ANALYSIS OF CURRENT INFORMATION SECURITY POLICY

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Abstract: this article analyzes scientific literature related to the development of information security policy, provision of perimeter protection, as well as norms, standards and laws of the Republic of Uzbekistan in the field of information security. At the same time, the work of independent laboratories in the field of information security and statistical data for the past years were reviewed.

Keywords: Information security, information security policy, authentication, authorization, integrity, confidentiality, risk assessmentю

АНАЛИЗ ДЕЙСТВУЮЩЕЙ ПОЛИТИКИ ИНФОРМАЦИОННОЙ БЕЗОПАСНОСТИ

Аннотация: в данной статье проведен анализ научной литературы, связанной с разработкой политики информационной безопасности, обеспечением охраны периметра, а также норм, стандартов и законов Республики Узбекистан в области информационной безопасности. При этом была рассмотрена работа независимых лабораторий в области информационной безопасности и статистических данных за прошедшие годы.

Ключевые слова: информационная безопасность, политика информационной безопасности, аутентификация, авторизация, целостность, конфиденциальность, оценка риска.

INTRODUCTION

The processing of electronic documents, as well as the daily work related to the processing of confidential information, involves many risks to the integrity of the information being processed. As the amount of data processed increases every year, so do the number of possible risks.

In general, the more confidential information an organization owns, the higher its value. Therefore, any data compromise can cause huge financial losses to an organization that can never be recovered. In today is world, there are many different threats to information security and data integrity. Cybercriminals are constantly changing the ways and means of obtaining the necessary information. From the point of view of cybercriminals, information is a commodity, and the more recent and relevant the information, the higher its price. Currently, cybercrime is not only a remote attack on certain resources, but also the use of social engineering methods for cybercrime.

Social engineering methods are aimed at obtaining the necessary permission to use information in their name, and these methods are based on the specific characteristics of the psychology of the affected person.

The use of such techniques creates a type of threat that occurs within the organization, known as "insider attacks," rather than from outside. This type of attack is dangerous because a person or an employee may violate information security without realizing that they are committing an illegal act.

To avoid this, it is necessary to use information security policy. This policy should minimize the possibility of data compromise or corruption.

Therefore, the information security policy covers the possible risks, namely:

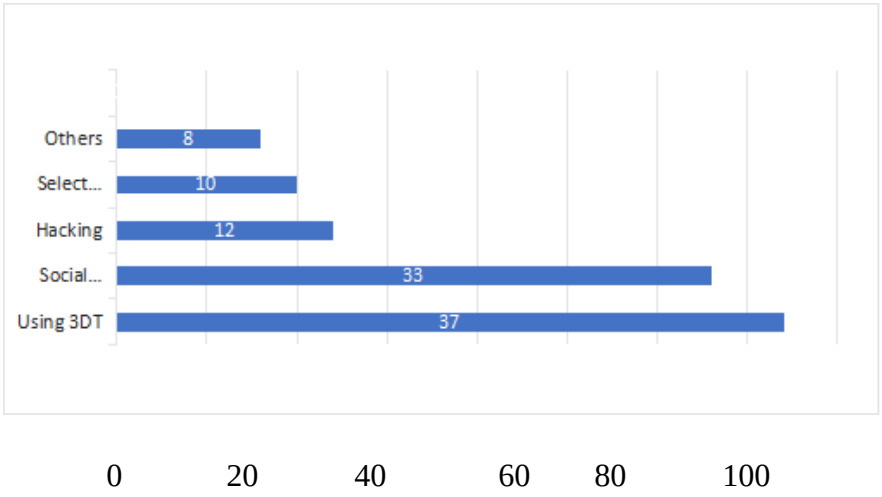
• theft of information;

• destruction of information;

• should provide maximum protection against information corruption.

MATERIALS AND METHODS

Information security policy is a set of preventive measures, rules and principles aimed at protecting confidential information and information processes in the enterprise. The security policy includes requirements and regulations for employees, organization leaders and technical services. The information security policy describes the goals and tasks that must be achieved and resolved during the implementation of the information security policy. In most cases, the information security policy is formulated and developed separately for a specific organization, and all employees, without exception, should familiarize themselves with this document.



1-picture. The attack on financial institutions in Q1 2019

Information security policy objectives may fall into one or more of the following categories:

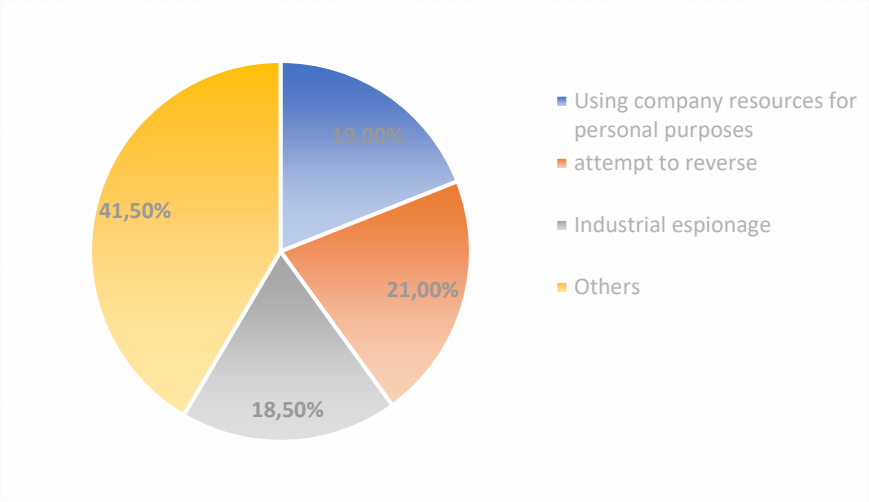
- information security — protection of information and the infrastructure that provides it from accidental or intentional effects of natural or artificial nature that can cause unwanted damage to the subjects of information relations;
- uthentication — the process of determining the authenticity of the user (network subscriber, message sender), program, device or data (information, received message, key);
- authorization — giving a certain person or a group of persons the right to perform certain actions;
- integrity — the state of information and its carrier, in which it is ensured that the whole and its individual components are not divided and that their unauthorized or intentional destruction, destruction, leakage, theft, forgery are prevented. ;
- confidentiality — the state of the information and its carrier, in which prevention of unauthorized familiarization with it or unauthorized documentation (copying) is ensured;
- risk — the possibility of using a specific vulnerability of the data processing system in the implementation of a specific threat;
- risk assessment — the process of comparison of calculated risk and risk criteria, carried out in order to determine the nature of the risk;

RESULTS

In this way, it can be concluded that the information security policy is an integral element of any organization. Applying an information security policy can significantly increase the level of information protection, which in turn reduces the risk of financial losses and discrediting the company.

Software companies also conduct their own research in the field of information security. These studies are useful for information security professionals to predict the type and nature of threats in advance. According to a report by the Ptsecurity portal, in the first quarter of 2019, methods of attacking financial organizations using ZDT (malware) and social engineering or "phishing" tools are widespread. "Phishing" is aimed at attracting employees of the organization picture- 1 provides a diagram of attack methods against financial institutions.

If security tools are evolving along with threats considering the methods and tools used in cyberattacks are significant it can be assumed that changes will occur. Maybe it's nothing It is possible to carry out an attack with the help of an unsuspecting employee, for example, by running an infected file. This type of attack is called “social engineering" and in everyday life such attacks are "phishing" or are called "insider attacks".



2 - picture. Threat diagram.

As you can see from the chart, this type of attack is in order of popularity It is becoming equal to ZDT. The main danger of phishing is that it is difficult to prevent. This type of attack is still the most dangerous for many organizations remains one of the attacks because the threat is carried out with the help of an employee can have serious consequences. Protecting the organization from the inside problem is still a weakness of many organizations.

Antimalware to verify the severity of the internal threat portal conducted a study on the nature of internal threats. This research the result can be observed through the following diagram (Picture-2). Loss of confidential information to choose protection methods it is necessary to consider the reasons. A diagram for this is shown in Picture-3

Created. Based on the above, in the development of information security policy more attention should be paid to the protection of data from threats originating from within the organization, in which it is necessary to consider the conditions necessary for the formation of an "inside threat".

Examples of such conditions include:

• bribery of a responsible person;

• excessive talkativeness of the employee, conditions of confidentiality in conversation violation;

• non-compliance with the terms of the information security policy in good faith;

• low level of computer literacy;

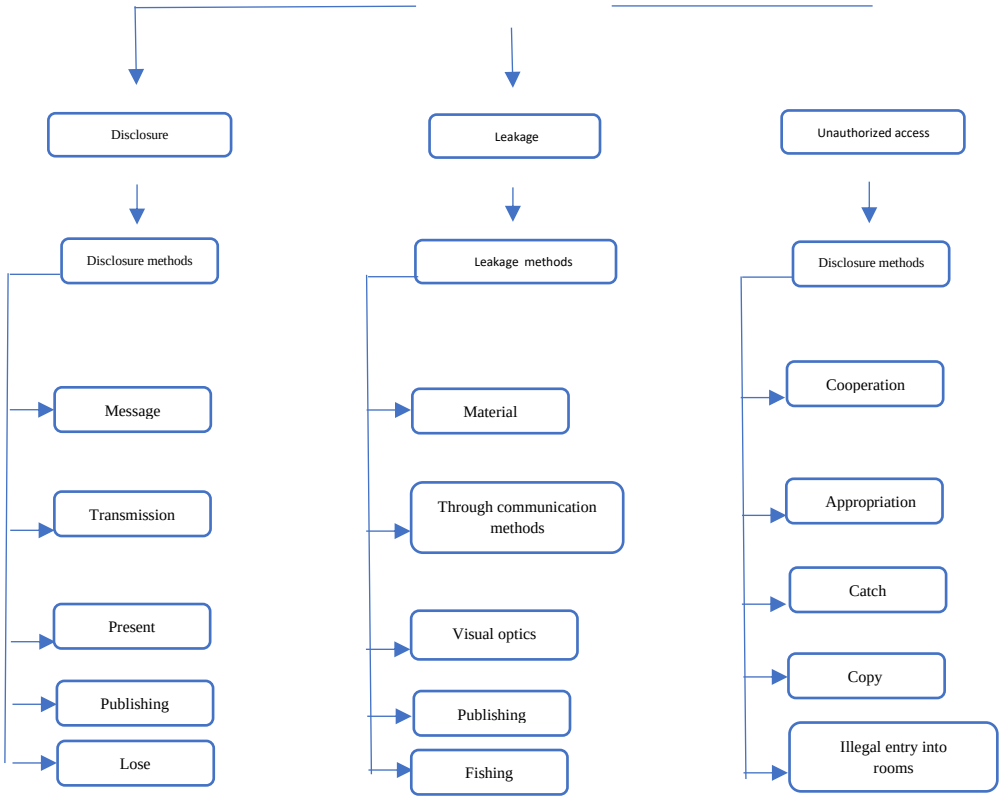
• careless handling of confidential information.

DISCUSSION

Based on the above information, it is necessary to analyze the current information security policy in the enterprise and define the task of developing a new information security policy. To review the current state of data protection in the enterprise, it is necessary to use the MARION (MARION) method. This method was invented in France by Assemblie Plinihre des Sociitis d'Assurances contre L'Incendie et les Risques Divers (APSAIRD) and improved by Club de la Sicuriti Informatique Frangaise (CLUSIF). The method is the de facto standard for computer risk detection. Designed according to ISO-SC27-WG1 standard. About a thousand security plans of information systems in the world have been calculated according to the MARION method. The essence of the methodology is to formulate basic, basic questions and their answers. Scores from 1 to 4 are used as answers:

1 is a negative rating, that is, a high level of threat;

4 is a positive rating, meaning the threat level is low.



3- picture. Methods of loss of confidential information.

Each criterion (question) has its own "weight", that is, information protection This criterion is determined separately according to the specific characteristics of the organization. The review of the security level consists of 6 sections, in which the main factors are evaluated. The assessment is carried out using the following formula:

Protection Level = Max. Ric - (S. Ric / P. Ric), here Max. Ric is the maximum risk level, 3 is taken as the maximum level.

That is, the gradation of risks looks like this:

• Max. Ric < 1 – low level of threat;

• 1 < Max. Ric < 2 – medium level of threat;

• 2 < Max. Ric < 3 – high level of threat.

S. Ric is the relative value of risks and it is by the following formula is calculated: the criterion value * to its "weight".

P. Ric is the "weighted" sum of the grades.

Analyzing the current information security policy is current in the enterprise it is necessary to review and analyze the developed software. This analysis necessary to review a potential vulnerability in the software being used. See the list of programs used in the enterprise in Table 1. can:

Table 1. List of enterprise information systems and software

№	Systems and programs
1.	Ijro.gov.uz – inter-departmental executive discipline system
2.	e-qaror.gov.uz – by local government authorities development, agreement and registration of decisions to be made single electronic system of transfer
3.	e-hujjat – local electronic document exchange system
4.	e-tahlil – sector activity control system
5.	collective.uz – effective team management system
6.	exat – e-mail protected
7.	murojaat.fergana.uz – applications portal

All computers in the enterprise run Windows 10 x64. MMHT software package to transmit electronic documents, including confidential information includes.

Table 2. Comparison of enterprise software

Name of the software	Protection with a password	From the certificate use	Owning a WEB-interface	Secure connection channel availability	Confidential / private	Software for the organization
Eqaror.gov.uz	+	+	+	+	+	+
Ijro.gov.uz	+	-	+	-	+	-
Collective.uz	+	+	+-	-	-	-
Exat	+	+	+-	-	+	+
e-hujjat	+	-	-	-	-	+
e-tahlil	+	-	-	-	-	+
murojaat.ferghana.uz	+	-	+	-	-	-

In this regard, data transfer is a secure VPN-type connection through the channel. Authentication in a secure communication channel is carried out using an electronic certificate.

It should be noted that the standard MS Office package is not included in the list in Table 1. Authentication in systems using an electronic certificate PIN code is done using An antivirus is mandatory on every computer software is installed

As you can see from the table above, 8 out of 5 software products very important for the work of the organization. In other words, if this software in the event that one of the products malfunctions or ceases to function to a significant extent, or can completely disrupt the work of the organization.

Using the interface comes with various risks of information that is expressed. + - is installed both on the WEB-interface and on the local network a software product that supports working in distributed form is defined. Electronic certificates - software for working with electronic documents used in products. Certificate authentication is one-phase, i.e. password (PIN code).

In the reviewed aspects of the current state of information security policy to make the following conclusion, taking into account the sum of identified shortcomings possible: currently the enterprise has a vulnerability in the form of internal threats and is current it is necessary to improve the information security policy.

In this way, the task of developing an information security policy is correct should be formed.

CONCLUSION

The current state of the enterprise related to ensuring information security was analyzed. The current information security policy of the enterprise, a log in which all important comments are recorded, and protection tools (software and engineering tools) were reviewed. The purpose of this analysis is to disclose or leak confidential information is to identify the shortcomings and weaknesses that can lead to the output. In addition to reviewing and analyzing the current information security situation, fix any flaws that could lead to a data leak and Explanations and instructions for elimination were given.

In summary, review the current information security policy developed and analyzed, and weaknesses identified. Information security the task of policy development is defined.

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