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Threat Level

Red

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THREAT ADVISORY

VULNERABILITY REPORT

APT-C-60's 1-Click WPS Office Exploit

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Summary

First Seen: February 2024
Affected Product: WPS Office for Windows
Threat Actor: APT-C-60 (aka False Hunter, Pseudo Hunter)
Malware: SpyGlace Backdoor
Targeted Countries: China, Hong Kong, Macau, Japan, Mongolia, North Korea, South Korea, Taiwan
Impact: The South Korea-linked cyberespionage group APT-C-60 has been actively targeting East Asian organizations by exploiting a zero-day vulnerability, CVE-2024-7262, in the Windows version of WPS Office. This sophisticated attack leverages the CVE-2024-7262 flaw to deliver the SpyGlace backdoor through phishing emails. Additionally, a related security flaw, CVE-2024-7263, surfaced due to an incomplete patch addressing the initial vulnerability, leaving WPS Office users vulnerable to arbitrary code execution.

CVEs

CVE	NAME	AFFECTED PRODUCT	ZERO-DAY	CISA KEV	PATCH
CVE-2024-7262	Kingsoft WPS Office Path Traversal Vulnerability	Kingsoft WPS Office for Windows	✓	✓	✓
CVE-2024-7263	WPS Office Remote Code Execution Vulnerability	Kingsoft WPS Office for Windows	✓	✗	✓

Vulnerability Details

#1 The South Korean cyberespionage group APT-C-60, also known as False Hunter or Pseudo Hunter, has exploited a zero-day vulnerability in the Windows version of WPS Office, identified as CVE-2024-7262, to deploy the SpyGlace backdoor on East Asian targets.

#2 This vulnerability, CVE-2024-7262, originates from inadequate validation of user-supplied file paths, particularly the 'ksoqing://' protocol, which permits the execution of external applications via specially crafted URLs within documents. This flaw enables adversaries to upload arbitrary Windows libraries and achieve remote code execution.

#3 APT-C-60 weaponized this vulnerability into a one-click exploit disguised as booby-trapped MHTML spreadsheet documents. These documents contain malicious hyperlinks concealed beneath a decoy image, designed to trick victims into activating the exploit.

#4 Upon execution, the processed URL parameters include a base64-encoded command that directs the execution of a specific plugin, promecefpluginhost.exe, which then attempts to load a malicious DLL containing the attacker's code. This DLL serves as APT-C-60's downloader, responsible for retrieving the final payload, the custom SpyGlace backdoor, from the attacker's server.

#5 The group distributed these malicious documents through phishing emails related to China-ROK relations, leveraging the zero-day vulnerability to trigger the payload. Although CVE-2024-7262 was quietly patched, the fix only addressed part of the faulty code, leaving other exploitable elements intact. Additionally, a second vulnerability, CVE-2024-7263, was identified, allowing arbitrary code execution by hijacking the control flow of the WPS Office plugin component, promecefpluginhost.exe.

Vulnerability

CVE ID	AFFECTED PRODUCTS	AFFECTED CPE	CWE ID
CVE-2024-7262	Kingsoft WPS Office version from 12.2.0.13110 to 12.1.0.16412	cpe:2.3:a:kingsoft:wps_office:*:*:*:*:*:*:*:*	CWE-22
CVE-2024-7263	Kingsoft WPS Office version 12.2.0.13110 to 12.2.0.17115 (exclusive)	cpe:2.3:a:kingsoft:wps_office:*:*:*:*:*:*:*:*	CWE-22

Recommendations

Immediate Software Update: Upgrade to the latest version of WPS Office for Windows. The patch in version 12.1.0.17119 was insufficient; ensure you are using the most recent release to mitigate CVE-2024-7262 effectively. The initial patch did not fully address the vulnerability, leaving systems exposed. Regular updates are crucial to maintaining security.

Enhanced Email Filtering: Deploy advanced email filtering solutions to detect and block phishing emails that may contain malicious WPS Office documents. Phishing is a common vector for delivering exploits. Effective filtering can reduce the risk of initial infection.

Review and Harden Patch Management Procedures: Ensure your patch management process includes verification steps to confirm the completeness and effectiveness of patches. Incomplete or ineffective patches can leave systems vulnerable, as seen with the initial CVE-2024-7262 patch.

Regularly Review and Update Dependencies: Monitor and update any third-party integrations or dependencies used with the WPS Office. Ensure that these components are also kept up-to-date with security patches to avoid potential vulnerabilities.

Potential MITRE ATT&CK TTPs

TA0042 Resource Development	**TA0001** Initial Access	**TA0002** Execution	**TA0003** Persistence
TA0005 Defense Evasion	**TA0007** Discovery	**TA0040** Impact	**T1203** Exploitation for Client Execution
T1583 Acquire Infrastructure	**T1583.001** Domains	**T1583.004** Server	**T1608** Stage Capabilities
T1608.001 Upload Malware	**T1587** Develop Capabilities	**T1587.004** Exploits	**T1204.001** Malicious Link
T1566 Phishing	**T1566.001** Spearphishing Attachment	**T1204** User Execution	**T1204.002** Malicious File
T1027 Obfuscated Files or Information	**T1010** Application Window Discovery	**T1574** Hijack Execution Flow	**T1041** Exfiltration Over C2 Channel

Indicators of Compromise (IOCs)

TYPE	VALUE
MD5	914cbe6372d5b7c93addc4feb5e964cd
SHA1	7509b4c506c01627c1a4c396161d07277f044ac6, 08906644b0ef1ee6478c45a6e0dd28533a9efc29
File Name	input.htm, WPS_TEST_DLL.dll
Domain	rammenale[.]com
IPv4	162[.]222[.]214[.]48, 131[.]153[.]206[.]231

Patch Details

The patch included in version 12.1.0.17119 to address CVE-2024-7262 was found to be insufficiently restrictive. To ensure comprehensive protection, WPS Office for Windows users are strongly advised to upgrade to the latest software release.

Link:
https://www.wps.com/download/

References

https://www.welivesecurity.com/en/eset-research/analysis-of-two-arbitrary-code-execution-vulnerabilities-affecting-wps-office/

https://mp.weixin.qq.com/s/F8hNyESBdKhwXkQPgtGpew

https://www.wps.com/whatsnew/pc/20240422/

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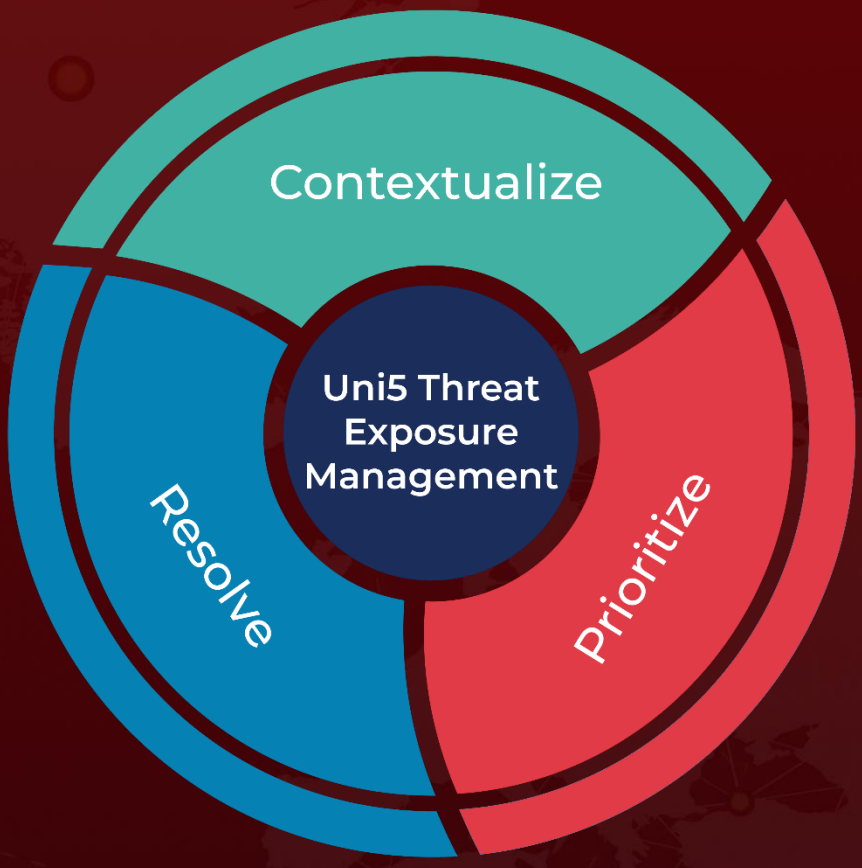

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