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Honeypot in Code Injection Attacks

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Abstract: In this paper honey pot is used to detect the fraud when the online credit card purchasing. In computer terminology, a **honeypot** is a computer. Generally, a honeypot consists of data (for example we can use the network site) that appears to be a legitimate part of the site but is actually isolated and monitored. Also it seems to contain information or a resource of value to attackers, which are then blocked. It is similar to the police baiting of a criminal and then conducting undercover surveillance, and finally punishing the criminal, by this they could not escape from the police.[1] Nowadays there is lot of online credit card purchase are made, so we don't know the person how is using the card online, we just capture the IP address for verification purpose. IP addresses will be unique. So there need a help from the cyber-crime to investigate the fraud. To avoid the entire above disadvantage we propose the system to detect the fraud in a best and easy way.The credit card fraud detection features uses user behavior and location scanning to check for unusual patterns, but using the honeypot we can protect it from the fraud. These patterns include user characteristics such as user spending patterns as well as usual user geographic locations to verify his identity. If any unusual pattern is detected, the system requires revivification. Lot of troubles will be reduced. The message will be send to the user when the fraud detecting time, after that by opening the user system we can define the message(some one hacking our web page) from the server. The system analyses user credit card data for various characteristics. These characteristics include user country, usual spending of the procedures. It is Based upon the before the data of that user the system recognizes unusual patterns in the payment procedure in this system by the securing format. So now the system may be require the user to login the area again or even block the user for more than 3 invalid attempts the message will be display.

I. INTRODUCTION

Credit-card-based purchases can be categorized into two types: 1) physical card (debit card) then the second type is 2) virtual card (credit card transaction). In a physical-card based purchase, the cardholder presents his card physically to a merchant for making a payment. To carry out the fraudulent transactions in this kind of purchase, an attacker has to steal the credit card in any way but to avoid the fraud by the honeypot tool. If the cardholder does not realize the loss of card, it can be lead to a substantial financial loss to the credit card company and the loss will be for the user. In the second kind of the purchase, only some important information about a card (card number, expiration date, secure code) is required to make the payment. Such purchases are normally done on the Internet or over the telephone system.

To commit fraud in these types of purchases, a fraudster simply needs to know the card details in any way it can be used for the fraud. Most of the time, the genuine cardholder is not aware that someone else has seen or stolen his card information. The only way to detect this kind of fraud is to analyze the spending patterns on every card and to be figure out any of inconsistency with respect to the "usual" of spending the patterns.

Fraud detection based on the analyzing of existing purchase data of cardholder is a promising the way to reduce the rate of successful credit card frauds. Since humans of the tend to exhibit the specific behaviorist of the profiles of the user, every cardholder can be represented by the set of patterns containing the information about the typical purchasing category, and at the time since the last purchase, the amount of money spent, etc. Deviation is from such as patterns is a potential threat Data correction

II. TYPES

Honeypot can be classified and it based upon their deployment of (use/action) and based on their level of involvement. Based on deployment, and honeypot may be classified as,

1. Production honeypot
2. Research honeypot

Production honeypot are easy to use, capture only limited information, and are used for primarily by companies or corporations. Production honeypot are placed inside the production network with other production servers and it be used by an organization to improve their overall state of security system. Normally, production honeypots are low-interaction honeypots, which are easier to deploy.

They give less information about the attacks or attackers than research honeypots. Research honeypot are run to gather information about the motives and tactics of the black hat community targeting different networks. These honeypot are not add direct value to the specific organization; instead, they were used to research the threats that are organizations face and to be learn how to be better protect against those the threats.[2] Research honeypot are complex to be deploy and maintain the system, to capture extensive information, and are used to primarily by research, military sides, or government sides

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of organizations. Based on the design criteria, honeypot can be classified into:

1. pure honeypot
2. high-interaction honeypot
3. low-interaction honeypot

Pure honeypot are full-fledged by the production systems. The activities of the attacker are may be monitored by using a casual tap and that has been installed on their honeypot link to the network system. And No other software is needs to be installed. Even though a pure honeypot is useful, the stealthiness of the defense of mechanisms can be ensured by the more controlled of mechanism.

High-interaction of honeypot that imitate the activities of the production systems that host a variety of services and, therefore, an attacker are may be allowed the lot of services to waste of their time. Therefore of, even if the honeypot is compromised, it can be restored more quickly. In general, high-interaction honey pots provides more than security by being difficult to the detect, but they are more expensive to maintain. If virtual machines are not available, one physical computer must be maintained for the each honeypot, which will be exorbitantly and expensive. Example: honey net.

Low reaction to the honeypot simulate only the services frequently are requested by attackers. Since they are consume relatively the few of the resources, multiple virtual machines can use easily to be hosted on one of the physical system, then the virtual systems have the short response at the time, and less of the code is required, reducing the complexity of the virtual system security.

III. SYSTEM SECURITY

The last part of the system is development by the lifecycle is the system maintenance, which is actually the implementation of the post implementation and review planned. Maintenance means resorting it to its original position. The system has designed with the effective tools and the techniques. The system was designed such that the future changes can be made with minimum changes in the code. The system was also designed to be flexible and adaptable, so that the maintenance cost in the future can be reduced as much as possible. It has been made easier to maintain the database system. Only the authorized person of the companies has been allowed to be access the database system.

Example:

The Data entered by the user and it is kept in the safe mode, so that no one can see the record of another it will be secured system. We have use the Encryption and Decryption technique to encrypt and decrypt the data in the system.

Register (for new users)

New user can register can register at this part. Here user means client who enters into the web site. A password protection with secure mode option is provided to guard from un-authorized access to database.

Login

In this login shows the previous clients of the site, whose are already registered at here they can login and view the related things to themselves and they can do shopping over here. The user identification which is required by the server for access to its file system. For some sites, completes the user's identification for access control. Since password information are quite sensitive in the control, and it is desirable in general to "mask" it or suppress type out.

Password managers

A password manager is a software application that helps a user store and organize passwords. Password managers are usually store passwords encrypted, by requiring the user to create a master password; a single, ideally very strong password which grants the user access to their entire password database.[8]

IV. IP ADDRESS (INTERNET PROTOCOL)

IP address blocking prevents connection between a server website and the certain IP-addresses or ranges of addresses. IP address blocking effectively and undesired connections from the hosts using affected addresses to a website and mail server, or other Internet servers.

Unix-like operating systems commonly implement the IP address blocking using TCP wrapper, configured by host of access to control files [1] /etc/hosts. Deny and /etc/hosts allow.

IP address blocking is commonly used to protect against the brute force attacks. Both companies, schools offering remote user access use Linux program such as deny hosts or fail2ban for protection from unauthorized access while allowing permitted remote access. This is also useful for people who need to remotely access their computers. It is also used for the censorship. On a website, an IP address have the ban is often used to prevent a disruptive member from the access, though a warning and/or account ban may be used beginning. Dynamic allocation of IP addresses can complicate incoming IP address of blocking, rendering it is difficult to block a specific user without blocking a larger number of IP addresses (blocks of IP address ranges), risking collateral damage caused by the ISPs sharing IP addresses of multiple internet users.

IP address blocking of the Showtime website for non-US origins. The four contains numbers are allowed in IP ADDERSS .there are different in single ".''Specific different of contain Numbers then 0-255 number allow in four contain number. The numbers also used in security to no act in any one the IP address.

For example: IP address 001.003.156.587.

IP ADDERSS are act in any person to detect the fraud in cyber security in first help in peoples. But now a day's message send in user open the account send the message in your account to act in another person .we all detect the fraud in easy way to act the fraud The lot of triple reduce the user .

IP address banning is also used for the limited syndication of content to specific regions. To achieve this, IP addresses are mapped to for countries they have been assigned to. This has been used to devastating an effect of most recently to target Nigerian the IP addresses due to the perception that all business emanating from the country is fraudulent, thus making it extremely difficult for legitimate of businesses based on the country to interact with their counterparts in the rest of the world. To make purchases abroad, Nigerians rely on proxy companies to mediate transactions.

Proxy server can be used to bypass an IP address ban[2] unless the site being accessed has an effective anti-proxy script. In a 2013 court ruling on craigslist v.3taps,US federal judge Charles Rubberier is decided that circumventing IP blocks in the order to access the website (for example using anonymous proxies) is the violation of CFAA, punishable by civil damages for "unauthorized access".[3]

V. CONCLUSION

The “HONEYPOT IN CODE INJECTION ATTACKS" has developed. The different steps in credit card transaction processing are represented as the underlying stochastic process of a Honeypot. We have used the ranges of transaction amount as the observation symbols, whereas the types of item have been considered to be states of the Honeypot. We have suggested a method for finding the spending profile as cardholders, and as well as application of this knowledge of deciding the value of observation symbols and initial estimate of the model parameters. It has also been explained how the Honeypot can detect whether an incoming transaction is fraudulent or not. Experimental results show the performance and effectiveness of our system and demonstrate the usefulness of learning those spending profile of the cardholders. Comparative of studies reveal that the Accuracy of the system is close to 80 percent over a wide variation of the input data given by the user. The system is also scalable for handling large volumes of transactions.

A good amount of User-friendly factors have been incorporated in the stores management system and it is possible for any user to explore these features to get the maximum benefit. The system was able to process and update the database with more ease. It helped in developing a total integrated system. The programming techniques used in the system provides a scope for future enhancement. The coding Style is as per the requirement of the user. The Various timely reports generated by the system have proved to be quite useful. The successful completion of the system resulted in

1. Elimination of manual processing.
2. The system is user friendly with GUI.
3. Fast data processing compared to manual processing.
4. Generations of reports
5. Immunization of the system from unauthorized user accesses.

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