

MegaCortex Ransomware Spotted Attacking Enterprise Networks

- Wiadomości bezpieczeństwa

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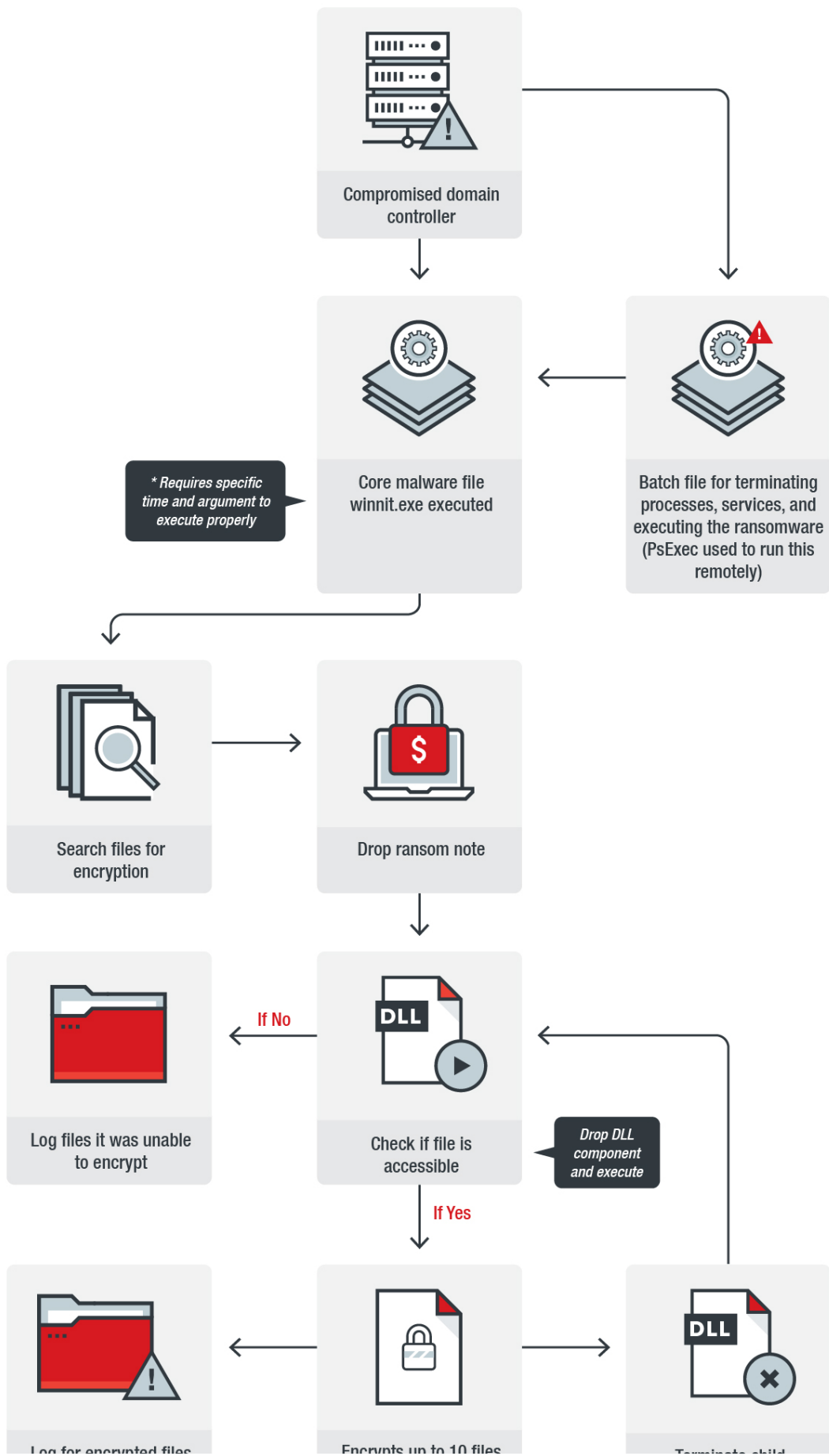


A new ransomware called MegaCortex (Trend Micro detects this as RANSOM.WIN32.CORTEX.SM) has been [reportedly deployed open on a new tab](#) against large corporate networks and workstations in the United States, Canada and parts of Europe. Cybersecurity firm [Sophos open on a new tab](#) first reported a sharp spike in MegaCortex activity last Friday noting that 47 attacks were stopped within 48 hours, which is two-thirds of all known incidents involving this ransomware. This recent surge isn't the earliest encounter with the ransomware — the first known sample was uploaded on January in the public sharing site VirusTotal.

How MegaCortex works

At least one victim reported that the attack originated from compromised domain controllers inside the enterprise network, but it isn't clear how the ransomware distributors gained access to the networks.

After gaining access to the domain controller, the attackers configured it to distribute a batch file, a renamed PsExec, and *winnit.exe*, which is one of the main executables of the malware, to the rest of the computers on the network. After this step, they run the batch file remotely. This file will terminate Windows processes as well as stop and disable services that will interfere with the ransomware's routines.



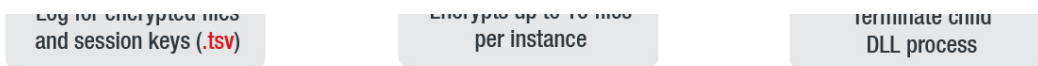


Figure 1. Infection chain of MegaCortex

The batch file then executes *winnit.exe*, the core malware file, during a specific time frame and with specific Base64 argument. If executed properly, the malware will search files for encryption and drop a ransom note. It will also extract a randomly-named DLL and execute it with *rundll32.exe*. This DLL is the component that will encrypt the computer's files. It will first check if the file is accessible. If not, it will simply log the files. If it is accessible, the file will be encrypted, the child DLL process will be terminated after a set number of file encryption attempts, and the cycle will start again.

When encrypting the victim's files, the ransomware will append the extension *.aes128ctr*. According to Sophos, the ransomware will also generate a file with a *.tsv* extension and drop it in the hard drive. The MegaCortex actors' ransom note instructs the users to submit this file to them because it contains encrypted session keys needed for decryption. The ransom note itself is a *.txt* file that doesn't ask for the usual cryptocurrency payment, instead it demands that victims buy the actor's software.

In addition to the main payload, the malware also [drops secondary components open on a new tab](#) that security researchers have identified as the Rietspoof malware, a delivery system used to drop multiple payloads onto a device.

Defending against ransomware

Users and businesses are recommended to adopt [best practices open on a new tab](#) to defend against ransomware: [Regularly back up files open on a new tab](#), keep the system and applications [updated open on a new tab](#), enforce the [principle of least privilege open on a new tab](#), and implement defense in depth — arraying security at each layer of a company's online perimeters, from [gateways open on a new tab](#), [networks open on a new tab](#), [endpoints open on a new tab](#), and [servers open on a new tab](#).

Trend Micro Ransomware Solutions

Enterprises can benefit from a multilayered approach to best mitigate the risks brought by ransomware. At the endpoint level, [Trend Micro Smart Protection Suites](#) deliver several capabilities like high-fidelity machine learning, behavior monitoring and application control, and vulnerability shielding that minimize the impact of this threat. [Trend Micro Deep Discovery Inspector](#) detects and blocks ransomware on networks, while [Trend Micro™ Deep Security™](#) stops ransomware from reaching enterprise servers — whether physical, virtual, or in the cloud. [Trend Micro™ Deep Security™](#), [Vulnerability Protection](#), and TippingPoint provide [virtual patching](#) that protects endpoints from threats that exploit unpatched vulnerabilities to deliver ransomware.

Email and web gateway solutions such as [Trend Micro™ Deep Discovery™ Email Inspector](#) and [InterScan™ Web Security](#) prevent ransomware from ever reaching end users. Trend Micro's [Cloud App Security products](#) (CAS) can help enhance the security of Office 365 apps and other cloud services by using cutting-edge sandbox malware analysis for ransomware and other advanced threats.

These solutions are powered by Trend Micro [XGen™ securityproducts](#), which provides a cross-generational blend of threat defense techniques against a full range of threats for [data centersproducts](#), [cloud environmentsproducts](#), [networksproducts](#), and [endpointsproducts](#). Smart, optimized, and connected, XGen™ powers Trend Micro’s suite of security solutions: Hybrid Cloud Security, User Protection, and Network Defense.

Updated as of May 15, 2019 9:30AM: Added image and information about MegaCortex infection chain

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