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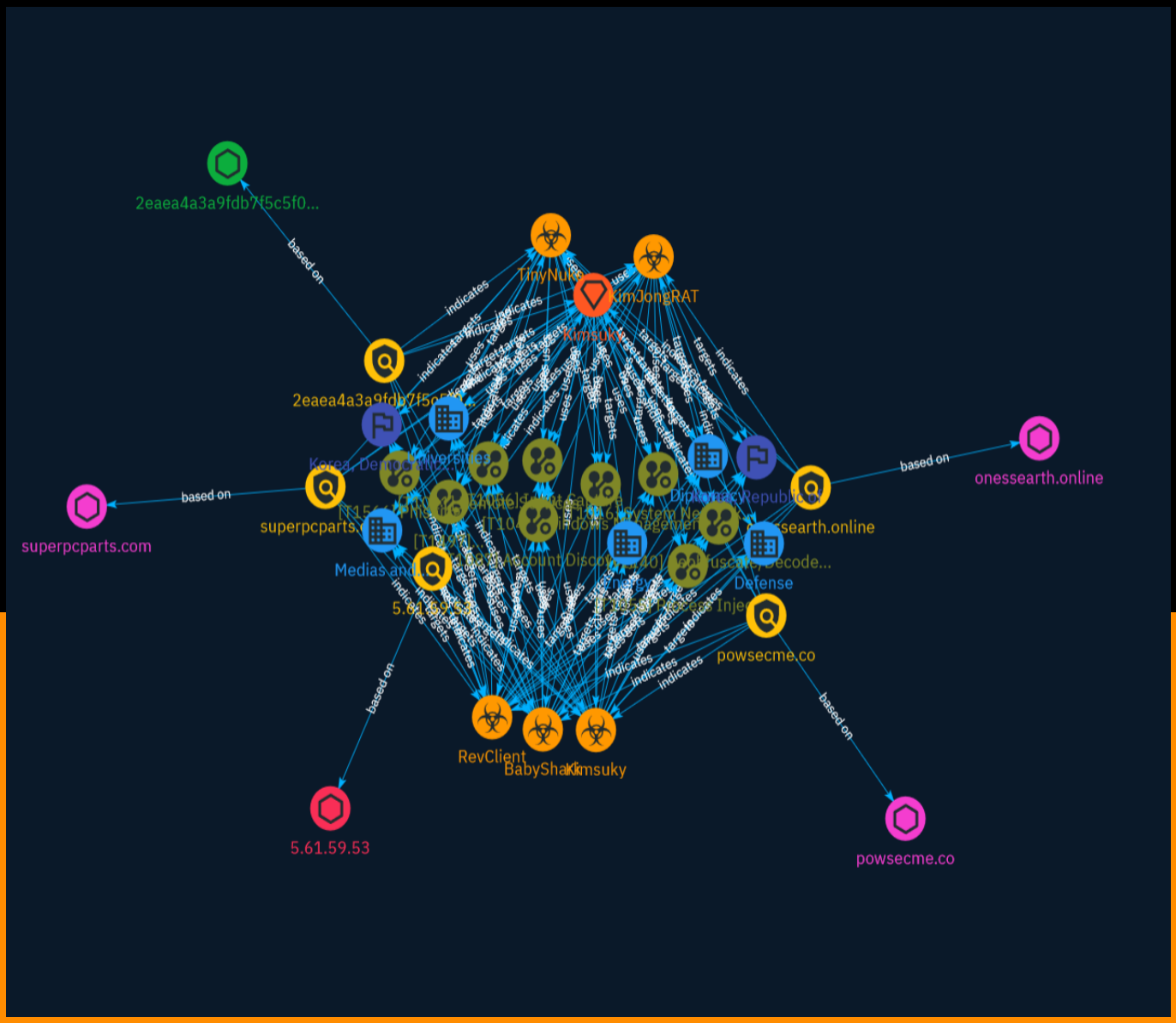
NETMANAGEIT

Intelligence Report

Kimsuky Threat Group Uses RDP to Control Infected Systems



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Overview

Description

A new strain of Kimsuky malware has been discovered in a series of cases where the malware is used to control and exfiltrate sensitive information from infected systems, according to ASEC.

Confidence

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

15 / 100

Content

N/A

Attack-Pattern

Name

Windows Management Instrumentation

ID

T1047

Description

Adversaries may abuse Windows Management Instrumentation (WMI) to execute malicious commands and payloads. WMI is an administration feature that provides a uniform environment to access Windows system components. The WMI service enables both local and remote access, though the latter is facilitated by [Remote Services](https://attack.mitre.org/techniques/T1021) such as [Distributed Component Object Model](https://attack.mitre.org/techniques/T1021/003) (DCOM) and [Windows Remote Management](https://attack.mitre.org/techniques/T1021/006) (WinRM).(Citation: MSDN WMI) Remote WMI over DCOM operates using port 135, whereas WMI over WinRM operates over port 5985 when using HTTP and 5986 for HTTPS.(Citation: MSDN WMI)(Citation: FireEye WMI 2015) An adversary can use WMI to interact with local and remote systems and use it as a means to execute various behaviors, such as gathering information for Discovery as well as remote Execution of files as part of Lateral Movement. (Citation: FireEye WMI SANS 2015) (Citation: FireEye WMI 2015)

Name

Virtualization/Sandbox Evasion

ID

T1497

Description

Adversaries may employ various means to detect and avoid virtualization and analysis environments. This may include changing behaviors based on the results of checks for the presence of artifacts indicative of a virtual machine environment (VME) or sandbox. If the adversary detects a VME, they may alter their malware to disengage from the victim or conceal the core functions of the implant. They may also search for VME artifacts before dropping secondary or additional payloads. Adversaries may use the information learned from [Virtualization/Sandbox Evasion](https://attack.mitre.org/techniques/T1497) during automated discovery to shape follow-on behaviors.(Citation: Deloitte Environment Awareness) Adversaries may use several methods to accomplish [Virtualization/Sandbox Evasion](https://attack.mitre.org/techniques/T1497) such as checking for security monitoring tools (e.g., Sysinternals, Wireshark, etc.) or other system artifacts associated with analysis or virtualization. Adversaries may also check for legitimate user activity to help determine if it is in an analysis environment. Additional methods include use of sleep timers or loops within malware code to avoid operating within a temporary sandbox. (Citation: Unit 42 Pirpi July 2015)

Name

Input Capture

ID

T1056

Description

Adversaries may use methods of capturing user input to obtain credentials or collect information. During normal system usage, users often provide credentials to various different locations, such as login pages/portals or system dialog boxes. Input capture mechanisms may be transparent to the user (e.g. [Credential API Hooking](https://attack.mitre.org/techniques/T1056/004)) or rely on deceiving the user into providing input into what they believe to be a genuine service (e.g. [Web Portal Capture](https://attack.mitre.org/techniques/T1056/003)).

Name

Process Injection

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

Phishing

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

System Network Configuration Discovery

ID

T1016

Description

Adversaries may look for details about the network configuration and settings, such as IP and/or MAC addresses, of systems they access or through information discovery of remote systems. Several operating system administration utilities exist that can be used to gather this information. Examples include [Arp](https://attack.mitre.org/software/S0099), [ipconfig](https://attack.mitre.org/software/S0100)/[ifconfig](https://attack.mitre.org/software/S0101), [nbtstat](https://attack.mitre.org/software/S0102), and [route](https://attack.mitre.org/software/S0103). Adversaries may also leverage a [Network Device CLI](https://attack.mitre.org/techniques/T1059/008) on network devices to gather information about configurations and settings, such as IP addresses of configured interfaces and static/dynamic routes (e.g. `show ip route`, `show ip interface`).(Citation: US-CERT-TA18-106A)(Citation: Mandiant APT41 Global Intrusion) Adversaries may use the information from [System Network Configuration Discovery](https://attack.mitre.org/techniques/T1016) during automated discovery to shape follow-on behaviors, including determining certain access within the target network and what actions to do next.

Name

Account Discovery

ID

T1087

Description

Adversaries may attempt to get a listing of valid accounts, usernames, or email addresses on a system or within a compromised environment. This information can help adversaries determine which accounts exist, which can aid in follow-on behavior such as brute-forcing, spear-phishing attacks, or account takeovers (e.g., [Valid Accounts](https://attack.mitre.org/techniques/T1078)). Adversaries may use several methods to enumerate accounts, including abuse of existing tools, built-in commands, and potential misconfigurations that leak account names and roles or permissions in the targeted environment. For examples, cloud environments typically provide easily accessible interfaces to obtain user lists. On hosts, adversaries can use default [PowerShell](https://attack.mitre.org/techniques/T1059/001) and other command line functionality to identify accounts. Information about email addresses and accounts may also be extracted by searching an infected system's files.

Name

Remote Services

ID

T1021

Description

Adversaries may use [Valid Accounts](https://attack.mitre.org/techniques/T1078) to log into a service that accepts remote connections, such as telnet, SSH, and VNC. The adversary may then perform actions as the logged-on user. In an enterprise environment, servers and workstations can be organized into domains. Domains provide centralized identity management, allowing users to login using one set of credentials across the entire

network. If an adversary is able to obtain a set of valid domain credentials, they could login to many different machines using remote access protocols such as secure shell (SSH) or remote desktop protocol (RDP).(Citation: SSH Secure Shell)(Citation: TechNet Remote Desktop Services) They could also login to accessible SaaS or IaaS services, such as those that federate their identities to the domain. Legitimate applications (such as [Software Deployment Tools](https://attack.mitre.org/techniques/T1072) and other administrative programs) may utilize [Remote Services](https://attack.mitre.org/techniques/T1021) to access remote hosts. For example, Apple Remote Desktop (ARD) on macOS is native software used for remote management. ARD leverages a blend of protocols, including [VNC](https://attack.mitre.org/techniques/T1021/005) to send the screen and control buffers and [SSH](https://attack.mitre.org/techniques/T1021/004) for secure file transfer. (Citation: Remote Management MDM macOS)(Citation: Kickstart Apple Remote Desktop commands)(Citation: Apple Remote Desktop Admin Guide 3.3) Adversaries can abuse applications such as ARD to gain remote code execution and perform lateral movement. In versions of macOS prior to 10.14, an adversary can escalate an SSH session to an ARD session which enables an adversary to accept TCC (Transparency, Consent, and Control) prompts without user interaction and gain access to data.(Citation: FireEye 2019 Apple Remote Desktop)(Citation: Lockboxx ARD 2019)(Citation: Kickstart Apple Remote Desktop commands)

Name

Deobfuscate/Decode Files or Information

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)

Sector

Name
Diplomacy
Description
Public or private entities which are actors of or involved in international relations activities.
Name
Energy
Description
Public and private entities operating to extract, store, transport and process fuel, entities managing energy plants and energy storage and distribution and entities managing fuel waste.
Name
Universities
Description
Public and private institutions for higher education.

Name
Defense
Description
Public and private entities involved in the conception and production of weapons and the planning and conducting of military operations.
Name
Medias and audiovisual
Description
Communication outlets used to deliver information by print, broadcast or Internet and people working in these outlets.

Indicator

Name
2eaea4a3a9fdb7f5c5f00a8ddefde8d343ea0036047c4fff75290f1cff89efa5
Description
ConventionEngine_Keyword_UAC SHA256 of 7313dc4d9d6228e442fc6ef9ba5a1b9a
Pattern Type
stix
Pattern
[file:hashes.'SHA-256' = '2eaea4a3a9fdb7f5c5f00a8ddefde8d343ea0036047c4fff75290f1cff89efa5']
Name
powsecme.co
Pattern Type
stix
Pattern

[domain-name:value = 'powsecme.co']

Name

superpcparts.com

Pattern Type

stix

Pattern

[domain-name:value = 'superpcparts.com']

Name

onessearth.online

Pattern Type

stix

Pattern

[domain-name:value = 'onessearth.online']

Name

5.61.59.53

Description

CC=NL ASN=AS58061 Scalaxy B.V.

Pattern Type

stix
Pattern
[ipv4-addr:value = '5.61.59.53']

Intrusion-Set

Name

Kimsuky

Description

[Kimsuky](https://attack.mitre.org/groups/G0094) is a North Korea-based cyber espionage group that has been active since at least 2012. The group initially focused on targeting South Korean government entities, think tanks, and individuals identified as experts in various fields, and expanded its operations to include the United States, Russia, Europe, and the UN. [Kimsuky](https://attack.mitre.org/groups/G0094) has focused its intelligence collection activities on foreign policy and national security issues related to the Korean peninsula, nuclear policy, and sanctions.(Citation: EST Kimsuky April 2019)(Citation: BRI Kimsuky April 2019)(Citation: Cybereason Kimsuky November 2020)(Citation: Malwarebytes Kimsuky June 2021)(Citation: CISA AA20-301A Kimsuky) [Kimsuky](https://attack.mitre.org/groups/G0094) was assessed to be responsible for the 2014 Korea Hydro & Nuclear Power Co. compromise; other notable campaigns include Operation STOLEN PENCIL (2018), Operation Kabar Cobra (2019), and Operation Smoke Screen (2019).(Citation: Netscout Stolen Pencil Dec 2018)(Citation: EST Kimsuky SmokeScreen April 2019)(Citation: AhnLab Kimsuky Kabar Cobra Feb 2019) North Korean group definitions are known to have significant overlap, and some security researchers report all North Korean state-sponsored cyber activity under the name [Lazarus Group](https://attack.mitre.org/groups/G0032) instead of tracking clusters or subgroups.

Country

Name
Korea, Democratic People's Republic of
Name
Korea, Republic of

Malware

Name
BabyShark
Description
[BabyShark](https://attack.mitre.org/software/S0414) is a Microsoft Visual Basic (VB) script-based malware family that is believed to be associated with several North Korean campaigns. (Citation: Unit42 BabyShark Feb 2019)
Name
TinyNuke
Name
Kimsuky
Name
RevClient
Name
KimJongRAT

Domain-Name

Value
onessearth.online
powsecme.co
superpcparts.com

StixFile

Value
2eaea4a3a9fdb7f5c5f00a8ddefde8d343ea0036047c4fff75290f1cff89efa5

IPv4-Addr

Value
5.61.59.53

External References

- https://otx.alienvault.com/pulse/65312ede507158b7c49f8e87
- https://asec.ahnlab.com/en/57873/