

## ***STATUS OF COMPUTER NETWORK SECURITY IN ORGANIZATIONS AND STANDARDS FOR ITS ENSUREMENT***

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***Abstract:*** *This article provides information about information protection, the need to ensure information security in modern computer systems, network standards and conditions for their effective and safe use.*

***Key words:*** *information security, network security, security protocols, network security standards, organizations developing network security standards.*

### **Introduction**

The creation of general information space and the widespread practical use of personal computers and the implementation of computer systems and networks create the need to solve the problem of information protection.

Information protection means the use of various tools and methods, taking measures and conducting activities in order to systematically ensure the reliability and integrity of information transmitted, stored and processed in modern computer systems and networks.

Data protection is:

- ensuring the physical integrity of information, that is, preventing information elements from meeting obstacles and being lost;
- not to allow the replacement (modification) of its elements while maintaining the integrity of the information;
- preventing unauthorized access to information by unauthorized persons or processes;
- it should be ensured that the resources transferred to the owners are used only in accordance with the conditions agreed by the parties.

With the development of global networks and the emergence of new technologies for receiving, processing and transmitting information, the attention of various individuals and organizations was drawn to the Internet. Many organizations have decided to connect their local networks to global networks and are now using WWW, FTP, Gophes and other servers. It has become possible to transfer information used for commercial purposes or state secrets to places on global networks, and in turn, there is a need for qualified specialists in the system of protecting this information.



The use of global networks is not only to search for "interesting" information, but also to perform commercial and other important tasks. Due to the lack of information protection tools during such activities, many losses can be faced.

It is the rapid exchange of information using the network that allows us to save time. In particular, the formation of the electronic government system in our country and the strengthening of the interaction between state management bodies and the population at its core will be carried out using the network.

Effective use of the network ensures the formation of a democratic information society. In such a society, the speed of information exchange will increase, the collection, storage, processing and use of information will have a quick result.

However, protection against problems such as illegal access to the network, use and change, loss of information has become an urgent issue. Enterprises, organizations and government agencies that connect their work to the network should pay serious attention to network security before connecting to the network to share information. Network security is carried out by using various tools and methods, taking measures and implementing activities in order to ensure the transmitted, stored and processed information in a reliable and systematic manner. A network security tool must quickly identify threats and take countermeasures against them. There are many types of network security threats, but they fall into a few categories:

- by attacking, listening and changing (eavesdropping);
- refusal of service; (Denial-of-service)
- port scanning (Port scanning).

In the process of information transmission, it is possible to eavesdrop, change and block information without the users noticing in the information exchange carried out through telephone communication lines, instant messaging over the Internet, video conferencing and fax transmissions. This attack can be performed using several network analysis protocols. Attackers can easily convert digital audio from CODEC (video or audio analog signal to digital signal and vice versa) standard into high-quality but large audio files (WAV). Usually, the process of this attack is completely invisible to the user. The system performs the specified actions without excessive stress and noise. There is absolutely no doubt about the theft of information. Only those who are aware of this threat in advance and want to preserve the value of the information being sent will be able to share information through a network protected by the application of special network security measures.

Nowadays, many computers are connected through the network all over the world. In order for computers to communicate globally, they must understand each other (be compatible). ITO-International Telecommunication Union (International Telecommunication Union) was established in order to ensure the proportionality of computers. It consists of three bodies that control telephone and data transmission systems. This body CCITT is French for *Consultatif International de Teagraphique et Telefonique* is called Their main task is to develop important proposals in the field of telephone, telegraph, data transmission services, and the proposals often become international standards.

International templates Jesus - (International Organization oath Standardization- International organization and standardization) is developed by. He to himself unites more than 100 countries of the world. Including ANSI of the USA, BSI of Great Britain, DIN of Germany.

Another international organization IEEE (Institute of Electrical and Electronics Engineers - electrical and electronic engineering institute) develops many standards in electronics and computer technology in addition to publishing various magazines. For local networks, its IEEE 82 standard is the main one.

The reliable construction and operation of the organization's networks is largely manifested in the correct application of international and national standards. Because the network designed and



systematized according to the standard works correctly both physically and logically. This is the main requirement of network administrators. That is, the network should be safe and fast, free from various risks, resistant to external influences.

Organizations engaged in standardization in the field of computer networks are listed in Table 1.

Table 1

Organization status	Shortened name	Full name	
		English	Uzbek
International	CCITT/ MKK TT ITU (since 1993)	International Telegraph and Telephone. Consultative Committee International Telecommunication Union-Telecom	Telefon va telegraf bo'yicha Xalqaro maslaxatchi qo'mitalar. Xalqaro Telekommunikatsiyalar birlashmasi – Telekom
International	Jesus MOS	International Organization for Standardization	Xalqaro standartlashtirish tashkiloti
International	DO NOT	European Computer Manufactures Association	Yevropa ishlab chiqaruvchilar assotsiatsiyasi
International	ETSI	European Telecommunications Standards Institute	Telekommunikatsiyalar sohasidagi Yevropa standartlar instituti
National (USA)	IEEE	Institute of Electronic and Electrical Engineers	Elektronika va radioelektronika muhandislar instituti
National (USA)	EIA AHSI	Electronic Industries Associatin	Elektron sanoati assotsiatsiyasi
National (USA)		American National Standards Institute	Standartlar Amerika Milliy instituti
National (USA)	TIA	Telecommunication Industry of America	Amerikaning telekommunikatsion industriyasi

Another classification is sometimes used, in which protocols are divided into the following groups:



- Novell (Novel from the company his own OC networks with known);
- SNA ( from IBM);
- Dec net ( from DEC);
- TCP/IP (a large group of protocols for communication in a local network or a set of networks connected to one another, as well as widely used in the Internet);
- Banyan (Banyan Systems in the company);
- Apple (Apple Computems from the company).

Email - Email is one of the most widely used communication channels on the Internet. Information exchange by e-mail accounts for 40% of information exchange in the network. Information exchange is carried out using only two protocols: SMTP (Simple Mail Transfer Protocol) and POP-3 (Post Office Protocol). POP-3 reflects the development of multimedia technologies, while SMTP was established at the level of the Arpanet project. Therefore, due to the fact that these protocols are open to everyone, opportunities for unauthorized access to e-mail resources are created:

SMTP servers are being used without permission due to improper installation of software, and this technology is known as "spam" technology; simple and effective methods are used to gain unauthorized access to e-mail messages, that is, reading information on the Winchester at lower levels, reading passwords for access to mail resources, etc.

The main purpose of the process of using e-mail is to ensure proper handling of important documents. Here, it is necessary to consider proposals in the following areas:

- E-mail from the system organization activity purposes use;
- personal on purpose use;
- confidential information storage and to them login;
- electron letters storage and them manage.

Confidentiality of information - ensures that information is accessible only to authorized users. To manage user access with Identification and Authentication, use of the following is required:

- Identification PIN codes
- Intellectual cards, contactless cards
- Biometric indicators
- To safety threat and weak places
- Errors and disadvantages
- Fraud and steal
- Physics and infrastructure supply lose
- Hacker and a destroyer
- Harmful code and software supply
- Foreign of the government espionage actions

In short, there are many organizations that regulate network technologies, and their task is to regulate and develop standards that meet the requirements of the times as new technologies enter the business network, which are constantly changing and updated, rich in inventions. exit, control, security.

Based on the above information, the following suggestions can be made. Information safety according to road to be placed wide spread out errors:

- In stickers passwords;
- The computer work during careless leave;



- Stranger on computers electron mail applications to open;
- Password bad structure (animals, cars names, names);
- Portable from computers free use;
- Mahmadona;
- To work put and to play
- Note not done security breach;
- Security system according to updates installation always postponement;
- Organization inside to risks neglect.

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