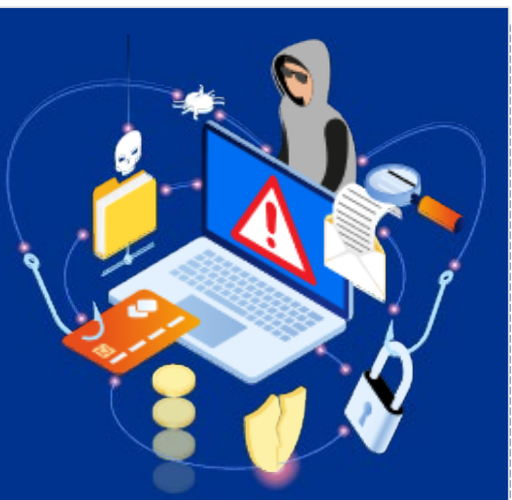
KPMG Cyber Threat Intelligence Platform

New FiveSys Rootkit – A Microsoft-Signed Malicious Kernel Driver



FiveSys, a Chinese cybersecurity threat that emerged in October 2021, abused Windows Hardware Quality Labs (WHQL) to obtain a valid digital signature, camouflaging it as a genuine Microsoft driver file. It is known to target victims in the Chinese gaming sector & focusses on proxying traffic through attacker-controlled proxy servers. Recently in 2023, a new rootkit with similarities to FiveSys surfaced, in terms of functionality, code similarity, infrastructure, and victimology. This new signed rootkit comes with expanded capabilities, allowing it to deploy any second stage unsigned driver that might be of interest to the attacker.

With few samples packed with VMProtect, the new rootkit comes as a generic standalone kernel driver signed directly by Microsoft. It disables User Account Control (UAC) and Secure Desktop Mode by modifying registry entries. It utilizes Winsock Kernel (WSK) for communication with C2. It uses DGA along with hardcoded fallback IP addresses to connect to C2 via TCP port 80. The second-stage driver payloads are fetched from the C2, decoded, decrypted and loaded directly into memory, bypassing Windows native driver loader to evade detection. Second-stage driver, then reads, encodes & writes the first stage driver, deleting the original file to remain undetected. Persistence is achieved through customized second-stage plug-ins that are deployed on victim's machine, some containing custom compiled drivers for each machine. During shutdown/reboot, the first-stage driver copies itself back to disc from memory. These plug-ins are used to disarm Microsoft Defender, deploy proxies on machine & redirect web browsing traffic to a remote server.

Increasing number of threats using legitimate digital signatures is becoming a challenge for defenders. Vigilant cybersecurity measures are vital to detect and counter the presence of such threats.

What should you do?

- Monitor Indicators of Compromise (IoCs) in your environment to identify anomalies.
- Ensure your Windows environment is patched to the brim and is protected with multi-factor authentication.
- Conduct a comprehensive, full spectrum, threat assessment exercise to uncover blind spots and improvement areas.

The KPMG Cyber Threat Intelligence Platform is an industry defining, research-based capability for enhanced visibility into cyber threats.

Our machine ingestible feeds and analysis are the result of automated, sensor-based intelligence metrics with dedicated, expert insights of each threat to provide you the appropriate context on a timely basis in industry standard formats such as STIX/TAXII/MISP.

These feeds are additionally co-related with our industry partners and independent research for additional context. The intelligence obtained is then curated from strategic, tactical and operational perspective to give you a wide-ranging view of cyber threats.

We also assist you with our renowned cyber incident response and threat hunting services in case you identify an active threat in your environment.

We offer a wide-range of services, including:
Strategic threat intelligence report
Machine ingestible threat intelligence feeds
Threat intelligence driven pre-emptive threat hunting exercise
Cyber Incident Response Services

Contact us:

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Indicators of Compromise: IP Addresses	
45.248.11[.]7	103.53.124[.]199
110.42.5[.]55	115.230.124[.]18
110.42.11[.]6	103.91.209[.]141
36.99.113[.]51	125.77.158[.]136
103.88.32[.]158	180.188.17[.]204
103.85.85[.]103	103.45.162[.]204
60.217.248[.]67	221.229.210[.]107
162.14.178[.]70	103.107.190[.]116

Indicators of Compromise: Domains	
68chuanqi[.]com	20mussw4c9pfhea.mpydj[.]xyz
gj2oydber4xfa6c[.]com	gdaszt6be.ady4111523[.]com
ywmmmm.bairimen[.]com	2afybptuag7bi94c.fodvtlyn[.]xyz
4cjhmtf.gg-mmfpz79[.]xyz	19gq0tjscglhzduwy8h.atqvx69f1[.]xyz
ybqjb6.ady4111523[.]com	1bwbosmlqqp3gf.vhld53sxiosqjm[.]xyz
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0dt7fmri.n7vzlm2tfdz4[.]xyz	08tayhl9pzog5l.7hgum3mdrp1y6h4unvp[.]xyz

Indicators of Compromise: Hashes
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41e64591ddb6030a11ac1fc338a15b23
3f295401fa59a32ff7a11551551ec607
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65c9a6cc173945a6e8b5efc8403d7fac
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9d41afbd7eb51de7a349cac5dbf4ec55

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