource.

The last 20-30 years have been characterized by an incredible improvement in electrical signal transmission technologies, which have led to the creation of new services and services. The rapid technological breakthrough and the demand for these services by the population, the state, and corporations have allowed the telecommunications market to grow several times over the past decade and a half. From 1990 to 2007, the share of the global telecommunications GDP grew from 1.7% to 3.7%. Of the total volume of services provided by the world economy, 4.7% are accounted for by telecommunications.

Every second inhabitant of the planet has a cell phone, and every fifth person has access to the Internet. Almost the entire world increase in users falls on these two areas of telecommunications [1].

In Russia, the telecommunications sector is ahead of metallurgy and the oil and gas industry in terms of dynamic development. For the innovative economy of Russia with its increasing information flows, telecommunications are a backbone industry.

On the other hand, it is believed that at present Russia does not lag behind developed countries in terms of the spread of cellular communications: where people live, mobile communications are available almost everywhere. From this point of view saturation has been achieved. This is another argument in favor of the need to expand the number of services.

Increasing the volume and changing the structure of traffic. If until the end of the last century, the bulk of the information transmitted over communication networks was voice traffic, then with the advent of the Internet, the data flow is constantly increasing. An increasingly dominant role in this process is played by

multimedia traffic. Because since when voice transmission is critical, the delay in signal transmission is critical, then transmission networks were built on circuit switching, while now there has been a shift towards packet-switched networks. The explosive growth of data traffic requires a transition from narrow-band data networks to ever-higher bandwidths [2].

According to Cisco Systems, the world's leading manufacturer of network telecommunications equipment, since 2014, video transmissions have been the main transmitted traffic over networks. It will take 2 years to view video traffic transmitted in 1 second. This example confirms that the importance of telecommunications will increase over time.

Service quality improvement. The development of new technologies and the construction of new data transmission networks contribute to an increase in the speed of information transfer, and consequently, an increase in the quality of services. No sooner had Russian telecommunications companies completed the installation and commissioning of 3G networks than they were replaced by fourth-generation networks and LTE networks, and 5G networks are already being developed.

Only with the help of the latest infrastructure can operators offer their users more favorable conditions. The struggle for customers forces us to use a variety of methods of influence, including an unprecedented increase in the quality of services while reducing tariffs. The rapid development of the telecommunications sector has led to the blurring of the line between information technology and telecommunications. State regulation of these industries is carried out according to unified development programs, for example, the federal program "Information Russia" (until 2030). This fusion is most clearly emphasized by the development of modern IT services for virtual computing. The so-called "cloud computing". Moreover, in accordance with the state program, the main contractor for the creation of Russian developments in this area and the creation of a national platform is Rostelecom [3].

On the other hand, the global development of the telecommunications sector shows that the processes of consolidation and restructuring of this sector of the economy are far from being completed in Russia. This natural process leads to a change in the IT infrastructure of corporations: merging, creating a single information space, regardless of which applications functioned in individual companies before the merger. All this remains an important task of IT technologies in the telecommunications sector.

The provision of software as a service or service will continue to expand [4]. For example, it is currently possible to centrally manage licensed anti-virus programs through providers with a single "click" provided by the SaaS model. Server equipment used in the telecommunications industry.

The Cisco UCS C220 M4 Rack Server is designed for performance and density in a wide range of business workloads, from networking to decentralized databases. This system uses the Intel Xeon processor E5-2600 v3 family, which provides a significant increase in performance and efficiency. This server is

extremely useful in telecom centers. capable of withstanding large streams of any data.

The Dell Compellent Storage Center delivers efficiency, speed and flexibility to scale on a single platform and data reliability from failures and breakdowns with a multi-protocol storage center. DELL-EMC storage centers are distinguished by their functionality, namely: storage virtualization, dynamic capacity provisioning, automated data storage.

References

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