Ethical Hacking: A Review

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Abstract

Now a day, all the information is available online, a numerous amount of people uses it, some uses it for gaining knowledge and skills while some uses it for illegal work or crime. The most common process of destroy and steal private information is defined in terms of Hacking. This is due to weakness of a system in a network but when Hacking involves for good intentions is known as Ethical Hacking. There are different methods or techniques used to hack the information. Hacking is illegal and harmful for the society but Ethical Hacking is legal and helpful for the society. This paper includes hacking, its history, its kinds, different types of hacking, operating system used in hacking and its goals.

Keyword: Hackers, Ethical Hackers, Security, Information security.

Introduction

Data security is the major issue in the current scenario. Internet is growing rapidly in the today's world and a large amount of data and information are moving online throughout the whole world. As the computer technology grows, the negative impacts of technology also increase. Current world is a world of digitalization. Various processes like banking, transaction, many transfer, etc. are conducting online and increase the risk of data security. Those who try to destroy or leak some essential information with bad intentions are called Hackers. To prevent the danger of being hacked by the hackers, a professionally trained Ethical Hackers are hired in the company who hacked data with good intentions or bounded by some rules. Ethical Hackers make an effort to prevent data and keeping it safe.

Definition of Ethical Hacking

Ethical Hacking is an authorized practice of bypassing system security to identify potential threats in a network.

Fig 1: Ethical Hacking

History of Hacking

The Hacking was started in 1939.The History of hacking is discussed below:

1939: The "BOMBE" became the world's first ethical hacking machine. It was used by the british to decipher encrypted German messages during World War II.

1960: The Computer penetration was first introduced by experts with the penetration tests by professionals.

1971: The "Tiger-Team" was formed in 1971. A civilian contractor James p. Andreson was hired by United States Air Force to test multi-tasking systems.

1974: The first ethical hacking conducted by USAF to test the security.

1986: The US Computer Fraud and Abuse Act makes black and grey hat hacking a criminal offense.

1995: An automated vulnerability scanner was discovered by **Dan Farmer & Wietse Venema.**

1999: Microsoft Window's 98 were released for software security.

2003: OWASP developed first OWASP testing guide for penetration checking.

2009: PTES was found in 2009. It leads to increase in ethical hacking jobs.

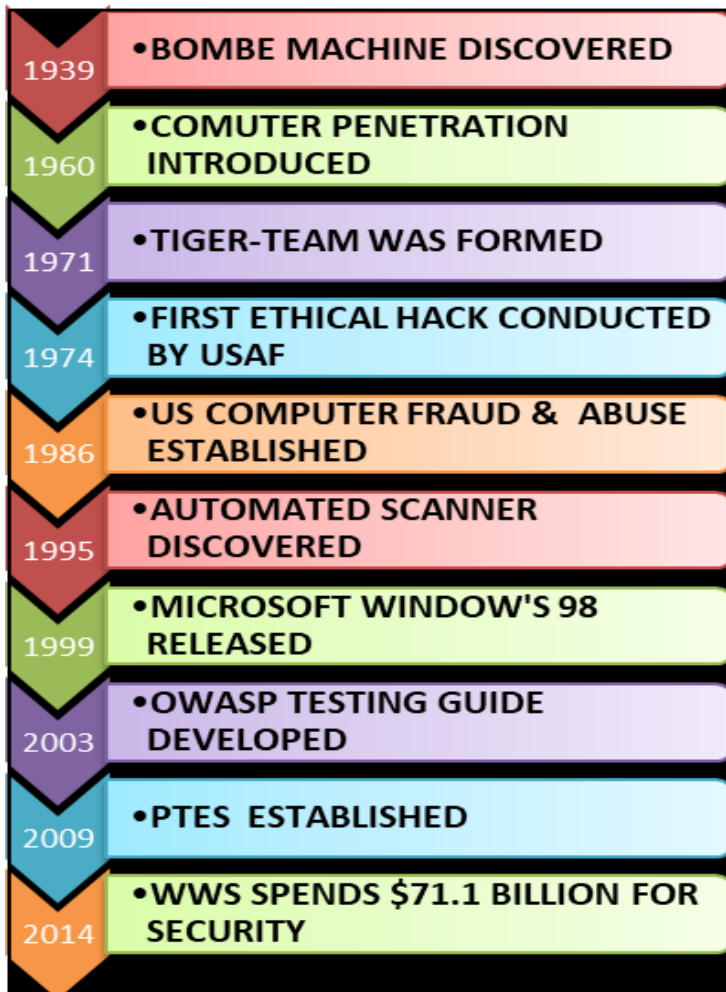**2014:** Worldwide security spending reaches $71.1 billion.

Fig 2: History of Hacking

Facts about Hackers

Hackers are the coders who have knowledge of programming knowledge of computer programming and have enough information on the systems they are about to hack.

Classification of Hackers
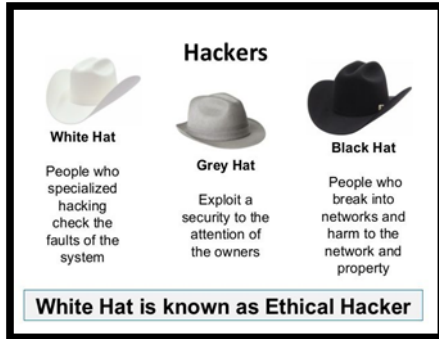
Hackers are classified into three types:

Fig 3: Types of Hackers

1. Black Hat Hackers: Those hackers who hack the system illegally to steal money or information or data for their own profit. Black Hat Hackers are also called an Unethical Hacker or security cracker. Black Hat Hacking is an illegal hacking.

2. **White Hat Hackers:** Those hackers who hack the system legally to prevent the system from black hat hackers and in order to test the security of the system. These hackers are the good ones of the hacking World. White Hat Hacking is legal.

3. Grey Hat Hackers: Those hackers who are the mixture of both white hat hackers and black hat hackers are called Grey Hat Hackers. They hack the system without the permission to test the security but they will never damage the system. This type of hacking is sometimes legal or sometimes it is illegal.

Operating System Used In Hacking:

1. Backtrack Linux: It is first OS used for hacking purposes. It has been designed for hacking by Offensive Security Organization of Israel Hackers.

2. Kali Linux: It is the most widely used OS across the world for hacking currently. This OS is the reborn version of Backtrack Linux as it contains much more advanced tools than Backtrack Linux.

3. BackBox: It is an Ubuntu-based Linux distribution operating system. It has its own software repositories.

4. Digital Evidence and Forensics Toolkit Linux: DEFT Linux is based on GNU Linux and DART. It is mostly used by ethical hackers.

Except from these there are many different system used in hacking are:

Node Zero, Gnack Track, Cyborg Hawk Linux, Black Arch Linux, Network Security Toolkit, and many more.

Advantages of Ethical Hacking:

1. Recovery of Lost Information: Hacking is used to recover all the lost information to the entire system. It is used especially when we lost our passwords.

2. **For Penetration Testing:** It is used for the security purpose to strengthen computer and network security by doing security testing**.**

3. To Protect Systems: It is used to protect the system from black hat hackers who hack the system for their own profit.

4. Fight against Cyber Terrorism: Ethical Hacking is used to prevent the system from cyber attacks or threats.

5. Fight Against National Security:

Ethical Hacking prevents the private information and data of the country from being hacked by the black hat hackers.

Fig 4: Advantages of Ethical Hacking

Disadvantages of Ethical Hacking

1. Privacy Violate: The most dangerous impact of ethical hacking is that it can cause the damage of someone's private information and data.

2. Increasing Cost to the Company:

Ethical Hackers are professionally hired to prevent the system from black hat hackers. A huge amount of salary will be given to ethical hackers which increases cost to the company.

3. Smuggling of Files: Hacking may corrupt the files of an organization which leads negative impacts on the organization.

4. Danger of Cyber Attacks: Now a day, there is a huge increment in the Cyber attacks due to hacking. Hackers hack the system and attacks on the entire system.

5. Hardware Damage: Viruses, Trojan horses and worm cause the computer to become vulnerable to hardware damage.

Review

Now a days, Internet Technologies are growing very rapidly. There is no internet security and the state of internet security is very poor. Non-ethical hackers hack the system to theft money and other confidential information; therefore we need ethical hackers to prevent the system from non-ethical hackers. The security risks and vulnerabilities in a network can be recognized with the help of ethical hacking.

Conclusion

In this paper, we present the idea of hacking   ethical hacking, types of hacking, facts about hackers, operating system used in hacking, Advantages of hacking and disadvantages of hacking. Ethical Hacking is the need of the hour because to

prevent the system from cyber attacks, privacy violation, smuggling of files and many illegal things Ethical Hacking is the best approach to fitting security gaps and forestall interruptions. Ethical hacking will assume a sure part in the security evaluation offerings and positively has earned its place among other security appraisals. It is very important part of the computer world. It manages all the security of the system.

Refernces

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