

## COMPUTER VIRUS AND SECURITY

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### **Abstract:**

A recommendation system is a system that provides suggestions to users for certain resources like books, movies, songs, etc., based on some dataset using different algorithms and recommends the most relevant items to users. Such recommendation systems are beneficial for organizations that collect data from large amounts of customers, and wish to effectively provide the best suggestions possible. The system scan recommend movies based on one or a combination of two or more attributes. Three main approaches are used for our recommender systems. One is Demographic Filtering i.e. They offer generalized recommendations to every user, based on movie popularity and/or genre. The System recommends the same movies to users with similar demographic features.

### **I. Introduction**

In recent time, the computer viruses have become very major problem for the computers and the IT environment. There were many anti-virus product were available in the market for protect the computing environment or our systems. The anti- viral products help us or users protect their system from the attack of viruses. They protect our systems or protect our some running programs and certain pattern in infected programs.

That time, the solution to prevent this virus attack had not yet been reached. Are using for decrease the infection of virus too hard and faced difficulty to implement.

It the current time, the problem of virus infection depends on the experiences of Somesecure models [1,2,3] may help to decrease the infection of virus by logically or a ranged access to computing resources. Without the help and contribution of theVendor, this problem cannot be solved in any positive manner.

In this paper, we will review the three different types of anti- viral products and their associated programs. After that, a software authentication system for sign the vendor's released program and provides us a easy way for verification the authenticity.

### **Literature**

This papers provides abstract overview of computing virus protection. Computer viruses are most critical country in computing machine scientific discipline. All computing machine users in the universe are enduring from this menace. Viruses reproduce themselves and spread through computing machine to computing machine every bit good as web to web.

Computer virus is a plan that can put to death itself with the aid of another septic feasible plan without cognition of computing machine. User and infect to computing machine There are some antivirus package and some best patterns to forestall from computing machine viruses. Equally

good as this literature reappraisal contains the present state of affairs of computing machine viruses, protection from computing machine viruses and how new antivirus package performs on computing machine viruses.

item BitDefender Antivirus 2010 – This provides a great security, simple serviceability, effectual usage of resources, and a valuable pricetag and provides up to day of the month engineerings to battle viruses and other malware. Active virus control is the latest engineering they are looking for to give a great security by ever detecting the behavior of a file. cite { 19 }

item Kaspersky Anti-Virus 2010 – All around protection from figure of menaces like viruses, Trojans, bots, worms, and spyware. This is more easy to utilize as it has created with user friendly pilotages. cite { 20 }

item Webroot AntiVirus with SpySweeper 2010 – A comprehensive desktop anti virus bundle which is used a multi-layered approach. Webroot AntiVirus with Spy Sweeper besides features proactive engineering to happen malware before it does any injury to the computing machine. cite { 21 }

item Norton AntiVirus 2010 – Great protection degree against malware but a job arises when uninstalling the package as its partial ninstallation. This uses traditional signature based sensing mechanism to observe malware. cite { 22 }

item ESET Nod32 Antivirus 4 – Kind of desktop anti virus package. But this does n't supply a complete security and misses some protection. This is non in the competition with otheranti virus package. cite { 23 }

## • **How A Virus Works**

Computer virus is nothing but it is code that can detect or destruct data or files. Viruses areMany types and also they are working different ways. Viruses are spread through communication Technology.

If the computer system connected to the public system it increase the infected of computer viruses. Viruses can spread by VPN.IOT (Internet of Things) is also a medium for multiply to viruses. If we are use different of supporting application increase the virus. It will easier for hackers to exploit vulnerabilities. There are following types of viruses.

### **1. File Virus**

File virus infecting document or Application file. If the infected Application file is run, then this virus spread into all document or files those accessed by the Application.

## **2. Boot Sector Virus**

This virus directly infecting the region of the hard drive. When the computer is boot up this virus damage the region of the hard drive that was first accessed. This boot sector virus is not allowing the user to able to his computer normally. And it also slows down the speed of the computer.

## **3. Macro Virus**

This virus usually attached or embedded with some application. It is not a stand- alone virus. Most of the time this virus infects Microsoft office application, like Excel and Word. Document infected by this virus will modify or by adding existing command to propagate itself when the command is execute/run.

## **4. E-mail Virus**

E-mail Virus works by the mail. This virus spread by the attachment. Special feature of this virus such as an extension .bat, .exe, or .pif. When this virus is active it will send a danger code to many e-mail addresses automatically.

## **5. Polymorphic Virus**

This virus automatically changes the code when they are infected to another computer. It is done to hide them from being detected. And this virus is more difficult to remove.

Virus attack can be preventing by using antivirus software. Antivirus software is also a type of code

Through which we detect and remove computer viruses. Antivirus vendor provide and renew the Computer virus database to kill the infected computer.

## **6. Resident Viruses**

These viruses occur in system memory (RAM). And these viruses interrupt all the operation performed by the computer system like closed the program that are opened , renamed and copied the same program files etc.

## **7. Direct action virus**

Direct action viruses take action when they are executed. These viruses take action whenever specific condition met, then virus perform the action and infects or damage files in the folder or directory. These directories have a specific path called AUTOEXE.BAT file. And the batch file always addressed in root directory of the disk.

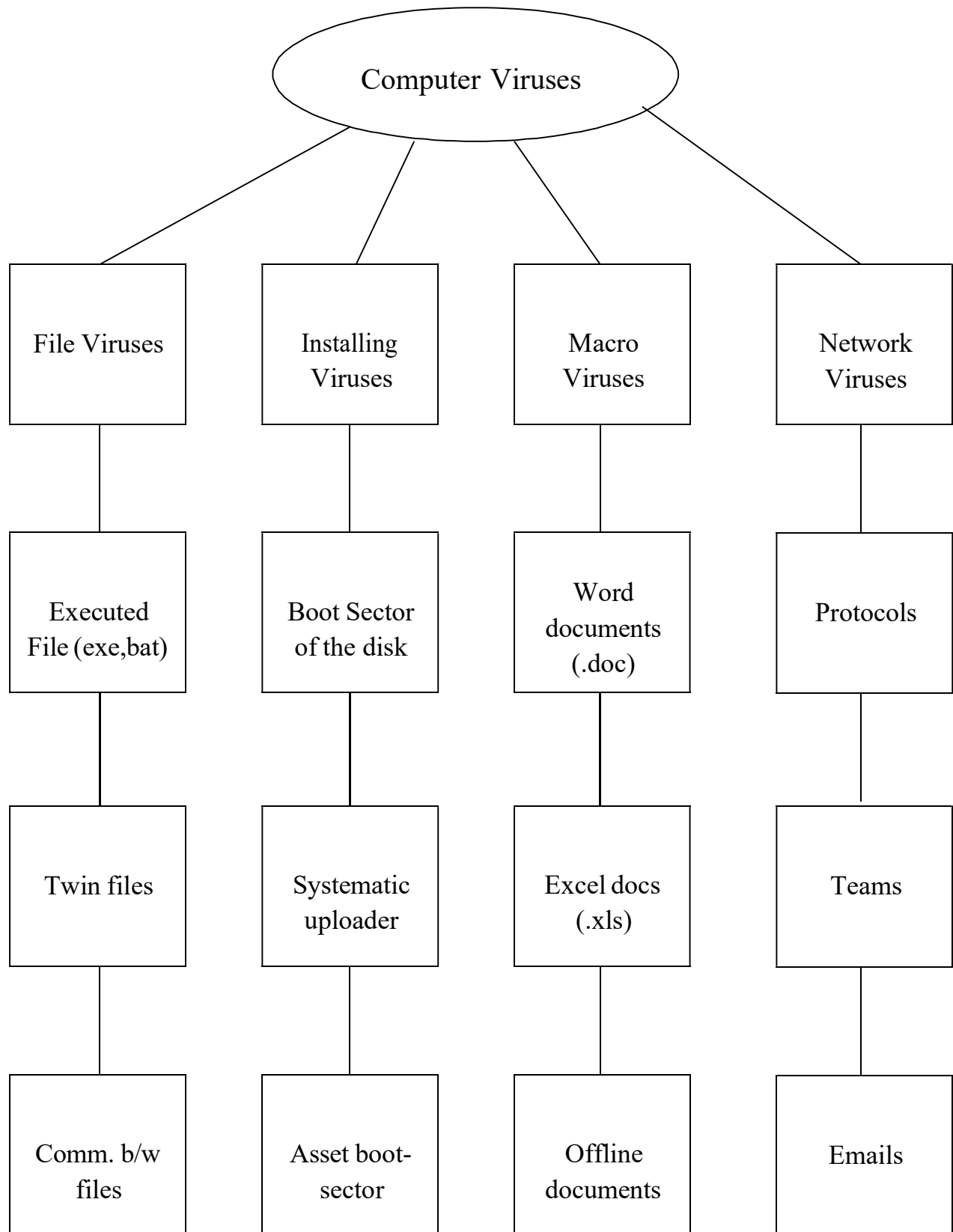
## **8. FAT Viruses**

FAT Viruses use the special types of file allocation table or part of a disk of the computer. This type of virus attack very dangerous for the hard drive section where important data files are stored. A damage file means result or information losses from the different-different files from directory or even whole directories.

### **Symptoms of virus on computer system**

Here some primary sign. By which we find computer may be infected with a computer virus:

- The performance of computer runs slower than usual performance.
- Some time computer stops responding, or it may be some times locks up.
- The computer restarts every minutes and crashes.
- Some time computer restart on its own additionally without human intervention.
- The computer start displaying unusual error or warning message.
- Unusual dialog and menu boxes are seen on the system screen in distorted form.
- Some times new icons displayed on the system screen that have not been put there and the icons are not related to any installed application.



## Prevention

System security can be divided into two ways, prevention, and treatment. Both prevention and treatment are differentiated on the Infection time. We can prevent the system if prevention is performed before spreading infection. Treatment always is done after a system has been infected. Prevention the system from the virus first we find the weak point the security hole that has been exploited the cause of infection. In general computer viruses are difficult to detect.

Each and every Virus come in different types and different forms, each virus is different in behavior and appearance.

We prevent the computer from viral attack, beside the use of anti-virus product, is prevent through user alertness. Users of computer should be aware of the characteristics of viruses, observe the change in files or in performance of the system knowledgeable about their system and capable of recovering a viral attack.

### **Recovery**

Anti-virus is a computer code to detect viruses. It is not to detect Trojans, Malware, Spam and Adware. But however these types of viruses develop many problem, but anti-virus maker makes the anti-virus more powerful by add the additional data to the coding.

Here we define the simple steps to remove the virus from the system are:

- First we identify the infected file on the drive.
- Find out how the virus activates. After find to take the necessary action to prevent the virus after reboots.
- After finding reboot the computer and remove the virus from the system.
- See the difference in system Performance before and after removed the virus.

All the above simplest steps are one option to remove a virus from a computer system. Apart from that there is another step is to re-install all programs with new ones. By using this virus will automatically disappear from the computer because you have a new system.

### **Reference**

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