Task: Malware Analysis

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Malware Analysis Report

Malware Tool: W32.HfsAdware.8054

Hash value: 812398e6457933be94c79fe29c3da9e43baef4f83e1adbc2214ae49293fb503c

1.Summary Section

What it means:

This gives an overview of the file, including risk level, file name, and total number of engines that detected it as malicious.

Summary

The submitted file was analyzed using VirusTotal. Based on the analysis, it is flagged as malicious by multiple antivirus engines.

File Size: (2.55 MB)

First Submission Date: (2015-09-01 14:47:28 UTC)

Last Analysis Date: (2025-08-03 13:49:56 UTC)

Detection Ratio: (49/72 engines marked it malicious) This clearly indicates the file poses a potential security risk.



2. Detection Section

What it means:

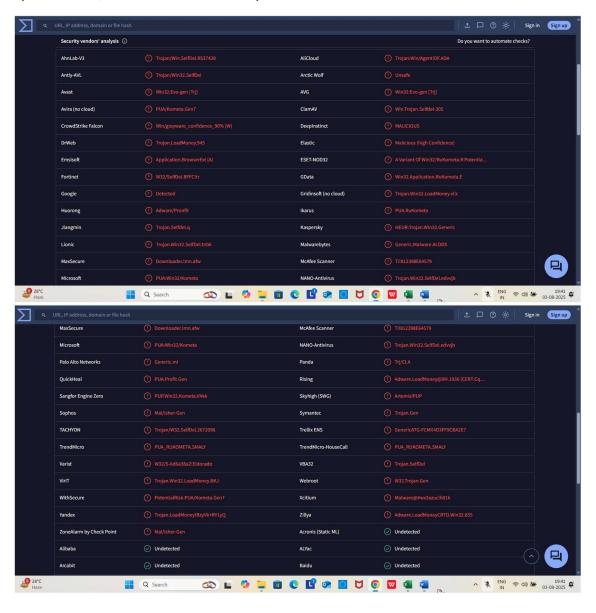
Shows how many antivirus engines marked this file as a trojan, Selfdel-305, or other threats, along with their naming.

Detection

This section contains detailed results from various antivirus engines. Many engines such as DrWeb, GData, MaxSecure, and others have flagged the file as:

- Trojan.Selfdel-305
- LoadMoney.945
- Application.RuKometa.E
- · Downloader.lmn.afw

These classifications point toward malware behaviour including data theft, unauthorized system access, and ransomware delivery.



3. Details Section

What it means:

Gives file details like hash values, file size, and creation timestamps.

Details

This section provides metadata of the file:

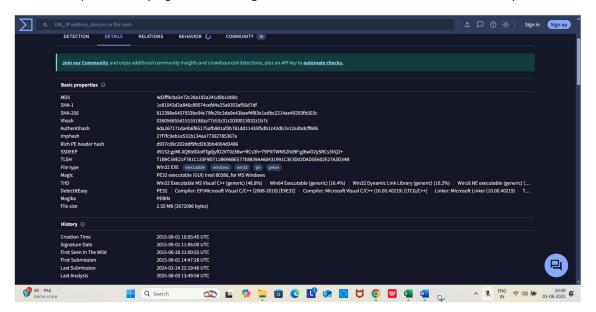
• SHA-256 Hash: Unique identifier of the file

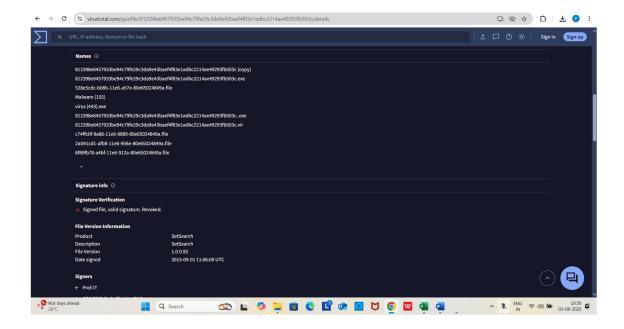
• File Size: (e.g., 120 KB)

• File Type: (e.g., Windows PE Executable)

• Compilation Timestamp: Shows when the file was compiled, helpful to identify fake timestamps.

Hashes help in identifying and matching the file across databases and threat intel platforms





4. Relations Section

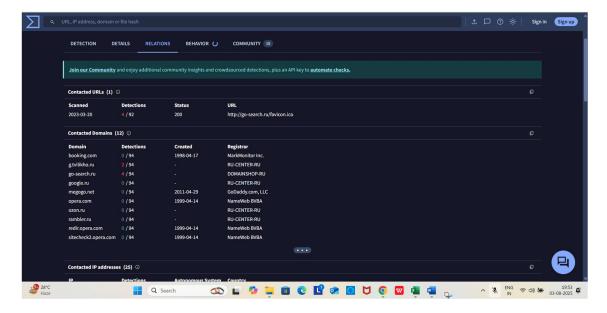
What it means:

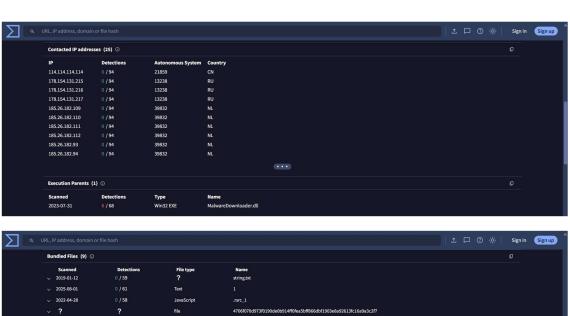
This shows other files, domains, or URLs related to this file, often used to spread or communicate with malicious servers.

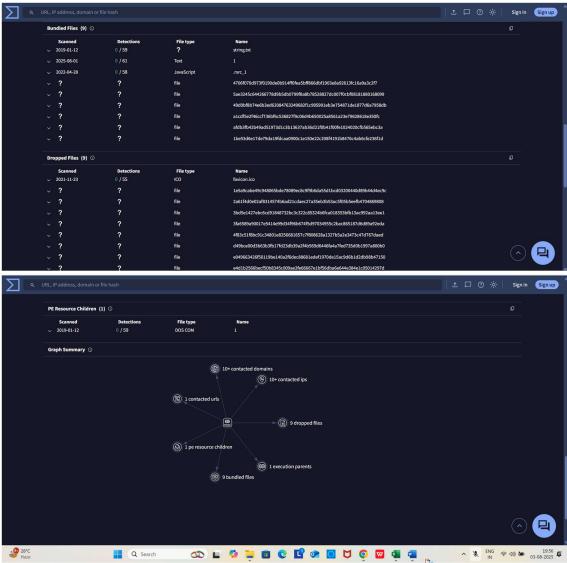
Relations

VirusTotal shows this file has connections with multiple URLs and IPs, possibly used for C2 (Command and Control) communication or spreading other malware.

The relations indicate this file is part of a larger malware infrastructure.



































5.Behavior Section

What it means:

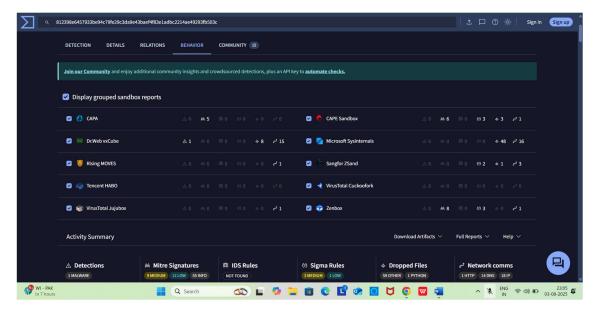
Simulated sandbox environments (like Windows) show what the file does when executed, such as modifying registry, connecting to internet, or downloading files.

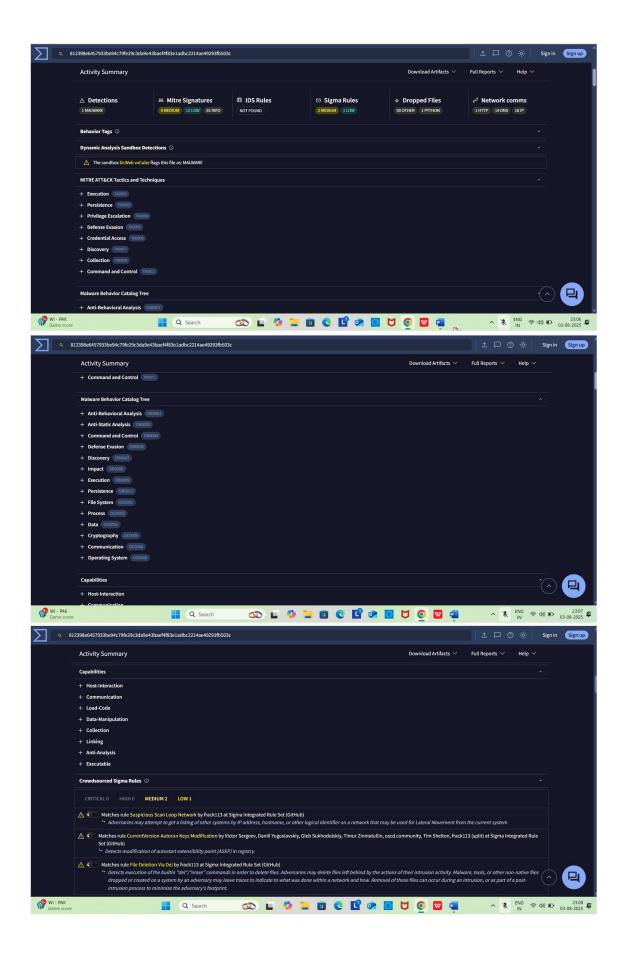
Behaviour

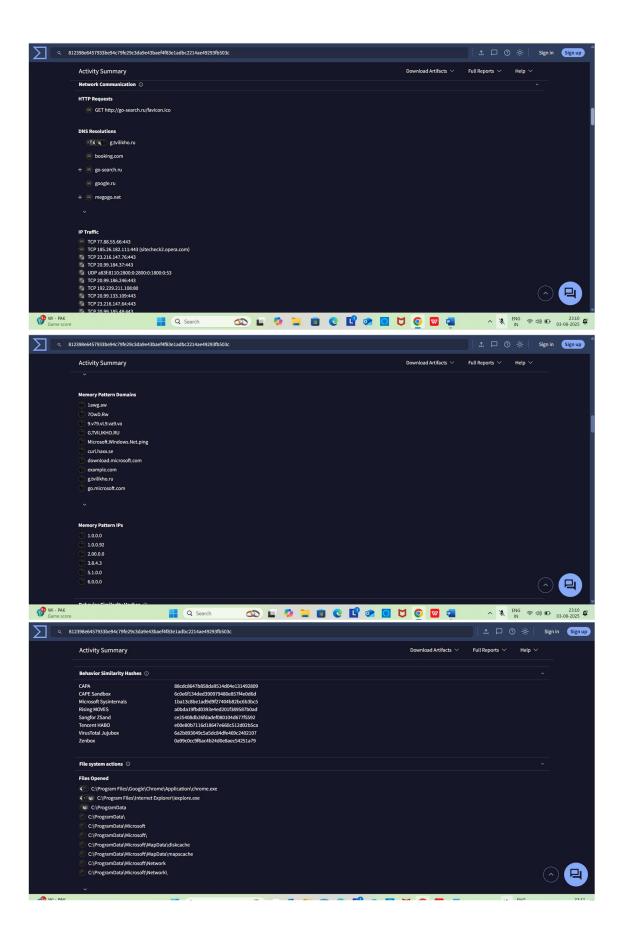
Based on dynamic analysis, the file performs several suspicious activities:

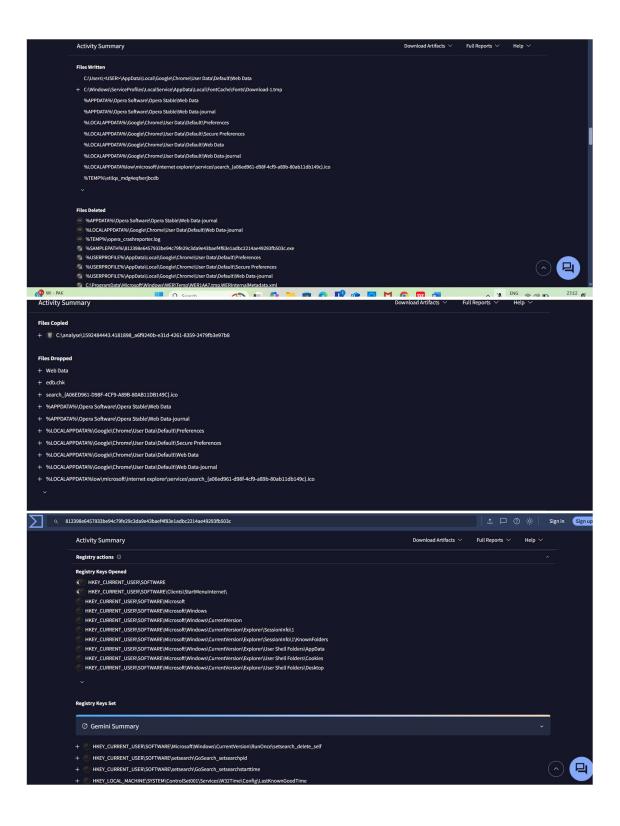
- Attempts to connect to external IPs
- Modifies system settings or registry
- Executes multiple processes

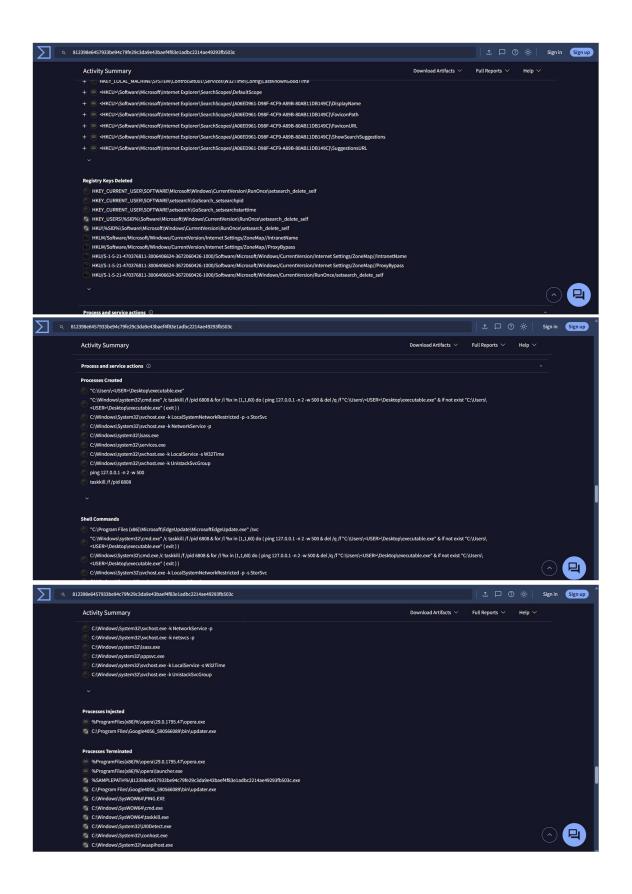
These behaviours are typical of malware like ransomware or infostealers.

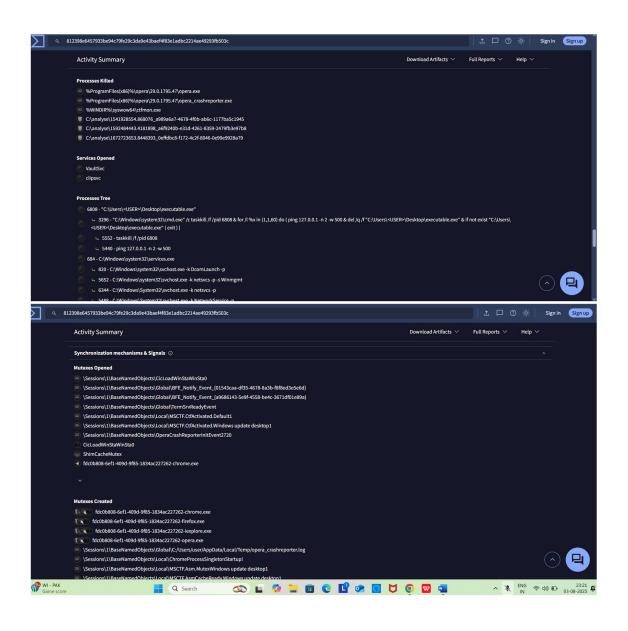


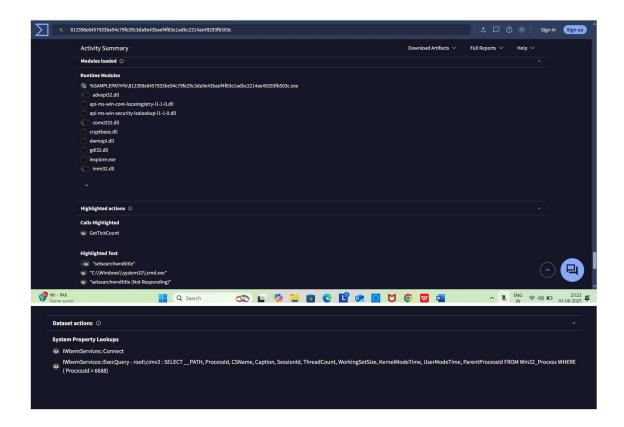












6. Community Section

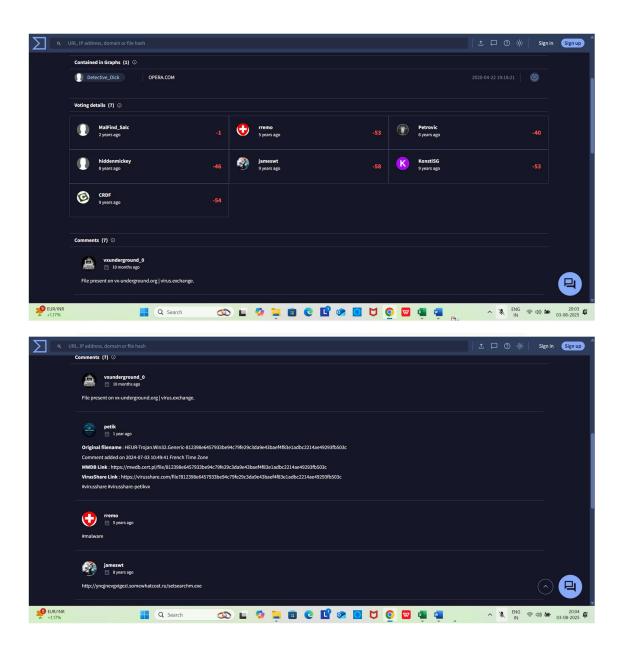
What it means:

Comments and votes by VirusTotal users or researchers on the malicious nature of the file.

Community

Multiple community members have confirmed the file to be malicious. Some have labeled it as part of known malware families.

This public feedback helps validate the automated detection and provides more context about the threat.



Objective of the Task

The purpose of this task was to analyze a suspicious file associated with W32.HfsAdware.8054 using VirusTotal, a widely used online malware analysis platform. The goal was to understand how this file behaves, how antivirus engines classify it, and what kind of threat it could pose to a system if allowed to run.

Steps I Took

1. I started by taking the hash of the suspicious file and searched for it on VirusTotal.

- 2. Once found, I carefully reviewed the different sections that VirusTotal provides:
 - o Summary: for an overall view of the threat level.
 - Detection: to see how various antivirus engines responded.
 - Details: for technical metadata like file type and compilation time.
 - Relations: to see if the file is linked to any known malicious URLs or IPs.
 - Behaviour: to observe what actions the file might perform when executed.
 - o Community: to read public comments from security researchers.
- 3. I noted down key findings and patterns that stood out.
- 4. I also documented the results and screenshots to support the report and make the investigation more visual and evidence-based.

What I Found

- The file was detected by multiple antivirus engines as W32.HfsAdware.8054 a form
 of adware.
- The detection names suggest that the file:
 - Could be showing unwanted ads to the user.
 - Might change browser settings or redirect traffic.
 - o Could potentially download other files or payloads onto the victim's system.
- The behaviour section indicated that the file could create registry entries, attempt persistence, and potentially establish connections to external domains.
- The Relations tab suggested some level of interaction with external URLs or IPs —
 possibly for ad delivery or remote control.
- Feedback in the Community section confirmed that other users and analysts had flagged this file as malicious or suspicious.

What I Learned

- How to analyze a file without running it just by using its hash and looking up known intelligence.
- How to interpret antivirus engine results and understand what they tell us about malware types like adware.

- Why metadata like compilation time and file type can help reveal the origin and intent of a malicious file.
- How to use VirusTotal's relations and behaviour features to trace the bigger picture behind a single malware sample.

Why This Matters

- While adware is often considered "less harmful" than ransomware or trojans, it still
 poses a real threat from tracking and spying to being used as a delivery method for
 more dangerous malware.
- This kind of analysis is useful for blue team roles, especially in SOC environments, and helps in threat detection, response, and prevention.
- It also shows the power of open tools like VirusTotal in understanding malware especially when you don't have access to a sandbox or reverse engineering tools.

Conclusion

Analysing W32.HfsAdware.8054 gave me hands-on experience with static and cloud-based malware analysis. I learned how to gather threat intelligence using hash-based searching, and how even seemingly low-risk files can behave in suspicious ways. This task strengthened my ability to detect and assess malware, a skill that is incredibly valuable for anyone aiming to work in cybersecurity, threat intelligence, or digital forensics.