Reverse Methodology of Keylogger for Cybersecurity

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Abstract: - The modern world arises with different hacking methodologies that produce the threats to day to day life. The increase in data breach by the black hat hackers is increasing at rapid speed. Several reasons are behind it but the lack of knowledge towards the security paves the way to the data breach. This paper explains the risks behind the hacking, prevention and minimization of hacking. Moreover this paper discusses the methodologies to stop the hacking that are in process in an organization.

Keywords: - Keyloggers- Keystroke-Hardware Based-Software Based-Hacking-Breach of Data-Base64- Reverse algorithm.

I. INTRODUCTION

Key logger is a tool to hack and monitor the system connected to the same network. In Information Technology sectors the Key loggers are used as surveillance tool to enhance the trust of the employees towards their work for the organizations. These types of key loggers are mostly hardware type that is attached with the CPU or laptop, by which each actions of the computer is monitored by the organization. But the alternative idea of usage of the key loggers are implemented and described in this paper. Therefore this paper focuses on preventing the hacking as soon as possible to stop the data breach.

II KEYLOGGER

Key-Logger is the tool that captures the strokes of the keyboard. Whenever the user types the information or the data by using key logger the data are directly made a copy by the key logger. In Information Technology organizations the key loggers are used as a surveillance to check their employees work towards the assigned properties which is programmed a legal part terms and conditions of the organizations. Few concerns use this tool to hack the private data and too it is a contrasting part of the modern world.

A) Software Based Logger
The Software based key loggers are used in IT field to troubleshoot the technical problems in the computer systems Windows 10 operating system has a built-in key logger to improve its typing and writing services.

B) Hardware-Based Logger
The Hardware based key logger seems to be a hardware component fitted directly into the computer thus it does not require any special coding. The above picture represents hardware based key logger which fitted into the system automatically captures the actions performed by the user system.


III HACKING

The term Hacking refers to the intrusion into a computer system or network by which the user's private data are breached by the unauthorized black hackers. The Hacking methodologies that are done by purpose that states legal primitives' are termed as White Hat Hackers. The contrasting part of the hacking is that breaching the data without the knowledge of the user as an intention to steal the passwords of digitalized sectors are termed as Black Hat Hackers. The rise in technology also paves the way to its insecurity towards the privacy of the customers who uses it.

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IV BREACH OF DATA BY HACKING

The day to day life moves by the increasing number of log in accounts in the organizations which has the credits, debits and private data. But the security given to those data are less compared to the rice in hacking methods. The lack of knowledge towards the security has become the main advantage of rise in breaching of technology. The mismatch in the development and the security of the developed technology paves its way to unsecured world of threats in the digitization. To avoid the threats situation the development of both technology and the security should be taken at the balance level.

V KEYLOGGER AS READABLITY TOOL

According to the implementations of the self-designed key logger, it has the main purpose of readability of the data inside a user system. This can be taken as the advantage as reverse technological methodology. The Key-logger is designed with the concept of keystroke logging where every keystrokes of the keyboard are auto-captured by the key logger. This paves the efficient way to prevent hacking methodology.
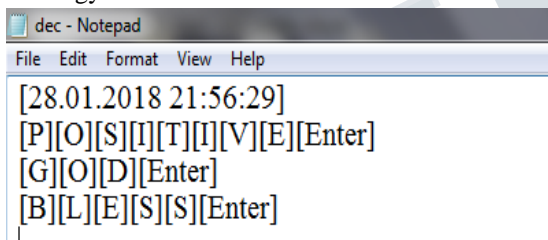
The above picture explains the readability of the key logger software.

VI KEYLOGGER AS REVERSE METHODOLOGY SYSTEM

To prevent the breach of data the key loggers can be used as a tool. Hacking a system has an algorithm by which hackers usually uses to hack the system in short time. The prevention of hacking mostly done by white hat hackers searches for the algorithm to prevent the hacking that already exists. At the time, when the software is sent to the hacker as a pop up or a message, once clicked the key logger starts logging every action done by the Hacker. This makes the software to log the data, encrypt the data and send the data to the White Hat Hackers.

VII STEPS OF MINIMIZATION OF HACKING

The minimization of the hacking can be done by using the few methodologies as follows,

A. Keystroke capturing:

The main advantage of key logger software is its keystroke capturing. The every action done by using the keyboard is captured as keystroke where a copy of the keystrokes is saved as a log file. By this method every single keystrokes can also be captured and saved as a log file within the system without the knowledge of the hacker.
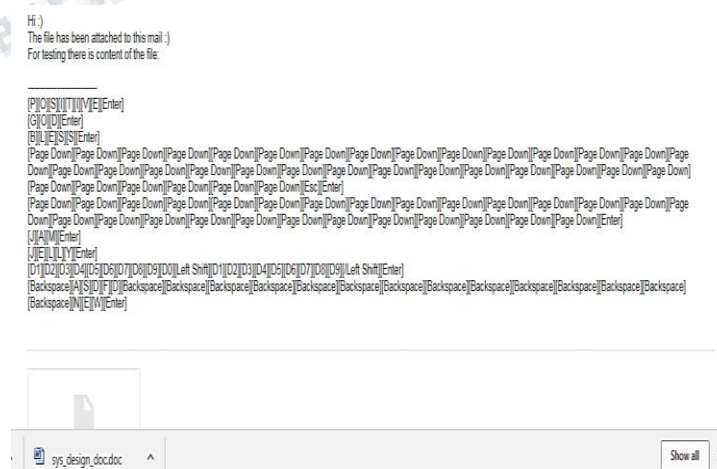
B. Encryption:

The saved log file should be encrypted by using different encryption algorithm by which the original data is encrypted and seems to be an unusual data. To make it simpler the Base 64 algorithm can be used which is a simpler algorithm to encrypt the data.
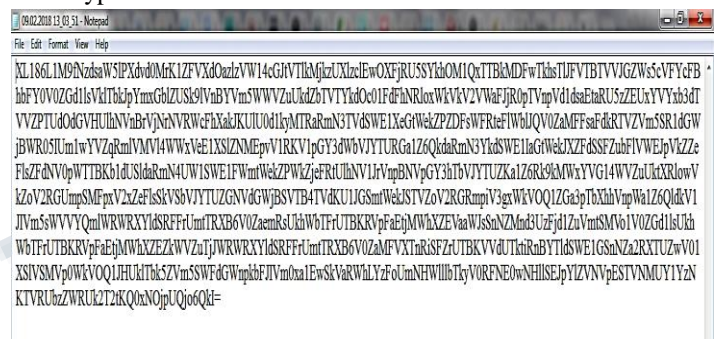
The above picture explains the encryption done by the key logger software.

C. Transmission of Data to Legal Hackers:

The encrypted data is sent from the hacker system to the legalized hacker system by the mail. This concept uses the coding of power shell script inside the software. This makes the software to transmit the data without the knowledge of the hacker.

The above picture shows the transmission of data through mail.

D. Original Data Access:

The original data can be accessed by using the reverse encryption algorithm by which the original data that was saved as a log file in the hackers system can be viewed and

used as the prevention of hacking at a sudden to destroy the hack attempts can be achieved. This gives an energetic way to stop the hacking that was in process. Moreover these types of methods make the easy access of legalized hackers to stop the hacking at the period of hacking of data breach.

VIII MINIMIZATION OF HACKING

The data sent by the key logger software makes it easy for the legal hackers to know the sort of algorithm used to breach the data of the organizations. As a result the reverse algorithm will be used and the hacking can be stopped at short period of time. This process can take time to stop the hacking but it is useful for the greater organizations which has large amount of data that are protected as a private documents. The data breach can be reduced that is minimized by using this methodology.

IX PREVENTION OF HACKING

Hacking has become a greater threat for the modern world. Each day arises with new technologies where the market comes up with another technology that makes down the existing technology. To prevent the hacking methods are not cent percent possible but to minimize the hacking is further easier when compared to prevent. The rising technology should be developed with the advanced security features and without it there comes an increase in loss percent of data. The anomalies aren't smaller but the security system must be a part of the development of the software.

X ANALYSIS

The use of the key logger software explained methodologies minimizes the time of hacking by which the tracking the location of hacking are made easier. The methodologies as keystroke functions, encryption, log files and decryption seem to be smaller steps but yield the greater advantages when compared to minimizing the loss of data.
*** (RESEARCH IN PROGRESS) ***

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