BlackCat Ransomware: Unleashing the Nitrogen Threat

TLP: Clear

KPMG. Make the Difference.



Emerging in November 2021, BlackCat (ALPHV/Noberus) is a rapidly evolving and persistent ransomware group that offer RaaS. Built in Rust it encrypts Windows, Linux, VMware ESXi, ReadyNAS, and Synology NAS devices, using advanced social engineering and malvertising like the "Nitrogen" campaign. BlackCat targets major industries, especially healthcare, across regions like the US, Australia, Canada, China, France, Germany, India, Italy, Japan, Romania, Spain, Taiwan, and the UK.

Users may download malware posing as "Advanced IP Scanner" via deceptive Google ads, initiating a "Nitrogen campaign" with a ZIP file containing a disguised executable that side-loads a modified "python311.dll" to trigger the Nitrogen code. Persistence is achieved via registry run keys and scheduled tasks, such as "OneDrive Security," which executes every five minutes. They use "Py-Fuscate" to obfuscate remote access tools like "Sliver" and "Cobalt Strike," using API unhooking and bypassing AMSI, WLDP, and ETW for evasion. Over eight days, attackers use tools like "PowerView" and "BloodHound" for extensive network mapping, identifying admins, computers, and AD trusts. They move laterally using "WMI," "RDP," and "Passthe-Hash," often leveraging dumped LSASS credentials. Sensitive data is exfiltrated using the open-source tool "Restic," which encrypts and transfers files to remote servers. Finally, BlackCat is deployed via SMB and PsExec, forcing systems to restart in "Safe Mode" with Networking, using a compromised account for auto-login to enable widespread file encryption. They deploy batch scripts to reset passwords, modify boot configurations, enable auto-login, delete shadow copies to hinder recovery, and leave ransom notes on compromised systems..

BlackCat's evolving ransomware tactics expose critical industries to severe data risks, stressing the necessity for continuous threat intelligence and strong encryption defenses.

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.

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

KPMG in India Cyber Response Hotline: 1800 2020 502

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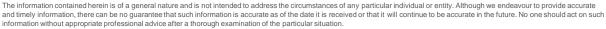












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Indicators of Compromise: IP Addresses	
5.199.168[.]24	94.156.67[.]180
91.92.242[.]55	94.156.67[.]185
141.98.6[.]195	194.180.48[.]42
193.42.33[.]14	91.92.240[.]194
194.49.94[.]18	91.92.241[.]117
194.49.94[.]21	91.92.242[.]182
194.49.94[.]22	91.92.245[.]174
91.92.242[.]39	91.92.247[.]123
91.92.245[.]26	91.92.247[.]127
91.92.250[.]60	91.92.249[.]110
91.92.250[.]65	91.92.250[.]148
91.92.250[.]66	91.92.250[.]158
91.92.254[.]193	91.92.251[.]240
94.156.67[.]175	185.73.124[.]238
94.156.67[.]188	194.180.48[.]165
91.92.245[.]175	195.123.226[.]84
91.92.240[.]175	194.169.175[.]134

Indicators of Compromise: Domains	
pcrendal[.]com	resources.docusong[.]com

Indicators of Compromise: Hashes

341d43d4d5c2e526cadd88ae8da70c1c

34aac5719824e5f13b80d6fe23cbfa07

eea9ab1f36394769d65909f6ae81834b

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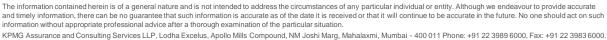












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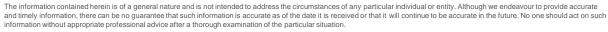












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