



A Review on Cyber Security and Its Threats

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A Review on Cyber Security and Its Threats

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Abstract- Cyber security is one of the major factor in the IT Industry and it plays a decisive role in the area of information technology. Whenever the thought comes about securing the information online, the first thing that strikes the mind is “Cyber Crime”. Today, the world is all about technology and although these technologies help in different ways, on same road there are difficulties too. These difficulties are related to the crime that increase at a high pace, the information that is saved digitally is no longer safe. Many Cyber units and Industries work on these parameters to stave off from these crimes. This paper principally focuses on the techniques that are used to shield the cyber-crime and the challenges that are merging in Cyber security and the threats that IT industry is facing.

Keywords: *Cyber-Crime, Cyber-Security, IT, Threats, Industry.*

I. INTRODUCTION

Today we can pass any information or any type of data from once place to another through the help of internet. Internet avail us many services and give us access for a large amount of data such as texts, graphs, music and software. ^[1]

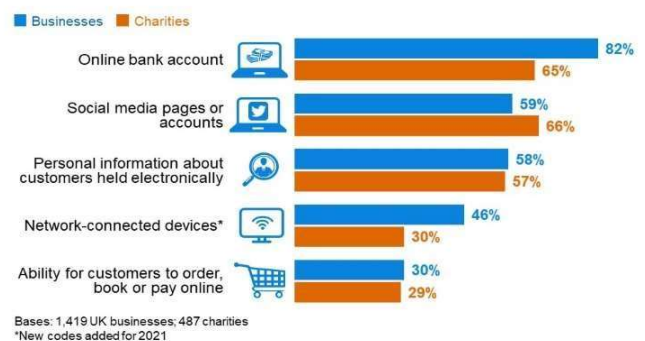


Fig.1.1 Information regarding amount of data saved digitally.

Just with the one click we easily receive and send the information but did you ever realize how much data is securely send from one network service to another without any loss or leakage of the information? The response of this question is lie between terms *Cyber Security*.

Today Internet is that fastest growing platform in every daily life. The increase in the technology leads to change in the thinking of mankind that actually follows the path of crime. Due to this the cybercrime is increasing at the alarming rate.

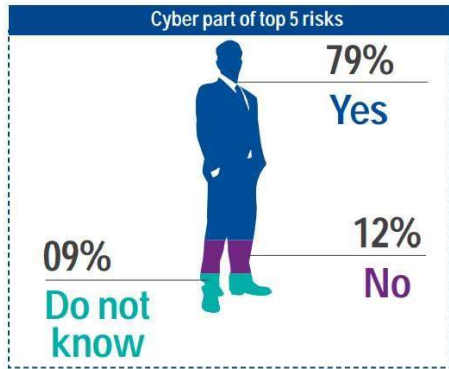


Fig. 1.2 Percentage of people who are aware about Cyber Crime

According to latest survey 79 per cent of the organization states that cyber security was one of the top five business risks.^[2] Whereas 43 per cent organizations told that they have experienced ransomware attacks in the last year. Moreover it is also includes that 73 per cent of law authorities comes to know that ATM card theft was the most commonly reported cybercrime.

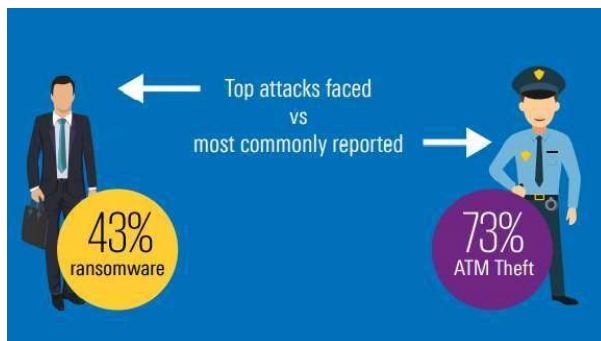


Fig. 1.3 Percentage of victims and the reported crime.

II. CYBER CRIME

Cyber-crime state the illegal activity that hits the computer system, computer hardware or network systems. This crime is committed by the IT professionals that call themselves the

hackers. These people have great knowledge about the computer system. Artificial Intelligence plays a great role in this crime now a days. Many hackers are organized, use latest technologies and having highly technical skills. Others are novice hackers.^[3] The growing list of cyber-crime includes email and internet fraud, ATM fraud, Net banking fraud, Theft of financial or card payment data, Ransomware attacks, Crypto jacking and Cyber espionage. Cybercrime not only damage the person's life but it also effect the global economy. According to the report of 2014 the annual damage on global economy was \$445 billion.^[4] This price tells itself that the crime we faced today is the biggest crime around the IT industry that increase with the increase of new technologies.

III. CYBER SECURITY

If there is a problem, IT industry has its solution too. Secure the data before sending to the stake holders is the first priority of the IT companies. We are living in the generation where every data is stored in the system manually. Even if you have less source then there is technology that helps you and provide you the platform that source is known as Cloud computing. Today everyone is so active on the social media sites and hackers are always ready to attack on the data from these sites only but the information stored in these sites are in the cyber form.

According to the survey of 2019, the total complaints registered by the cyber cell was **5156172**. Whereas total complaints and FIRs were in the range **190054**.^[5]

S. No.	Types of complaint	No. of complaints	No. of FIR registered
1.	Oral Complaints	11223694	513497
2.	Written complaints	8428966	4452621
Total complaints/FIRs		19652660	4966118
Total FIRs registered		5156172	

Table 1.1 National Crime Records

IV. THREATS IN CYBER SECURITY:

Threats can be defined as something which happens unexpectedly. There are various threats in the crime of Cyber. Such threats are given below:

A. Social engineering threats: These kind of threats happen in the social media platforms where the huge amount of data is shared socially. The criminals will use the various techniques to track their personal details like Passwords, bank details and sensitive information that affects the life of human being.

B. Ransomware attacks: These are the attacks where the hackers will hold the data and IT information till the end user will pay them to release. These types of attacks are implemented with the help of passing emails, infected USB sticks and so on. The target of such attacks starts from individual to large organizations or government organizations. [6]

C. Internet of things threats: Many internet of things are insecure in terms of installations. The attackers easily grab the information with this. This includes the attack of home

Security system as well. The attackers will analyze the personal information like passwords.

D. Patch managements: Today it is very necessary that we keep ourselves updated but not only have us we also need to update the technologies. The technologies which are not updated time to time will call the open threat to the criminals.

The cyber security attacks are of different types like:

A. Distributed denial of service (DDoS): In this attack, the attacker tries to interrupt the side by attacking the normal traffic of a network, server or service.

B. Social engineering: In this attack, the attacker attends to manipulate people to interrupt the security of any network.

C. Man in the Middle (MitM): In this type of attack, the attacker inserts himself in the situation when a user is conversing with an application.

D. Malware and spyware: In this type of attack, unauthorized actions are performed on user's system by installing faulty software.

E. Password attacks: In this type of attack, the hacker breaks into the account of the user which our protected by passwords.



Fig.1.4 Top 10 Threats of the future

Today we have vast technologies that involve in various tasks and all are working together. Merging all the technologies together is somewhere easy task with the help of cloud services but if we talk in terms of security it makes the system more complex. The service that cloud provider's gives is more non securable services as it help the attackers to attack the system on one platform only.

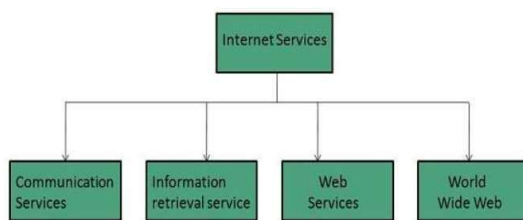


Fig. 1.5 Types of Internet Services

V. CONCLUSION

Computer security is one of the main concern in the field of information technology. With the increase of new technology the crime rates are also increasing with increase passing year. Many industries were already start working in the field of security. With the new technology and increase of Cyber threats cause the large effect on the industry and as well as to the global economy. Industries are continuously working to secure their data and understand the infrastructure but this task is not only for the short period. This is very resilient to come out with the proper solution for these types of crime but it is possible by making the new cyber space to low down its crime rate.

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