

NETMANAGEIT

Intelligence Report

CVE-2024-21412: DarkGate Operators Exploit Microsoft Windows SmartScreen Bypass in Zero-Day Campaign

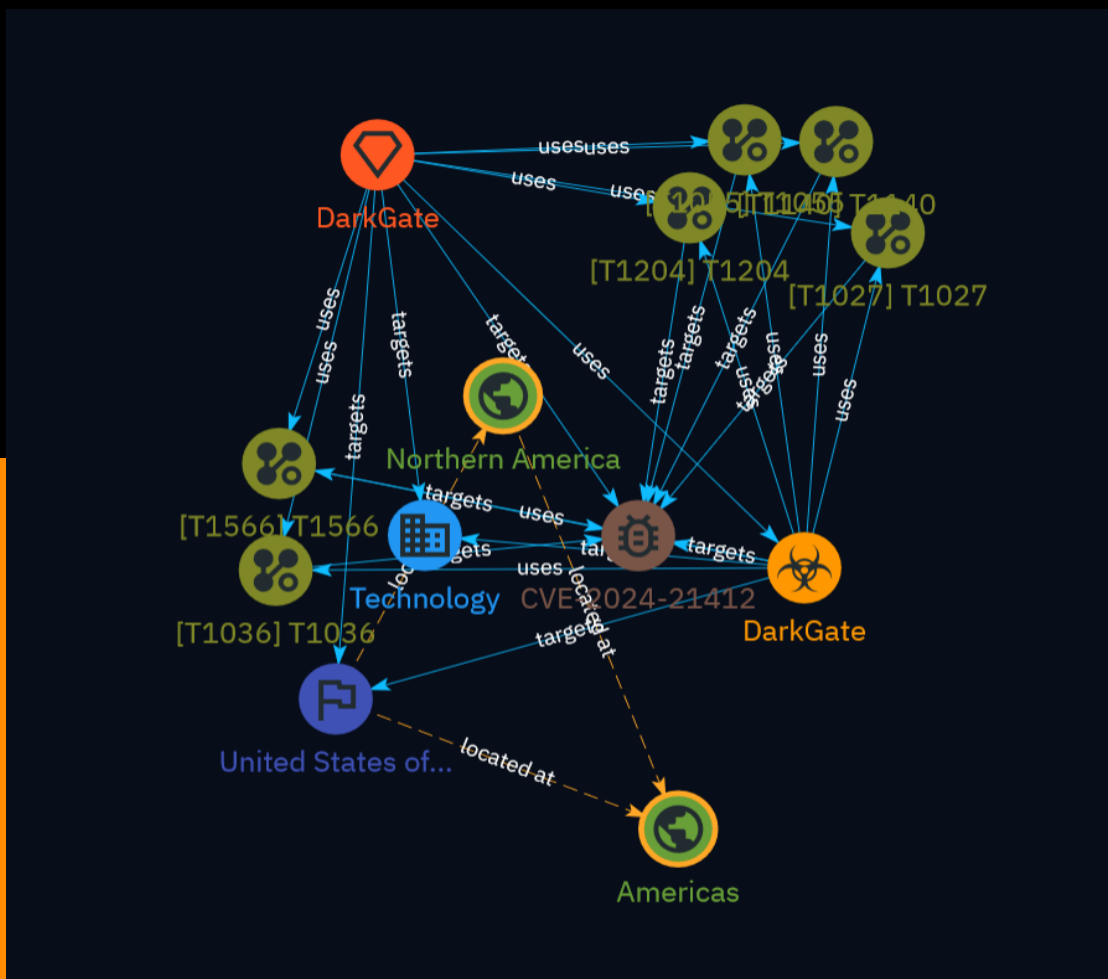


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Overview

Description

A recent DarkGate campaign exploited CVE-2024-21412, a Microsoft Windows SmartScreen bypass vulnerability, through phishing PDFs containing Google DoubleClick redirects that led victims to sites hosting the exploit and fake software installers to deploy the malware payload. The installers used DLL sideloading to execute the malware, which had multiple stages employing encryption and obfuscation to evade detection.

Confidence

This value represents the confidence in the correctness of the data contained within this report.

100 / 100

Content

N/A

Vulnerability

Name

CVE-2024-21412

Description

Microsoft Windows Internet Shortcut Files contains an unspecified vulnerability that allows for a security feature bypass.

Intrusion-Set

Name

DarkGate

Malware

Name

DarkGate

Attack-Pattern

Name
T1027
ID
T1027
Description

Adversaries may attempt to make an executable or file difficult to discover or analyze by encrypting, encoding, or otherwise obfuscating its contents on the system or in transit. This is common behavior that can be used across different platforms and the network to evade defenses. Payloads may be compressed, archived, or encrypted in order to avoid detection. These payloads may be used during Initial Access or later to mitigate detection. Sometimes a user's action may be required to open and [Deobfuscate/Decode Files or Information](<https://attack.mitre.org/techniques/T1140>) for [User Execution](<https://attack.mitre.org/techniques/T1204>). The user may also be required to input a password to open a password protected compressed/encrypted file that was provided by the adversary. (Citation: Volexity PowerDuke November 2016) Adversaries may also use compressed or archived scripts, such as JavaScript. Portions of files can also be encoded to hide the plain-text strings that would otherwise help defenders with discovery. (Citation: Linux/Cdorked.A We Live Security Analysis) Payloads may also be split into separate, seemingly benign files that only reveal malicious functionality when reassembled. (Citation: Carbon Black Obfuscation Sept 2016) Adversaries may also abuse [Command Obfuscation](<https://attack.mitre.org/techniques/T1027/010>) to obscure commands executed from payloads or directly via [Command and Scripting Interpreter](<https://attack.mitre.org/techniques/T1059>). Environment variables, aliases, characters, and other platform/language specific semantics can be used to evade signature based detections and application control mechanisms. (Citation: FireEye Obfuscation June 2017) (Citation: FireEye Revoke-Obfuscation July 2017)(Citation: PaloAlto EncodedCommand March 2017)

Name

T1566

ID

T1566

Description

Adversaries may send phishing messages to gain access to victim systems. All forms of phishing are electronically delivered social engineering. Phishing can be targeted, known as spearphishing. In spearphishing, a specific individual, company, or industry will be targeted by the adversary. More generally, adversaries can conduct non-targeted phishing, such as in mass malware spam campaigns. Adversaries may send victims emails containing malicious attachments or links, typically to execute malicious code on victim systems. Phishing may also be conducted via third-party services, like social media platforms. Phishing may also involve social engineering techniques, such as posing as a

trusted source, as well as evasive techniques such as removing or manipulating emails or metadata/headers from compromised accounts being abused to send messages (e.g., [Email Hiding Rules](https://attack.mitre.org/techniques/T1564/008)).(Citation: Microsoft OAuth Spam 2022)(Citation: Palo Alto Unit 42 VBA Infostealer 2014) Another way to accomplish this is by forging or spoofing(Citation: Proofpoint-spoof) the identity of the sender which can be used to fool both the human recipient as well as automated security tools.(Citation: cyberproof-double-bounce) Victims may also receive phishing messages that instruct them to call a phone number where they are directed to visit a malicious URL, download malware,(Citation: sygnia Luna Month)(Citation: CISA Remote Monitoring and Management Software) or install adversary-accessible remote management tools onto their computer (i.e., [User Execution](https://attack.mitre.org/techniques/T1204)).(Citation: Unit42 Luna Moth)

Name

T1204

ID

T1204

Description

An adversary may rely upon specific actions by a user in order to gain execution. Users may be subjected to social engineering to get them to execute malicious code by, for example, opening a malicious document file or link. These user actions will typically be observed as follow-on behavior from forms of [Phishing](https://attack.mitre.org/techniques/T1566). While [User Execution](https://attack.mitre.org/techniques/T1204) frequently occurs shortly after Initial Access it may occur at other phases of an intrusion, such as when an adversary places a file in a shared directory or on a user's desktop hoping that a user will click on it. This activity may also be seen shortly after [Internal Spearphishing](https://attack.mitre.org/techniques/T1534). Adversaries may also deceive users into performing actions such as enabling [Remote Access Software](https://attack.mitre.org/techniques/T1219), allowing direct control of the system to the adversary, or downloading and executing malware for [User Execution](https://attack.mitre.org/techniques/T1204). For example, tech support scams can be facilitated through [Phishing](https://attack.mitre.org/techniques/T1566), vishing, or various forms of user interaction. Adversaries can use a combination of these methods, such as spoofing and promoting toll-free numbers or call centers that are used to direct victims to malicious websites, to

deliver and execute payloads containing malware or [Remote Access Software](<https://attack.mitre.org/techniques/T1219>).(Citation: Telephone Attack Delivery)

Name

T1055

ID

T1055

Description

Adversaries may inject code into processes in order to evade process-based defenses as well as possibly elevate privileges. Process injection is a method of executing arbitrary code in the address space of a separate live process. Running code in the context of another process may allow access to the process's memory, system/network resources, and possibly elevated privileges. Execution via process injection may also evade detection from security products since the execution is masked under a legitimate process. There are many different ways to inject code into a process, many of which abuse legitimate functionalities. These implementations exist for every major OS but are typically platform specific. More sophisticated samples may perform multiple process injections to segment modules and further evade detection, utilizing named pipes or other inter-process communication (IPC) mechanisms as a communication channel.

Name

T1036

ID

T1036

Description

Adversaries may attempt to manipulate features of their artifacts to make them appear legitimate or benign to users and/or security tools. Masquerading occurs when the name or location of an object, legitimate or malicious, is manipulated or abused for the sake of

evading defenses and observation. This may include manipulating file metadata, tricking users into misidentifying the file type, and giving legitimate task or service names. Renaming abusible system utilities to evade security monitoring is also a form of [Masquerading](<https://attack.mitre.org/techniques/T1036>). (Citation: LOLBAS Main Site) Masquerading may also include the use of [Proxy](<https://attack.mitre.org/techniques/T1090>) or VPNs to disguise IP addresses, which can allow adversaries to blend in with normal network traffic and bypass conditional access policies or anti-abuse protections.

Name

T1140

ID

T1140

Description

Adversaries may use [Obfuscated Files or Information](<https://attack.mitre.org/techniques/T1027>) to hide artifacts of an intrusion from analysis. They may require separate mechanisms to decode or deobfuscate that information depending on how they intend to use it. Methods for doing that include built-in functionality of malware or by using utilities present on the system. One such example is the use of [certutil](<https://attack.mitre.org/software/S0160>) to decode a remote access tool portable executable file that has been hidden inside a certificate file. (Citation: Malwarebytes Targeted Attack against Saudi Arabia) Another example is using the Windows `copy /b`` command to reassemble binary fragments into a malicious payload. (Citation: Carbon Black Obfuscation Sept 2016) Sometimes a user's action may be required to open it for deobfuscation or decryption as part of [User Execution](<https://attack.mitre.org/techniques/T1204>). The user may also be required to input a password to open a password protected compressed/encrypted file that was provided by the adversary. (Citation: Volexity PowerDuke November 2016)

Country

Name

United States of America

Region

Name

Northern America

Name

Americas

Sector

Name

Technology

Description

Private entities related to the research, development, manufacturing and distribution of electronics, softwares, computers and products related to information technologies.

External References

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- https://www.trendmicro.com/en_us/research/24/c/cve-2024-21412--darkgate-operators-exploit-microsoft-windows-sma.html
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- <https://otx.alienvault.com/pulse/65f3218a873a7f237e5bc3b5>