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Topic : malware analysis

Here is a static analysis overview for **Trojan.GenericKD.30454175** (SHA256: 61f2d6fa249bfd74e59d8f6d50191c62490fc690f7fb035fe2133b4566b38a89), derived from open-source tools and threat intelligence feeds:

Static Analysis Insights

- **Delivery and Disguise:**
 - Frequently distributed as a ZIP attachment that masquerades as a PDF document. The executable often uses a PDF icon to trick users into launching it.
- **Initial Behavior:**
 - After execution, a decoy error message is shown to distract the victim while malicious actions proceed covertly in the background.
- **Process Injection & Stealth:**
 - Injects code into legitimate Windows processes (such as explorer.exe) to avoid detection and maintain persistence.
- **Persistence Mechanism:**
 - Alters the Windows Registry—especially under HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run—so the malware or its payloads run on each system startup.
- **File System Signs:**
 - Drops additional executables (often with PDF icons or innocent filenames) into user profile directories and .tmp files into the Temp folder.
- **Network and Proxy Activity:**
 - Attempts connections to remote C2 servers (reported servers in the US, UK, Japan), downloads further payloads, and may modify system or browser proxy settings, potentially rerouting or disrupting internet traffic.
- **Spam and Credential Theft:**
 - Some variants, including this one per supplementary detection (Trojan.PWS.Stealer.19347), may attempt to send spam via SMTP or steal credentials by harvesting from browsers or system stores.

Open-Source Tools for Static Analysis

Tool	Main Purpose	Highlights
Ghidra	Disassembler/decompiler	Deep code and logic analysis; free and cross-platform
PEStudio	PE file metadata, string extraction	Quick import/API review, heuristic anomaly flags
PEframe	Static PE analyzer	IOC extraction, metainfo for automation/scripting
Radare2	Disassembler, hex editor	Powerful scripting and reverse-engineering
Detect It Easy (DIE)	Packing/obfuscation detection	Identifies if the file is packed and needs unpacking
BinText/strings	String extraction	Uncovers embedded URLs, registry keys, error messages
Resource Hacker	Resource viewer/editor	Reveals hidden icons/resources/malicious embedded files
CFF Explorer	PE header and structure analysis	Detailed view and modification of PE sections

Typical Analysis Steps (Open Source Workflow)

- File identification:**
Use file command (Linux) or PEStudio to confirm executable type and cross-check SHA256 hash (VirusTotal).
- Metadata/Import Analysis:**
PEStudio and PEframe can reveal suspicious imported functions—like those for process injection, networking, registry.
- Extract Embedded Strings:**
With BinText or the strings utility, look for command-and-control URLs, registry keys, possible decoy errors.
- Check for Obfuscation:**
DIE detects packers/obfuscation; if present, unpack before further static analysis.

5. Inspect PE Structure:

CFF Explorer allows for in-depth PE header review; Resource Hacker lets you check icons and other embedded resources.

6. Compile IOCs:

Gather any found IPs/domains, file/registry artifacts, mutexes for detection and response.

Security Recommendations

- Perform all actions in a **segregated virtual environment** to avoid risk of infection during analysis.
- For additional actionable intelligence, upload the hash or file to public sandboxes (e.g., Hybrid Analysis, Any.run, VirusTotal) for automated behavioral reports and community findings.

These open-source tools and analysis steps comprise a comprehensive static review and are best-practices for investigating trojans flagged under GenericKD signatures.

Analysis Results: VirusTotal Scan and Vendor Detections

After acquiring the malware sample for analysis, I calculated its SHA-256 hash (61f2d6fa249bfd74e59d8f6d50191c62490fc690f7fb035fe2133b4566b38a89) and submitted it to VirusTotal to leverage the threat intelligence provided by multiple antivirus vendors.

The screenshot displays the VirusTotal analysis interface for a file. At the top, a red circle indicates a 'Community Score' of 61 out of 71. A notification states that 61/71 security vendors flagged the file as malicious. The file's SHA-256 hash is 61f2d6fa249bfd74e59d8f6d50191c62490fc690f7fb035fe2133b4566b38a89, and its size is 236.00 KB. The last analysis was performed 4 months ago. Below this, a list of detected behaviors includes 'peexe', 'direct-cpu-clock-access', 'persistence', 'checks-bios', 'calls-wmi', 'clipboard', 'assembly', 'runtime-modules', 'detect-debug-environment', 'spreader', and 'long-sleeps'. The 'COMMUNITY' tab is selected, showing a list of sandbox reports from various vendors. A table summarizes these reports, including the vendor name, the number of detections, and the number of samples analyzed. The table is as follows:

Vendor	Detections	Samples
CAPE Sandbox	4	0
Lastline	2	0
Microsoft Sysinternals	19	8
Rising MOVES	0	0
Sangfor ZSand	3	6
Tencent HAO	0	2
VirusTotal Cuckoofork	7	0
VirusTotal Jujubox	0	0
VirusTotal Observer	0	0
Zenbox	5	5

At the bottom, there is an 'Activity Summary' section and links to 'Download Artifacts', 'Full Reports', and 'Help'.

DETECTION
DETAILS
RELATIONS
BEHAVIOR
COMMUNITY 4

Join our Community and enjoy additional community insights and crowdsourced detections, plus an API key to automate

Contacted URLs (2)

Scanned	Detections	Status	URL
2018-07-08	3 / 67	-	http://ike.alphadeltas.in/api.php
2025-07-31	0 / 97	200	http://checkip.dyndns.org/

Contacted Domains (5)

Domain	Detections	Created	Registrar
alphadeltas.in	0 / 94	-	-
checkip.dyndns.com	0 / 94	1996-09-24	MarkMonitor Inc.
checkip.dyndns.org	0 / 94	1998-11-22	MarkMonitor Inc.
dyndns.org	1 / 94	1998-11-22	MarkMonitor Inc.
ike.alphadeltas.in	0 / 94	-	-

Contacted IP addresses (18)

IP	Detections	Autonomous System	Country
114.114.114.114	0 / 94	21859	CN
131.186.113.70	0 / 94	54253	DE
131.186.161.70	0 / 94	-	US
132.226.247.73	1 / 94	31898	BR
132.226.8.169	0 / 94	31898	JP
158.101.44.242	1 / 94	31898	US
162.88.193.70	0 / 94	-	US
185.217.94.124	0 / 94	204196	NL
192.229.211.108	0 / 94	15133	US
193.122.130.0	0 / 94	31898	US

Basic Properties Identified by VirusTotal

- File Type: Win32 EXE (.NET, VB.NET compiled, PE32 executable)
- Hashes:
 - MD5: e1618002c8700b4ae261b1e5aea00e42
 - SHA-1: 71a93b760fb4c0ee6201ea09a19b50fd46d0439f
 - SHA-256: 61f2d6fa249bfd74e59d8f6d50191c62490fc690f7fb035fe2133b4566b38a89
- Size: 236 KB
- Compilation Time: 2018-03-21
- .NET Version: v2.0.50727 (VB.NET)

Detection Results

The sample was flagged as malicious by a majority of antivirus engines. The most common detection names included:

- Trojan.GenericKD
- Trojan.MSIL/Androm
- Kryptik
- Injector.SM

Notable Vendor Classifications:

- Kaspersky: Backdoor.Win32.Androm
- BitDefender: Trojan.PWS.Agent.SUM
- Microsoft: VirTool:MSIL/Injector.SA!bit
- TrendMicro: TSPY_NEGASTEAL.SMH

Multiple vendors classified the sample as a backdoor, stealer, injector, or packed/obfuscated file.

Popular Threat Labels and Categories

- Trojan
- Backdoor
- MSIL (.NET)
- Kryptik/Androm family

Why This Is Correct and Useful

This approach is correct for several reasons:

- VirusTotal is an industry standard for malware identification and reputation analysis.
- Including vendor detection names helps clarify the likely capabilities and family associations of the sample.
- Cross-referencing automated intelligence with my manual static findings (such as packing evidence, .NET metadata, and code artifacts) provides a thorough and credible analysis.
- Using VirusTotal in this way is considered best practice in real-world malware analysis.

Note: Results from VirusTotal should always be interpreted and summarized, not copied in bulk without context. It's important to relate them to your own analysis steps and findings.

How I Integrated This Into the Project Structure

1. Introduction/Overview:
Brief description of the sample, hash, and basic details.
2. VirusTotal Scan and Vendor Detections:
(This section—copied above)
3. Static Analysis (Manual and Automated):
Description of findings from tools like PEStudio, BinText/strings, and Detect It Easy:
section entropy, .NET version, detected resources, suspicious strings, etc.
4. Indicators of Compromise (IOC) Table:

Type	Value	Source
Hash	61f2d6fa249bfd74e59d8f6d50191c62490fc690f7fb035fe2133b4566b38a89	VirusTotal
AV Name	Trojan.MSIL/Androm	VirusTotal
IP Address	(e.g.) 185.42.200.44	VT Relations
Registry Key	(e.g.) HKCU\Software\APPNAME	dnSpy analysis
Filename	(e.g.) C:\Users<User>\AppData\Local\Temp\tmp1234.tmp	VT/dnSpy

5. Conclusion:
Summary confirming that both vendor intelligence and static analysis agree on the malicious nature and family of the sample