Mar 19 2024

NETMANAGEIT

Intelligence Report

CryptoWire with Decryption Key Included

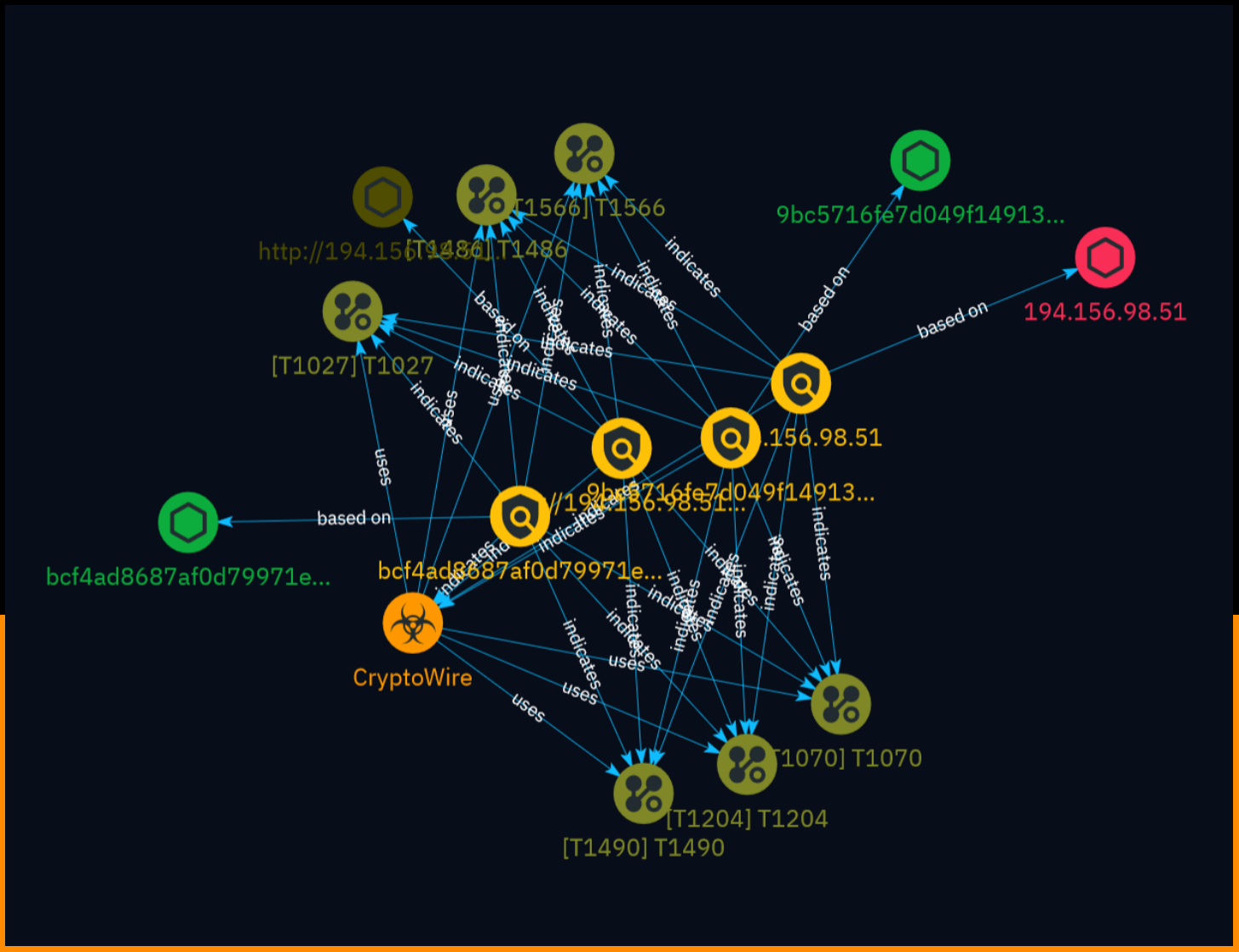

Table of contents

Overview

Entities

Observables

External References

Overview

Description

A recent analysis discovered the distribution of CryptoWire ransomware, which was prevalent in 2018. The malware spreads via phishing emails and uses Autoit scripting. It maintains persistence by registering a scheduled task. The malware explores local and network drives to expand encryption. It deletes shadow copies to prevent recovery. Encrypted files use the extension .encrypted. Decryption keys are included in some variants, while others send the key to a command server. Users should update antivirus software and avoid opening suspicious files.

Confidence

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

100 / 100

Content

N/A

Indicator

Name

http://194.156.98.51/bot/log.php

Description

- **Unsafe:** False - **Server:** - **Domain Rank:** 0 - **DNS Valid:** False - **Parking:** True - **Spamming:** False - **Malware:** False - **Phishing:** False - **Suspicious:** True - **Adult:** False - **Category:** N/A - **Domain Age:** {'human': 'N/A', 'timestamp': None, 'iso': None} - **IPQS: Domain:** 194.156.98.51 - **IPQS: IP Address:** N/A

Pattern Type

stix

Pattern

[url:value = 'http://194.156.98.51/bot/log.php']

Name

bcf4ad8687af0d79971e5f73ab152b7732bf3540726f71654da87f36e54cff6f

Pattern Type

stix

Pattern

[file:hashes.'SHA-256' = 'bcf4ad8687af0d79971e5f73ab152b7732bf3540726f71654da87f36e54cff6f']

Name

194.156.98.51

Description

- **Zip Code:** N/A - **ISP:** STARK INDUSTRIES SOLUTIONS LTD - **ASN:** 44477 - **Organization:** Stark Industries Solutions - **Is Crawler:** False - **Timezone:** Asia/Hong_Kong - **Mobile:** False - **Host:** vm1867589.stark-industries.solutions - **Proxy:** True - **VPN:** True - **TOR:** False - **Active VPN:** False - **Active TOR:** False - **Recent Abuse:** True - **Bot Status:** False - **Connection Type:** Premium required. - **Abuse Velocity:** Premium required. - **Country Code:** HK - **Region:** Central and Western District - **City:** Hong Kong - **Latitude:** 22.28420067 - **Longitude:** 114.17590332

Pattern Type

stix

Pattern

[ipv4-addr:value = '194.156.98.51']

Name

9bc5716fe7d049f1491341ed22dfd354b2070146248a06ca66f871179d0ef50f

Pattern Type

stix

Pattern

[file:hashes.'SHA-256' = '9bc5716fe7d049f1491341ed22dfd354b2070146248a06ca66f871179d0ef50f']

Malware

Name
CryptoWire

Attack-Pattern

Name
T1490
ID
T1490
Description
Adversaries may delete or remove built-in data and turn off services designed to aid in the recovery of a corrupted system to prevent recovery.(Citation: Talos Olympic Destroyer 2018) (Citation: FireEye WannaCry 2017) This may deny access to available backups and recovery options. Operating systems may contain features that can help fix corrupted systems, such as a backup catalog, volume shadow copies, and automatic repair features. Adversaries may disable or delete system recovery features to augment the effects of [Data Destruction](https://attack.mitre.org/techniques/T1485) and [Data Encrypted for Impact] (https://attack.mitre.org/techniques/T1486).(Citation: Talos Olympic Destroyer 2018) (Citation: FireEye WannaCry 2017) Furthermore, adversaries may disable recovery notifications, then corrupt backups.(Citation: disable_notif_synology_ransom) A number of native Windows utilities have been used by adversaries to disable or delete system recovery features: * `vssadmin.exe` can be used to delete all volume shadow copies on a system - `vssadmin.exe delete shadows /all /quiet` * [Windows Management Instrumentation](https://attack.mitre.org/techniques/T1047) can be used to delete volume shadow copies - `wmic shadowcopy delete` * `wbadmin.exe` can be used to delete the Windows Backup Catalog - `wbadmin.exe delete catalog -quiet` * `bcdedit.exe` can be used to disable automatic Windows recovery features by modifying boot configuration data - `bcdedit.exe /set {default} bootstatuspolicy ignoreallfailures & bcdedit /set {default} recoveryenabled no` * `REAgentC.exe` can be used to disable Windows Recovery Environment (WinRE) repair/recovery options of an infected system On network devices, adversaries may leverage [Disk Wipe](https://attack.mitre.org/techniques/T1561) to delete

backup firmware images and reformat the file system, then [System Shutdown/Reboot](https://attack.mitre.org/techniques/T1529) to reload the device. Together this activity may leave network devices completely inoperable and inhibit recovery operations. Adversaries may also delete “online” backups that are connected to their network – whether via network storage media or through folders that sync to cloud services.(Citation: ZDNet Ransomware Backups 2020) In cloud environments, adversaries may disable versioning and backup policies and delete snapshots, machine images, and prior versions of objects designed to be used in disaster recovery scenarios.(Citation: Dark Reading Code Spaces Cyber Attack)(Citation: Rhino Security Labs AWS S3 Ransomware)

Name

T1486

ID

T1486

Description

Adversaries may encrypt data on target systems or on large numbers of systems in a network to interrupt availability to system and network resources. They can attempt to render stored data inaccessible by encrypting files or data on local and remote drives and withholding access to a decryption key. This may be done in order to extract monetary compensation from a victim in exchange for decryption or a decryption key (ransomware) or to render data permanently inaccessible in cases where the key is not saved or transmitted.(Citation: US-CERT Ransomware 2016)(Citation: FireEye WannaCry 2017)(Citation: US-CERT NotPetya 2017)(Citation: US-CERT SamSam 2018) In the case of ransomware, it is typical that common user files like Office documents, PDFs, images, videos, audio, text, and source code files will be encrypted (and often renamed and/or tagged with specific file markers). Adversaries may need to first employ other behaviors, such as [File and Directory Permissions Modification](https://attack.mitre.org/techniques/T1222) or [System Shutdown/Reboot](https://attack.mitre.org/techniques/T1529), in order to unlock and/or gain access to manipulate these files.(Citation: CarbonBlack Conti July 2020) In some cases, adversaries may encrypt critical system files, disk partitions, and the MBR.(Citation: US-CERT NotPetya 2017) To maximize impact on the target organization, malware designed for encrypting data may have worm-like features to propagate across a network by leveraging other attack techniques like [Valid Accounts](https://attack.mitre.org/techniques/T1078), [OS Credential Dumping](https://attack.mitre.org/techniques/T1003), and [SMB/Windows Admin Shares](https://attack.mitre.org/techniques/T1021/002).(Citation: FireEye WannaCry 2017)(Citation: US-CERT NotPetya 2017) Encryption malware may also leverage [Internal

Defacement](https://attack.mitre.org/techniques/T1491/001), such as changing victim wallpapers, or otherwise intimidate victims by sending ransom notes or other messages to connected printers (known as "print bombing").(Citation: NHS Digital Egregor Nov 2020) In cloud environments, storage objects within compromised accounts may also be encrypted. (Citation: Rhino S3 Ransomware Part 1)

Name

T1070

ID

T1070

Description

Adversaries may delete or modify artifacts generated within systems to remove evidence of their presence or hinder defenses. Various artifacts may be created by an adversary or something that can be attributed to an adversary's actions. Typically these artifacts are used as defensive indicators related to monitored events, such as strings from downloaded files, logs that are generated from user actions, and other data analyzed by defenders. Location, format, and type of artifact (such as command or login history) are often specific to each platform. Removal of these indicators may interfere with event collection, reporting, or other processes used to detect intrusion activity. This may compromise the integrity of security solutions by causing notable events to go unreported. This activity may also impede forensic analysis and incident response, due to lack of sufficient data to determine what occurred.

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)

StixFile

Value
bcf4ad8687af0d79971e5f73ab152b7732bf3540726f71654da87f36e54cff6f
9bc5716fe7d049f1491341ed22dfd354b2070146248a06ca66f871179d0ef50f

Url

Value
http://194.156.98.51/bot/log.php

IPv4-Addr

Value
194.156.98.51

External References

- https://asec.ahnlab.com/en/63200/
- https://otx.alienvault.com/pulse/65f98d9b7e692f9526d6e8a8