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IIDPS DETECTION AND SECURING SYSTEM BY USING FORENSIC TECHNIQUES

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Abstract

In organizations where is a group of people working it is very common to share or leak security patterns of the machines. An attacker can make huge damage to data of the individual or organization with the login pattern of the machine of an employee, this type of attacks we called it inside attacks. In this Project we proposed a new system named IIDPS which is Internal Intrusion Detection Protection, which is a proposed technique for detecting internal intruders using system calls where every users will have unique way of using his or her system from starting to ending every time. Here System calls nothing but frequency and continuity of the operation on their machines. This is used to find the individual user behavior from the group of the people. Based on the sequence of the system calls we find the system pattern and based on the system pattern we find the user behavior. We proposed an algorithm of SC Pattern Identification and Detection with traditional N-Gram. We demonstrated a system to find the inside attacks and levels of the attacks.

Keywords: - IIDPS, System Calls, Insider Attacks

1. INTRODUCTION

Basically in the organizations or companies many users, employees work in the same location, it is very common to share their login access information to their coworkers for various reasons. They share the login access information to work in the machines behalf of them, or share it to the sub-ordinates to submit work etc likewise many reasons there to share the login access information. But without taking the permission if any user login into another user accounts process some data is attack. It's not happened out side or network based attack, it's an internal things. So this is reason we named it as Internal Intrusion. There is no work of this survey, all the work done basically into the network based,

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protocol based etc. We solve this problem by analyzing the user behavior in the individual. So if any user pattern is not matched with login user account so system will treat like suspect, with login user response it may convert to new behavior of the user or attack. In this we are taking advantages of the NLP to compare the user patterns.

2. RELATED WORK

Existing System

In current offices or any organizations have the lot of users are for collaboration work. When people are work together there is chance of the sharing the security keys for work sharing. In some situations higher authority will share their security keys to the sub co-workers for many reasons, so lot of possibilities there for sharing the keys, but in the machines once we have the any security key of the others we can access or update the data, this is called as internal attacks. In literature there is lot work proposed for network attacks like DDoS or Packet Dropping etc. But there is work for this internal insider attcks.

Proposed System

We are proposing a novel architecture called IIDPS which will track the all the users behavior and intimidate to the user in all the situation wasn't right. Our application will track the user behavior in the some steps. Initially when user login into the application system will track the users operation and order in the sequence, using the N-gram technique we analyze the series and sequence of the system calls and make the system pattern. Every time user system pattern is matched by the existing pattern, if in case match not found then user will get the notifications.

1. Initial work to track the internal intruders
2. System used to track the user behavior all the time and get communicate user any this happened which we un-expecting.
3. Using NLP algorithms we can generate the pattern.

4. IMPLEMENTATION

Algorithm Process in Project

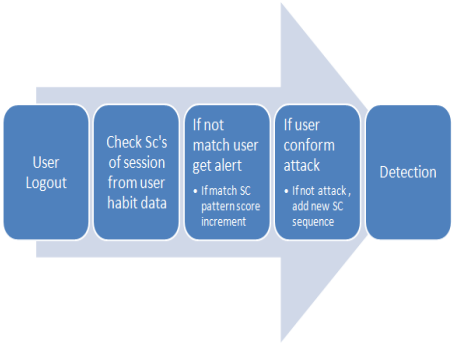

Fig:-1 Algorithm Process in Project

Architecture

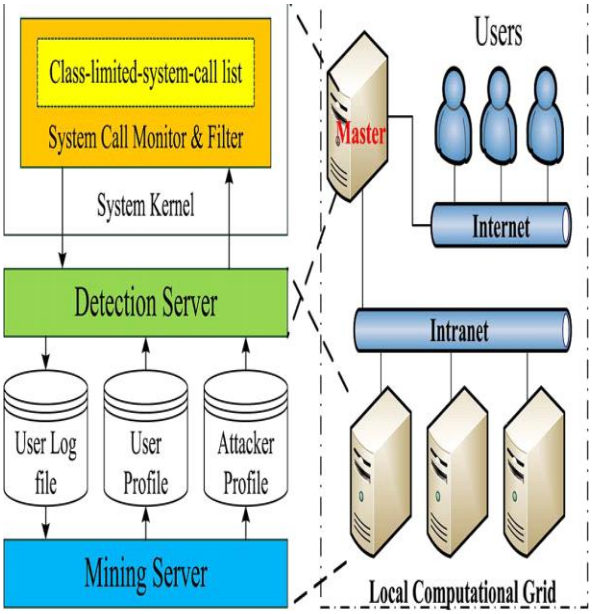

Fig:-2 Architecture

IIDPS

IIDPS is a structure or a application which represents the concept called Internal Intrusion Detection and Protection System (IIDPS), to run over Internal Intrusion and interior gatecrashers. To validate clients, at present, most extreme structures investigate the utilization of login test utilizing client recognizable proof and secret word. Our application will track the user behavior in the some steps. Initially when user login into the application system will track the users operation and order in the sequence, using the N-gram technique we analyze the series and sequence of the system calls and make the system pattern.

Detection and Protection

We keep track the user operations in the form of the system calls. For example user initially open profile and update profile the SC's will be open, view, update etc. Based on these sc's we generate the SC patterns.

User

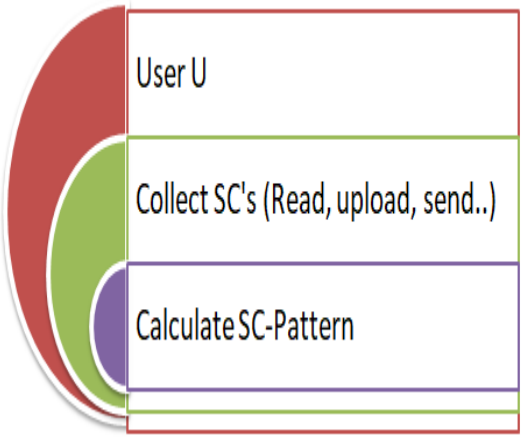

Fig:-3 User Process in Project

Here User not anything but a co-worker in a set of personnel in an enterprise, consumer can log into device the usage of their own login sample. After login user perform operations like upload, down load, replace, ship, view and so on. Application User can get alert when s/he attacked. Based on person choice application will locate the intruder, that is the person get covered.

Admin

Administrator is a prime client of our gadget. Administrator can check the SC-Patterns of the customer. Administrator can hold the certainties of assaults, similar to assault time and records, sort of working

framework, aggressor subtleties, and phase of attack.

Attack Types

Type 1: This assault is defined as the state of affairs where in a user (attacker) of a normal SC's like study, search, get listing, download etc...

Type 2: This assault is an attack that launches a sensitive SC's, that's defined as sensitive information, which could delete, update, chg. Mod and so forth..

Type 3: This assault is an assault that launches a better get admission to right to assault the gadget, e.g., cracking password.

5. EXPERIMENTAL RESULTS

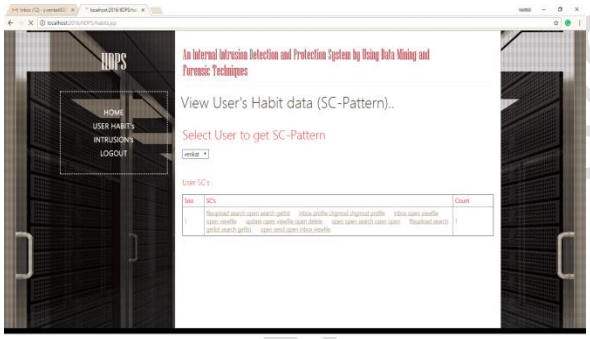

Fig:-4 Admin View User Habit Data Out Put Page

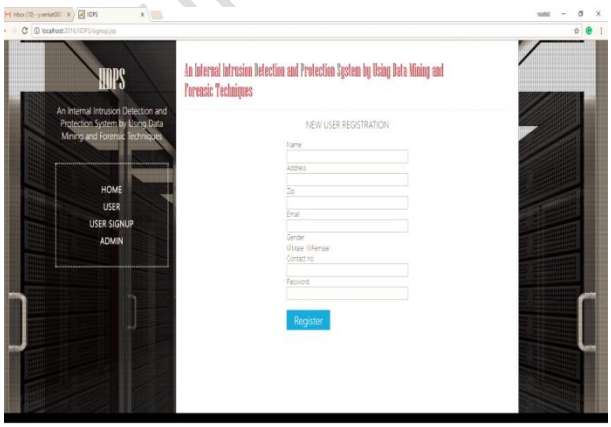

Fig:-5 new user Registration out Put Page

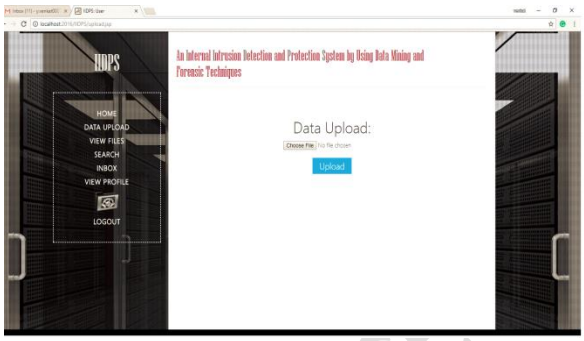

Fig:-6 File Upload Out Put Page

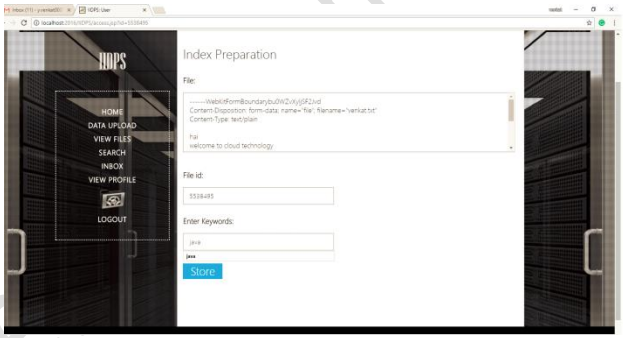

Fig:-7 Enter Key Word Out Put Page

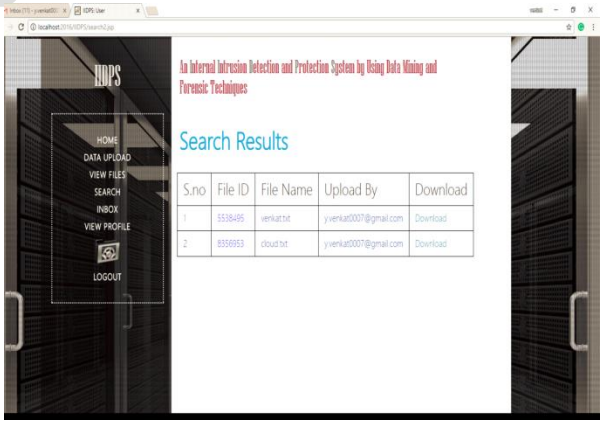

Fig:- 8 User Search Results

6. CONCLUSION

In this project we find the problems we are facing in the current organizations insider attacks, based on this we proposed a concept called SC Pattern Identification and Detection with traditional N-Gram. We demonstrated a system to find the inside

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attacks and levels of the attacks. When attacker make some operation sand logout then system will check the sc calls with existing sc patterns, if not matched then user will get the alert, according to the user response then application will make decision for detection. For future work we need to find the solution for revocation of the data. We need to find out the solution for revocation of the data when attack is happened.

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