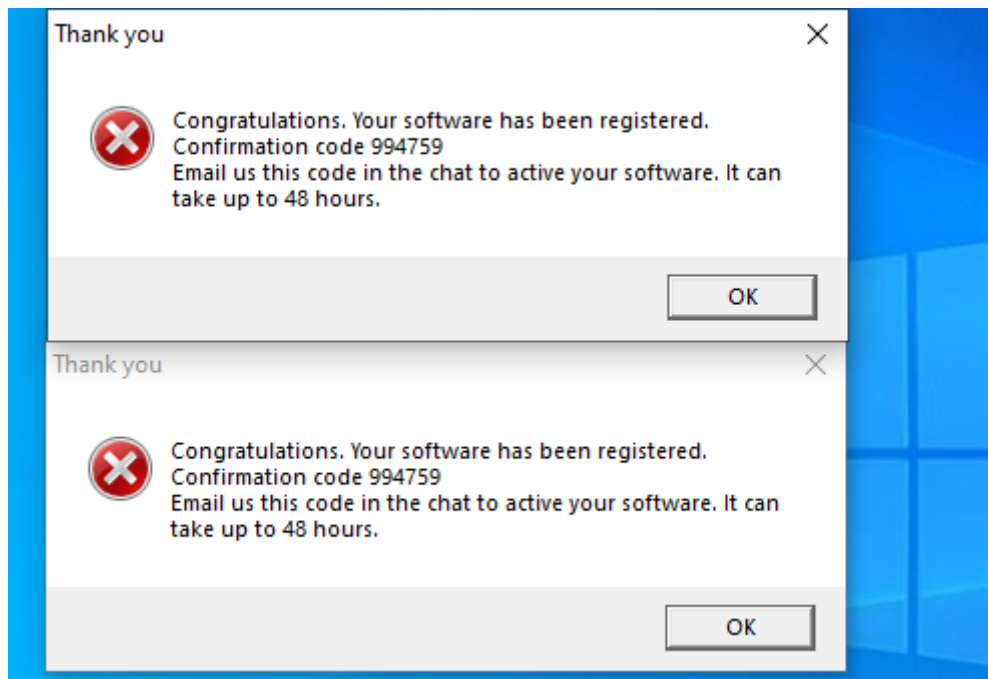
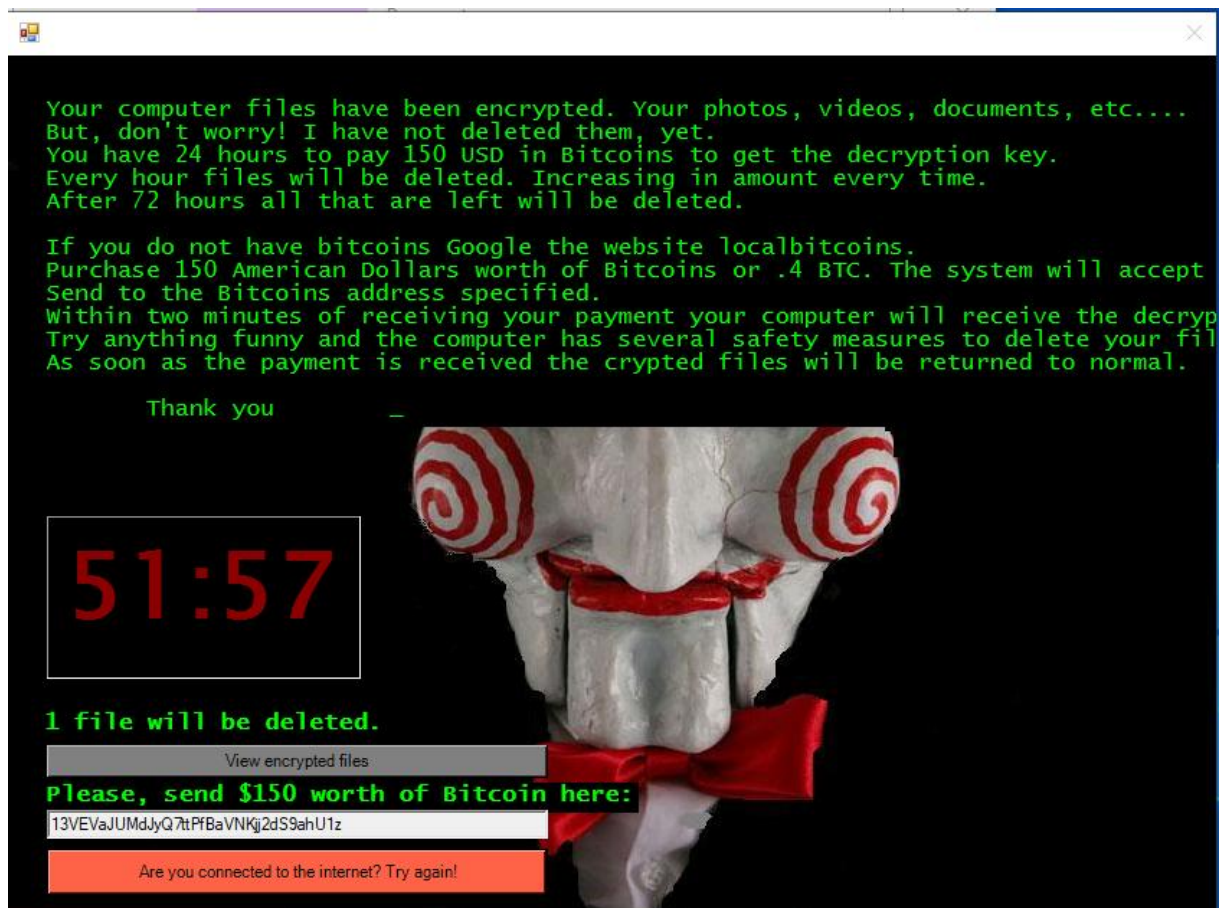

SIEM &SOC Final Project

Author Mateusz Łagocki



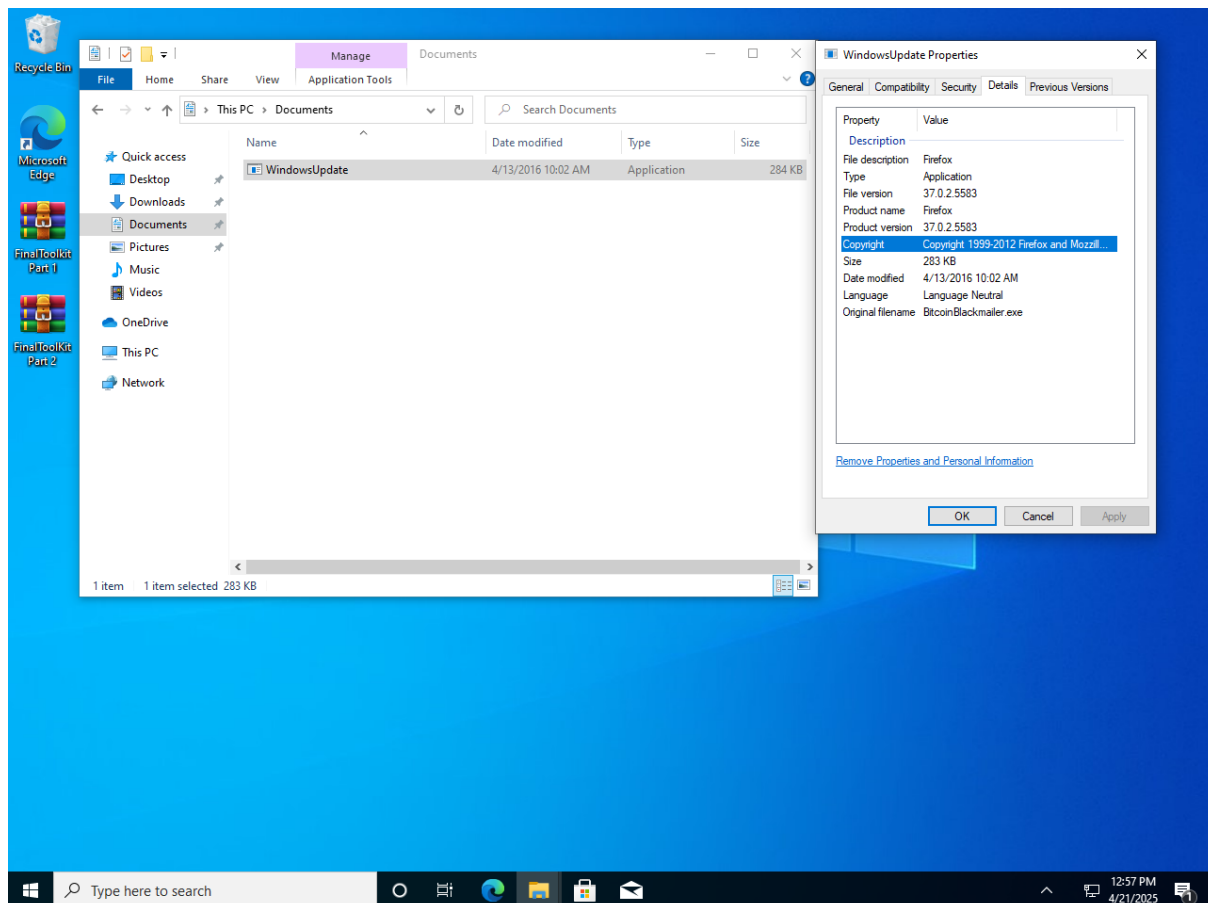
What It Means:

- The message appears to be a **fake notification**, possibly part of a **scam or ransomware** attempt.
- It claims that software has been "registered," but then asks the user to send a confirmation code via chat to "active" the software (note the grammatical error – it should be "activate").
- The message is generic, does not mention any specific software, and uses suspicious language, which is common in malicious popups.
- The fact that two identical windows appeared simultaneously suggests **automated or malicious behavior**, which is a strong sign of malware activity.



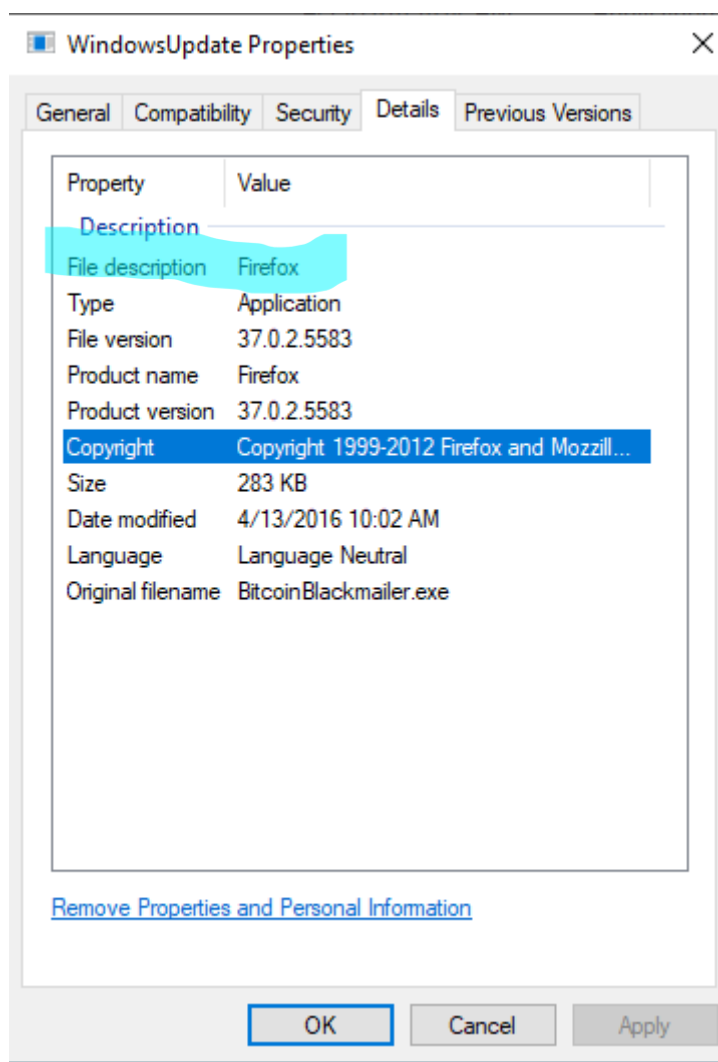
In the picture above, we can see the effect if an unaware user overrides the ok (which is, unfortunately, the only choice).

We can see that we are dealing with a typical ransomware whose purpose is to force us to pay a ransom under the threat of deleting already encrypted files and all files on the user's computer.

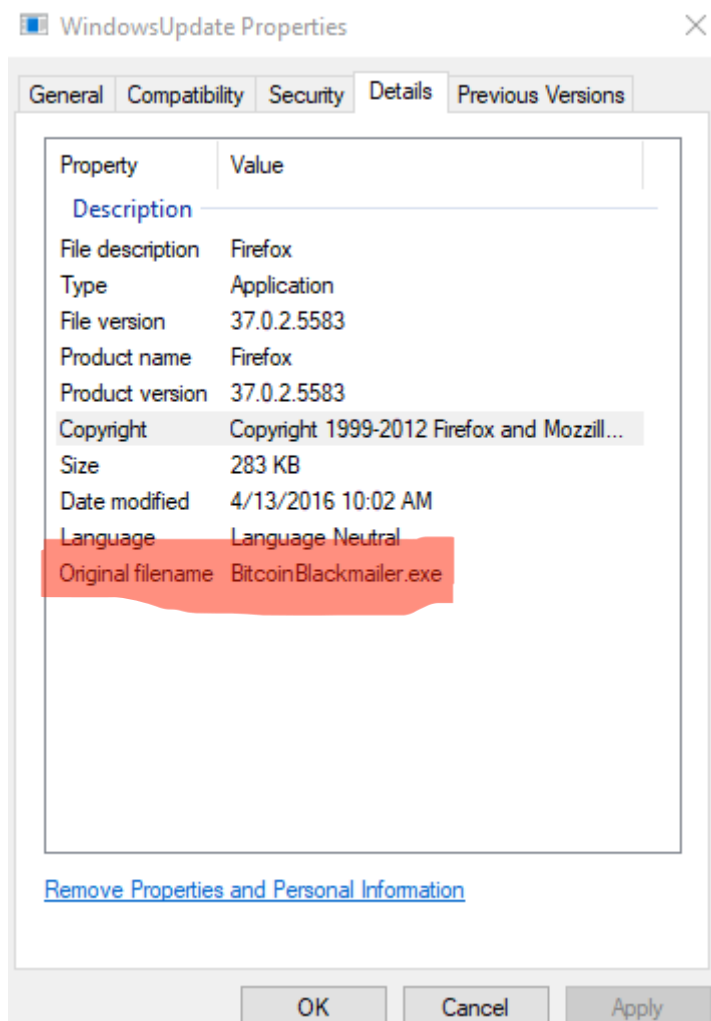


In the above screenshot, we see a potential file that is a threat to our user.

At first, it may seem like a simple system update file, but after delving into the properties, it turns out that it is malware that has infected the computer and probably slowed down its performance by overloading processes responsible for the speed of operation.



In the file description section, we see the program that the malware is impersonating. At first glance, firefox itself does not seem suspicious because it is the name of an ordinary web browser, but ...



In the Original file name section, we see the real name of the application that is overwritten as the browser.

After reconnaissance on the Internet or available sources, we can find information that BitcoinBlackmailer is malware, and according to the definition of malware, such software can impersonate other programs to deceive the vigilance of the attacked user.

Task Manager							
File Options View							
Processes Performance App history Startup Users Details Services							
Name	Status	29% CPU	53% Memory	12% Disk	1% Network	Power usage	Power usage t...
> Service Host: Task Scheduler		0%	3.7 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Web Account Ma...		0%	1.5 MB	0 MB/s	0 Mbps	Very low	Very low
> Local Security Authority Process...		0%	4.4 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Storage Service		0%	1.3 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: UtcSvc		0%	14.2 MB	0 MB/s	0 Mbps	Very low	Very low
> Microsoft Windows Search Inde...		0%	6.1 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Network List Service		0%	1.4 MB	0 MB/s	0 Mbps	Very low	Very low
> Microsoft Network Realtime Ins...		0%	3.3 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Local Service (Net...		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
Desktop Window Manager		0%	21.0 MB	0 MB/s	0 Mbps	Very low	Very low
Services and Controller app		0%	3.5 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Edge Update (32 bit)		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Diagnostic Policy ...		0%	7.0 MB	0 MB/s	0 Mbps	Very low	Very low
> Start		0%	13.3 MB	0 MB/s	0 Mbps	Very low	Very low
> Search		0%	0 MB	0 MB/s	0 Mbps	Very low	Very low
> Runtime Broker		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Windows Insider S...		0%	3.5 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Capability Access ...		0%	1.0 MB	0 MB/s	0 Mbps	Very low	Very low
smphost		0%	2.5 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Group Policy Client		0%	0.7 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Edge Update (32 bit)		0%	0.7 MB	0 MB/s	0 Mbps	Very low	Very low
User OOBE Broker		0%	0.8 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft OneDrive (32 bit)		0%	38.0 MB	0 MB/s	0 Mbps	Very low	Very low
> Windows Security Health Service		0%	1.5 MB	0 MB/s	0 Mbps	Very low	Very low
> Firefox		0%	5.6 MB	0 MB/s	0 Mbps	Very low	Very low
> Service Host: Local Service (Net...		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
Fewer details		End task					

Now let's go to the task manager to see what happened there.

Name	Status	100% CPU	51% Memory	21% Disk	0% Network	Power usage	Power usage t...
Services and Controller app		0%	3.5 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: User Profile Service		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
System Guard Runtime Monitor...		0%	2.8 MB	0 MB/s	0 Mbps	Very low	Very low
Task Manager		0%	16.8 MB	0 MB/s	0 Mbps	Very low	Very low
Shell Infrastructure Host		0%	3.6 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: DCOM Server Proc...		0%	7.7 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: Program Compati...		0%	1.3 MB	0 MB/s	0 Mbps	Very low	Very low
Xbox Game Bar (3)		0%	11.0 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Edge Update (32 bit)		0%	3.0 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: Storage Service		0%	1.3 MB	0.1 MB/s	0 Mbps	Very low	Very low
Service Host: GameDVR and Bro...		0%	2.2 MB	0 MB/s	0 Mbps	Very low	Very low
Runtime Broker		0%	2.4 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: Network Location ...		0%	2.2 MB	0 MB/s	0 Mbps	Very low	Very low
Start		0%	11.6 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Edge Update (32 bit)		0%	1.1 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Content		0%	1.6 MB	0.1 MB/s	0 Mbps	Very low	Very low
Registry		0%	13.4 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: Unistack Service G...		0%	3.8 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: Server		0%	0.8 MB	0 MB/s	0 Mbps	Very low	Very low
Office		0%	4.4 MB	0.1 MB/s	0 Mbps	Very low	Very low
Service Host: SysMain		0%	43.0 MB	0 MB/s	0 Mbps	Very low	Very low
Runtime Broker		0%	1.0 MB	0 MB/s	0 Mbps	Very low	Very low
Firefox		0%	2.8 MB	0 MB/s	0 Mbps	Very low	Very low
Microsoft Network Realtime Ins...		0%	2.7 MB	0 MB/s	0 Mbps	Very low	Very low
Service Host: WinHTTP Web Pro...		0%	0.9 MB	0 MB/s	0 Mbps	Very low	Very low

We can notice that every now and then it loads the processor and memory to a significant degree. We can see that firefox itself does not load the components, but the ransomware we are interested in does not give results or information regarding the load on the computer.

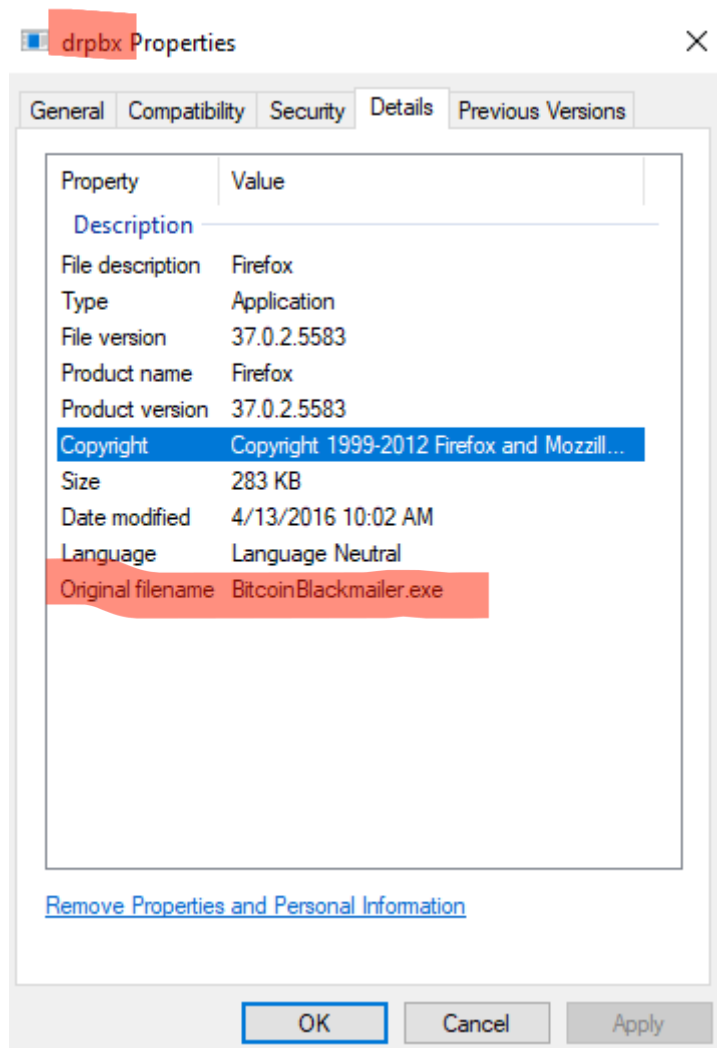
Firefox	0%	6.5 MB	0 MB/s	0 Mbps	Very low	Very low
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The screenshot above shows the program and the malware impersonating it.

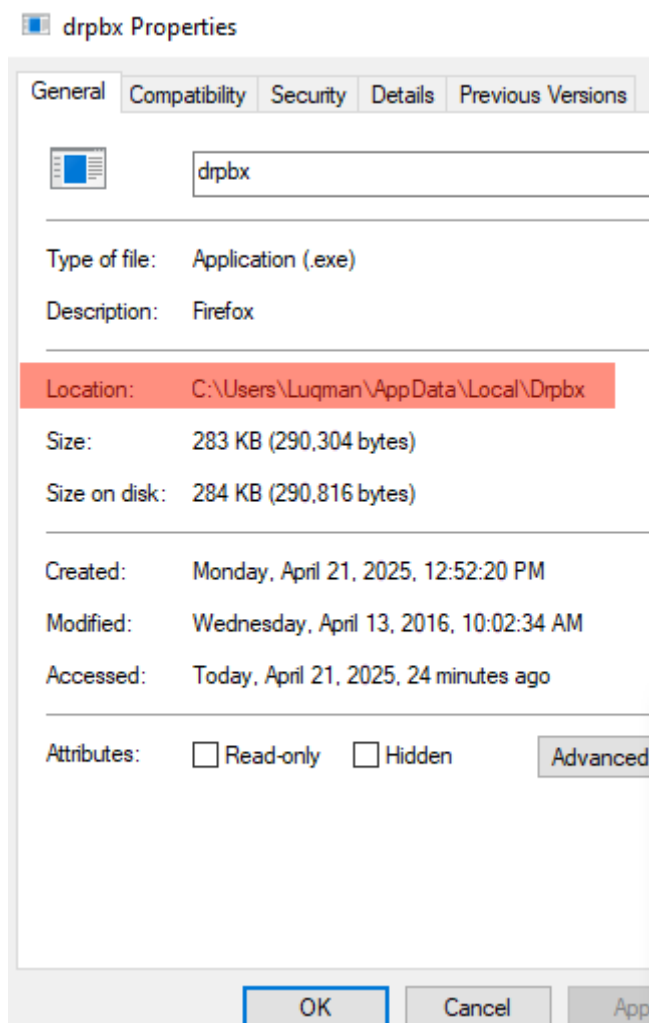
Task Manager					
File Options View					
Processes Performance App history Startup Users Details Services					
User		Status	12% CPU	59% Memory	0% Disk
					0% Network
Application Frame Host			0%	1.5 MB	0 MB/s
Client Server Runtime Proc...			0%	0.6 MB	0 MB/s
COM Surrogate			0%	2.7 MB	0 MB/s
CTF Loader			0%	4.1 MB	0 MB/s
Desktop Window Manager			0%	31.8 MB	0 MB/s
Firefox			0%	1.0 MB	0 MB/s
Firefox			0%	10.8 MB	0 MB/s
Host Process for Windows ...			0%	2.3 MB	0 MB/s
Microsoft Edge			0%	4.0 MB	0 MB/s
Microsoft Edge			0%	3.0 MB	0 MB/s
Microsoft Edge			0%	4.8 MB	0 MB/s
Microsoft Edge			0%	6.4 MB	0 MB/s
Microsoft Edge			0%	1.4 MB	0 MB/s
Microsoft Edge			0%	26.1 MB	0 MB/s
Microsoft OneDrive (32 bit)			0%	3.6 MB	0 MB/s
Microsoft Text Input Appli...			0%	5.9 MB	0 MB/s
Microsoft.Photos.exe		Suspended	0%	0.3 MB	0 MB/s
Npcap 1.79 Setup			0%	6.5 MB	0 MB/s
Runtime Broker			0%	3.4 MB	0 MB/s
Runtime Broker			0%	0.2 MB	0 MB/s
Runtime Broker			0%	3.6 MB	0 MB/s
Runtime Broker			0%	19.8 MB	0 MB/s
Runtime Broker			0%	2.1 MB	0 MB/s
Search		Suspended	0%	0 MB	0 MB/s
Search application			0%	80.9 MB	0 MB/s
Service Host: Clipboard Us...			0%	1.6 MB	0 MB/s
Service Host: Connected D...			0%	2.1 MB	0 MB/s
Service Host: Unistack Serv...			0%	1.6 MB	0 MB/s
Service Host: Windows Pus...			0%	3.6 MB	0 MB/s
Shell Infrastructure Host			0%	3.4 MB	0 MB/s
Start			0%	12.9 MB	0 MB/s
Task Manager			0%	26.7 MB	0 MB/s
User OOBE Broker			0%	0.6 MB	0 MB/s
Windows Explorer			0%	40.2 MB	0 MB/s

In the Users tab, we see several firefoxes fired up even though they are not physically running on the computer. Of course, we are talking about our only user here.

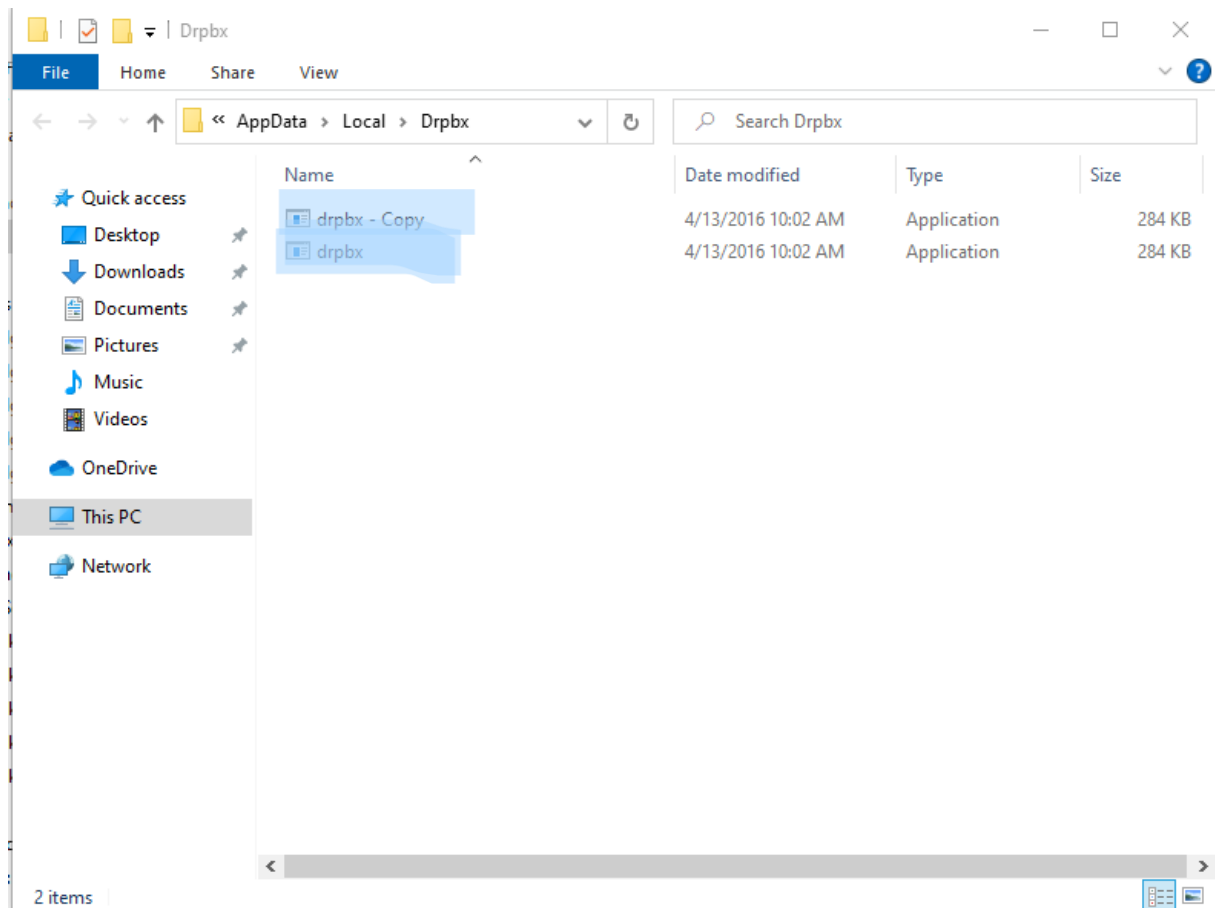
Let's see what's hidden in these running applications.



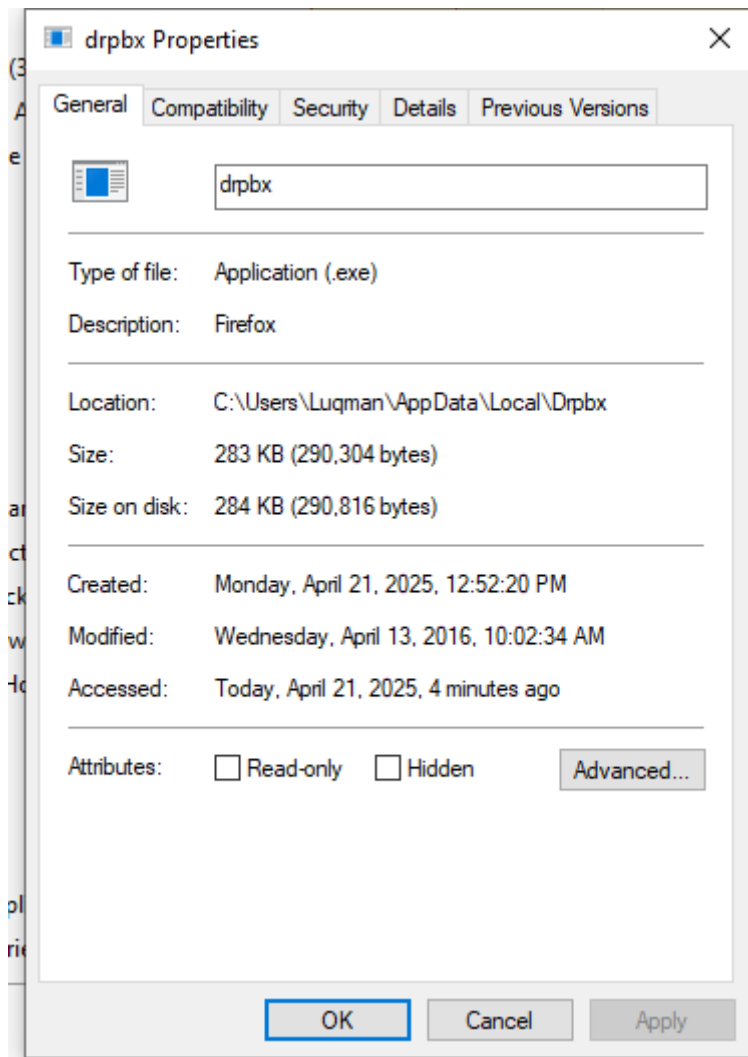
In the areas highlighted in red, we see more disturbing incidents. One that has been detected before and drpbx which is rather inconsistent with web browsers.



We see the location of the suspected file let's check it.

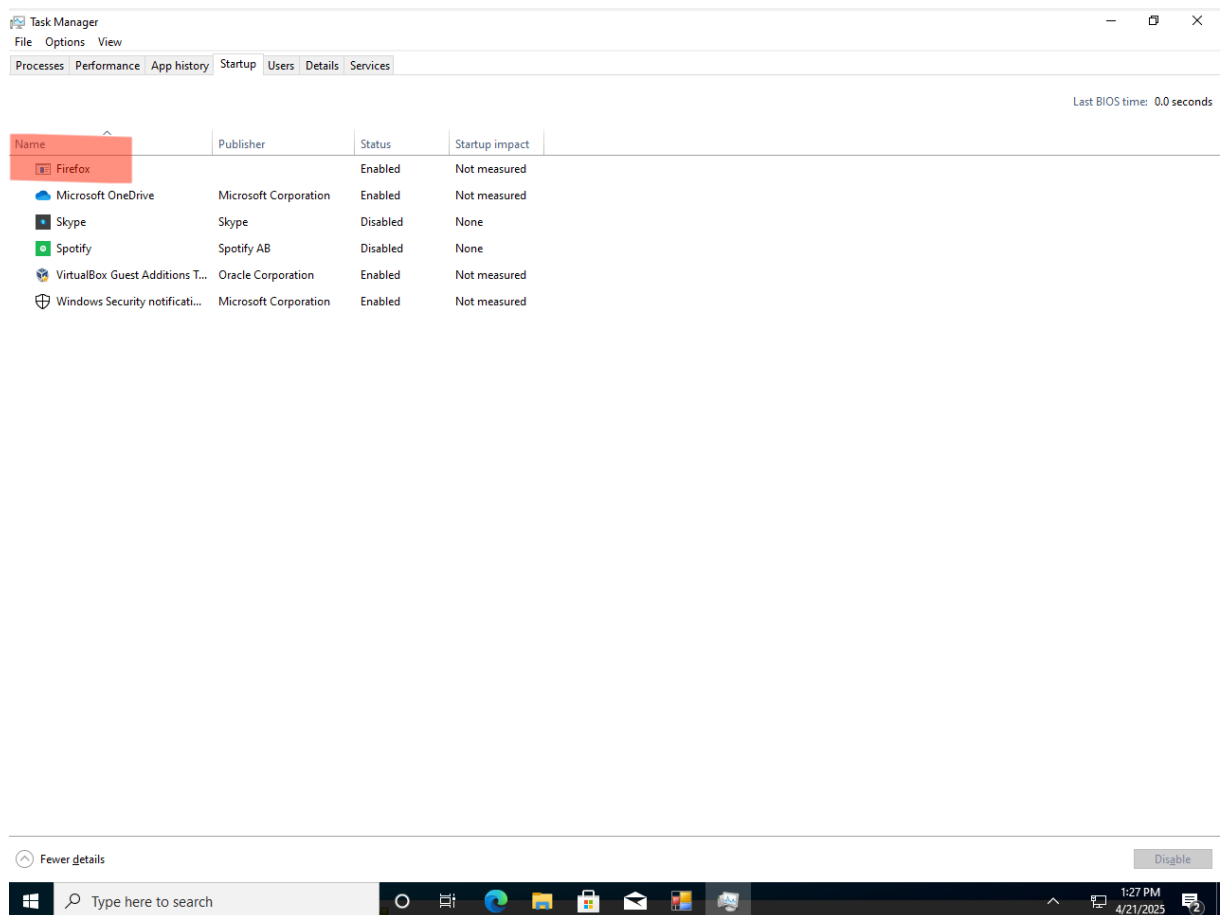


We see two more infected files in this location.

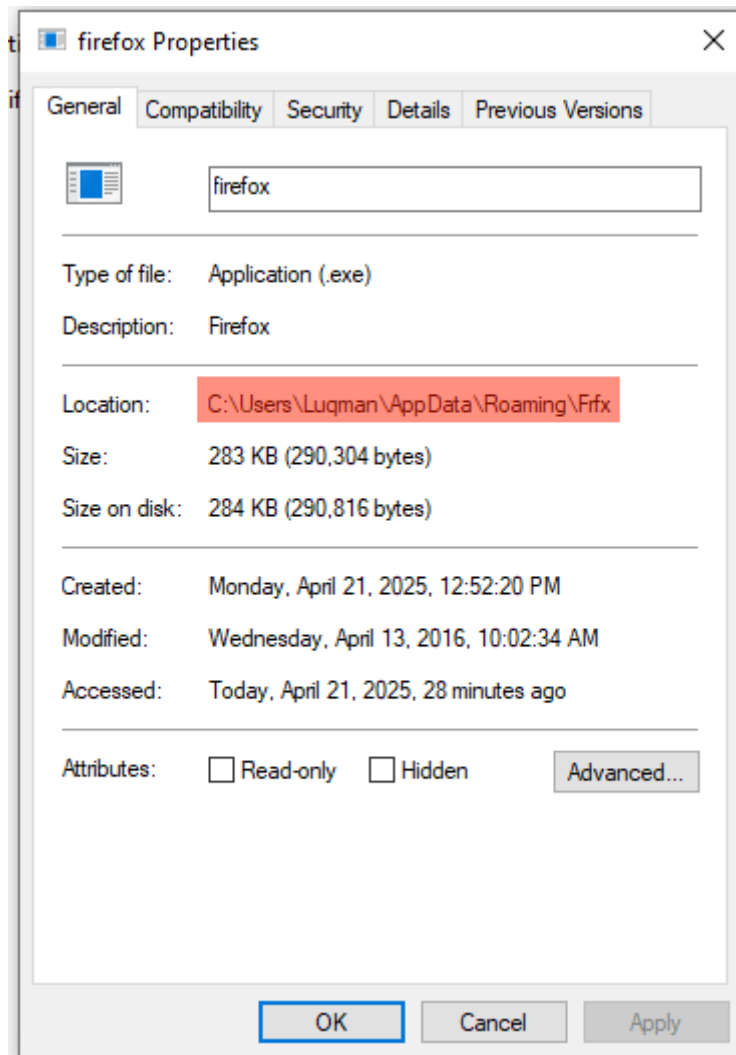


In the second case, we have the same situation.

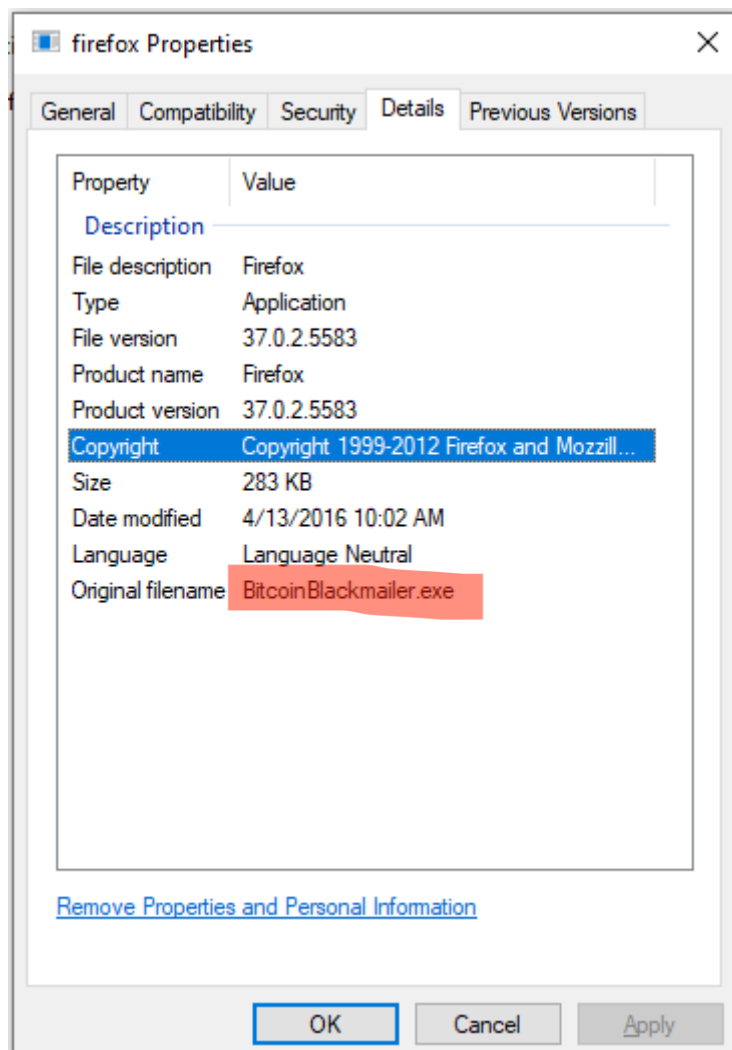
It refers again to drpbx which is just infected.



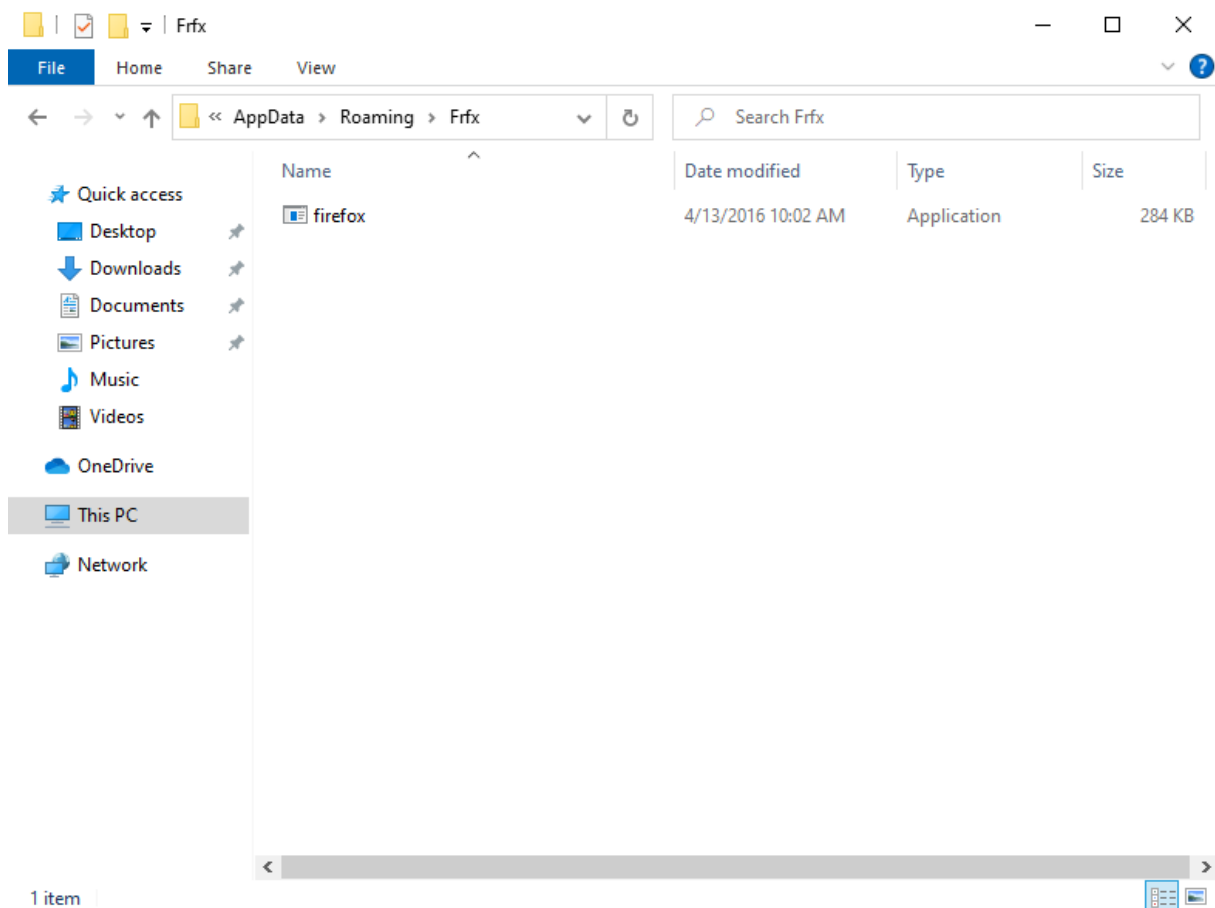
In the Startup section, we see our potential malware infection.



After checking in the properties section, we can find the location of this software



To make sure and confirm that I am dealing with the same thing, I check the program information in detail and everything agrees with the original findings found at the very beginning.



After checking the location found in the details, we find only one file which is just malicious.

At this point we have the culprit of this user's troubles with the computer.

Process Explorer - Sysinternals: www.sysinternals.com [DESKTOP-38RB3EF\Luqman]

File Options View Process Find Users Help

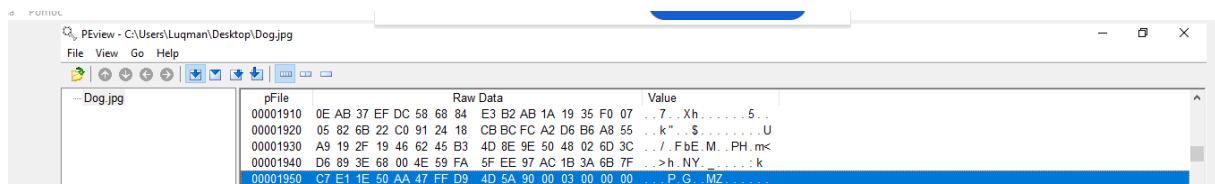
<Filter by name>

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name
StartMenuExperienceHost.exe		19,272 K	37,744 K	6060		
RuntimeBroker.exe		5,956 K	13,392 K	5048	Runtime Broker	Microsoft Corporation
SearchApp.exe	Susp...	184,376 K	84,172 K	4464	Search application	Microsoft Corporation
RuntimeBroker.exe		26,232 K	43,516 K	4216	Runtime Broker	Microsoft Corporation
SearchIndexer.exe		23,032 K	20,276 K	4092	Microsoft Windows Search I...	Microsoft Corporation
SearchProtocolHost.exe		1,784 K	7,772 K	5572	Microsoft Windows Search P...	Microsoft Corporation
SearchFilterHost.exe		1,524 K	7,188 K	6740		
SearchProtocolHost.exe		2,304 K	11,504 K	5828		
RuntimeBroker.exe		6,580 K	19,312 K	6192	Runtime Broker	Microsoft Corporation
svchost.exe		4,308 K	7,144 K	6624	Host Process for Windows S...	Microsoft Corporation
svchost.exe		2,472 K	5,632 K	6756	Host Process for Windows S...	Microsoft Corporation
svchost.exe		1,516 K	1,504 K	6892	Host Process for Windows S...	Microsoft Corporation
svchost.exe		2,112 K	1,932 K	6900	Host Process for Windows S...	Microsoft Corporation
svchost.exe		2,676 K	1,672 K	6952	Host Process for Windows S...	Microsoft Corporation
svchost.exe		1,324 K	1,452 K	6984	Host Process for Windows S...	Microsoft Corporation
dasHost.exe		3,084 K	1,424 K	7016		
svchost.exe		18,764 K	5,368 K	7128	Host Process for Windows S...	Microsoft Corporation
SgmBroker.exe		3,732 K	4,256 K	1876	System Guard Runtime Monit...	Microsoft Corporation
svchost.exe		4,904 K	3,324 K	1844	Host Process for Windows S...	Microsoft Corporation
svchost.exe		4,640 K	5,220 K	6332	Host Process for Windows S...	Microsoft Corporation
svchost.exe		1,508 K	1,328 K	4856	Host Process for Windows S...	Microsoft Corporation
svchost.exe		2,300 K	4,100 K	7688	Host Process for Windows S...	Microsoft Corporation
dpbx.exe	< 0.01	38,852 K	10,284 K	7960	Firefox	
dpbx.exe		30,020 K	2,684 K	7988	Firefox	
SecurityHealthService.exe		2,736 K	2,892 K	8072	Windows Security Health Se...	Microsoft Corporation
OneDrive.exe		49,016 K	10,876 K	6556	Microsoft OneDrive	Microsoft Corporation
ShellExperienceHost.exe	Susp...	10,840 K	24,232 K	5024	Windows Shell Experience H...	Microsoft Corporation
RuntimeBroker.exe		2,576 K	11,908 K	7500	Runtime Broker	Microsoft Corporation
svchost.exe		1,436 K	2,864 K	5028	Host Process for Windows S...	Microsoft Corporation
svchost.exe		1,088 K	4,272 K	7544	Host Process for Windows S...	Microsoft Corporation

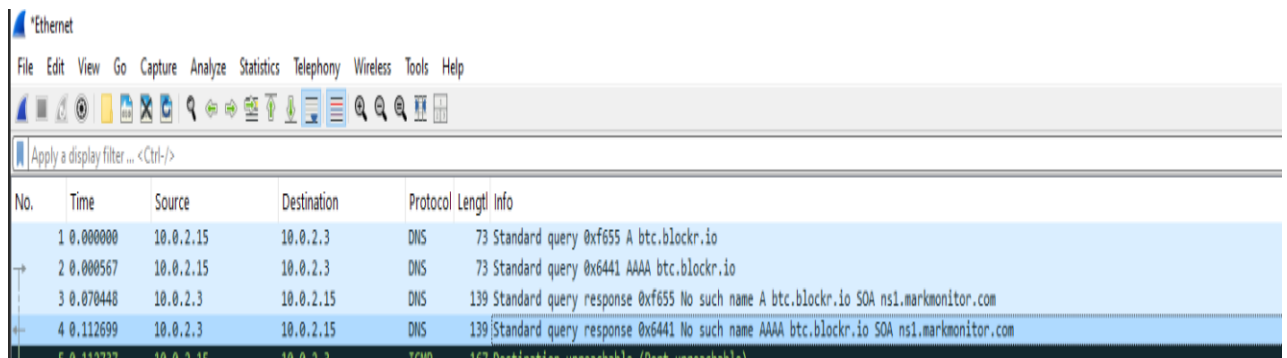
CPU Usage: 31.68% Commit Charge: 59.20% Processes: 140 Physical Usage: 61.66%

When we start explorer process we see two processes:

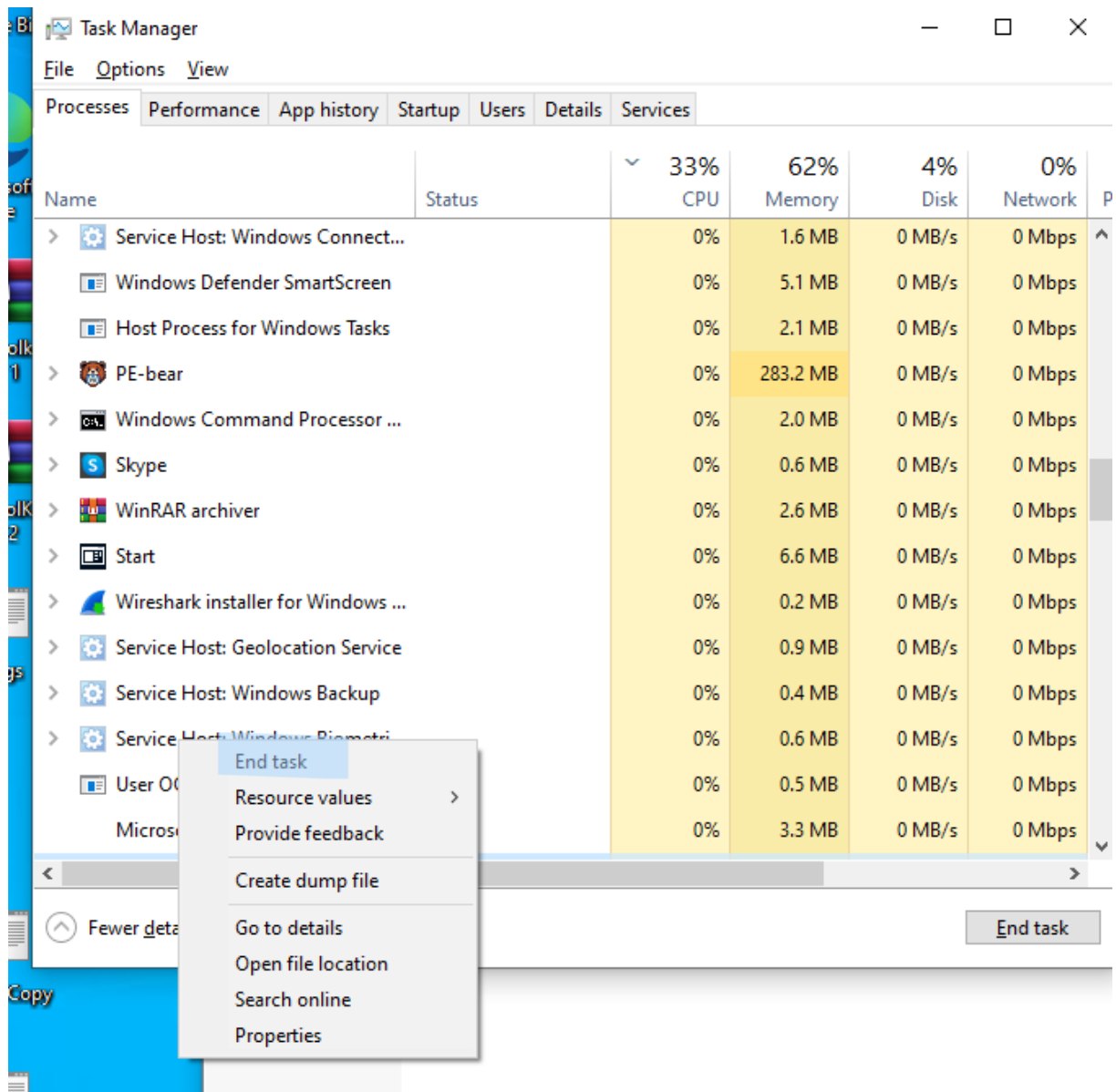
dpbx.exe despite the fact that they have a different PID they refer to our infected file.



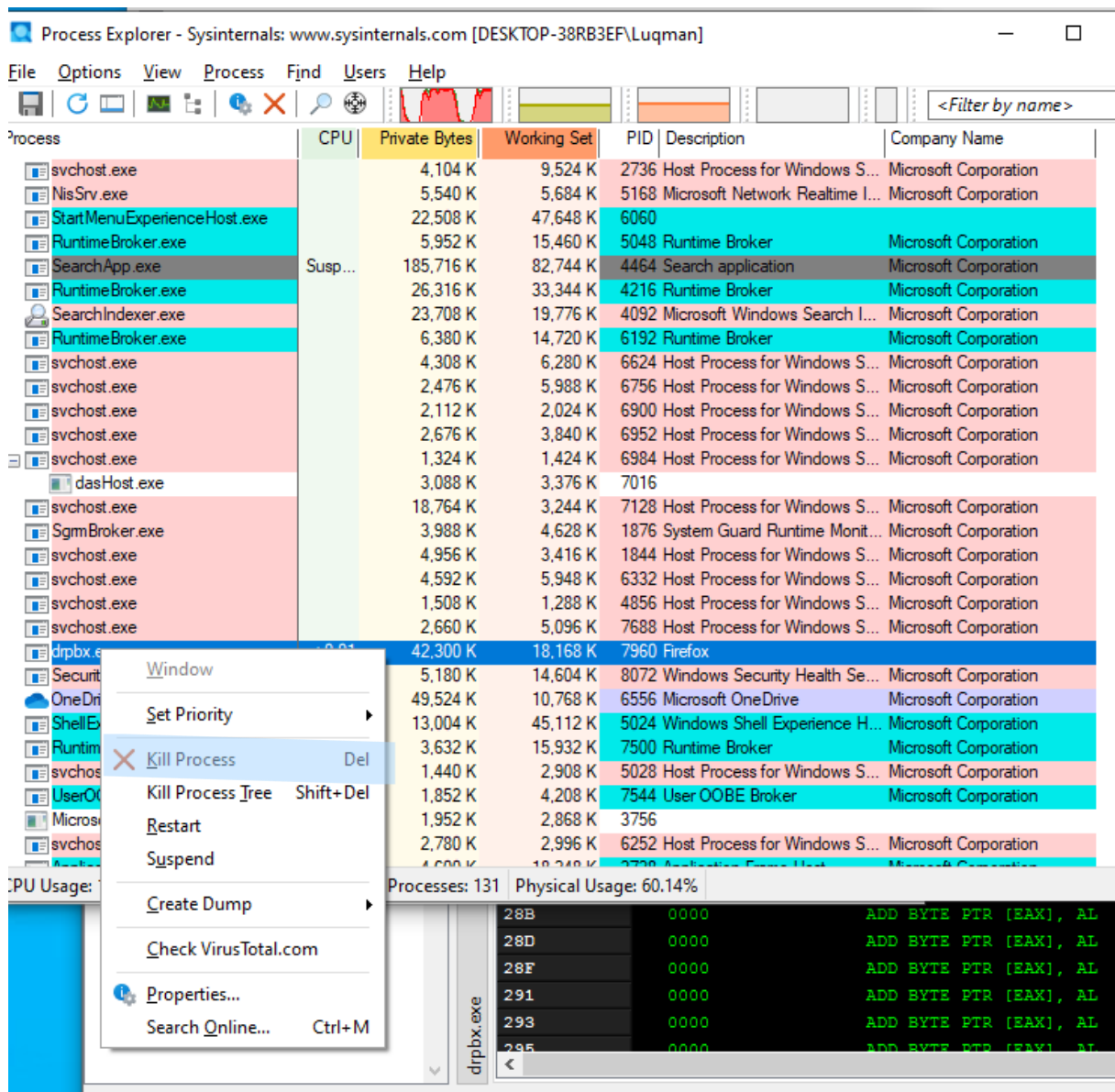
Here are the strings indicating the infection



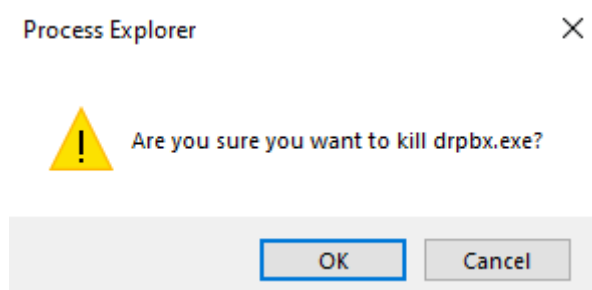
Its confirm from wireshark.



First Step: I choose to complete the task



Second step: in process explorer finds infected processes and selects kill process option



Third step: I confirm my willingness to remove the harmful proces

Task Manager

FileOptionsView

ProcessesPerformanceApp historyStartupUsersDetailsServices

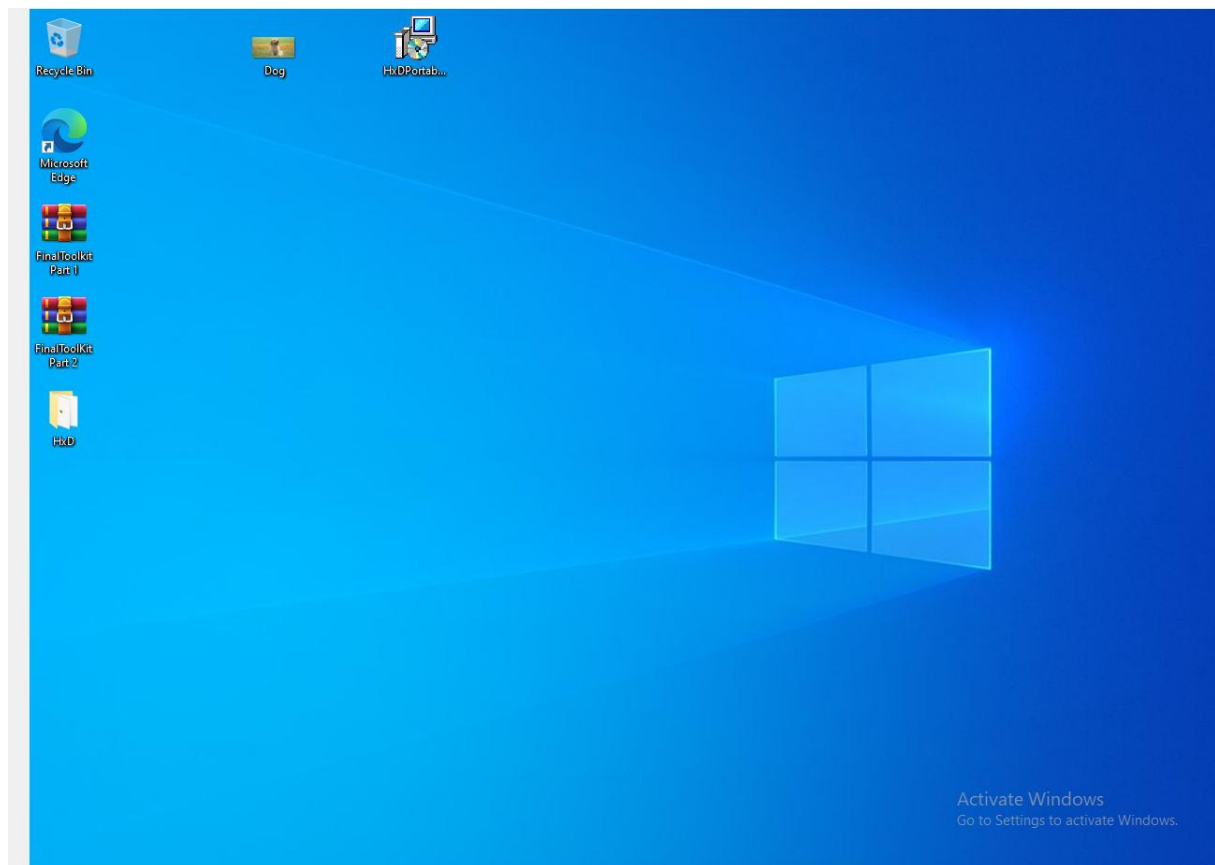
Last BIOS time: 0.0 seconds

Name	Publisher	Status	Startup impact
Microsoft Edge	Microsoft Corporation	Enabled	Not measured
Microsoft OneDrive	Microsoft Corporation	Enabled	Not measured
Phone Link	Microsoft Corporation	Disabled	None
Skype	Skype	Disabled	None
Spotify	Spotify AB	Disabled	None
VirtualBox Guest Additions T...	Oracle Corporation	Enabled	Not measured
Windows Security notificati...	Microsoft Corporation	Enabled	Not measured

Fewer details

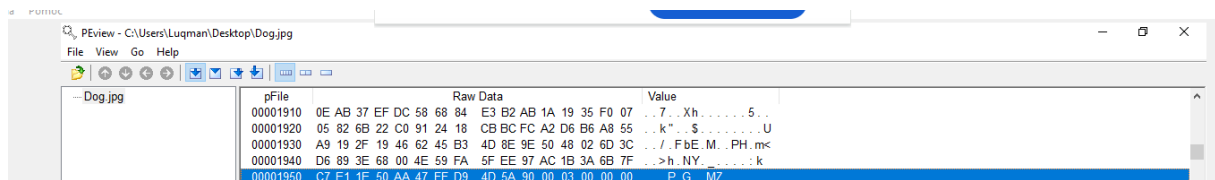
Disable

And final confirmation of the removal of harmful processes

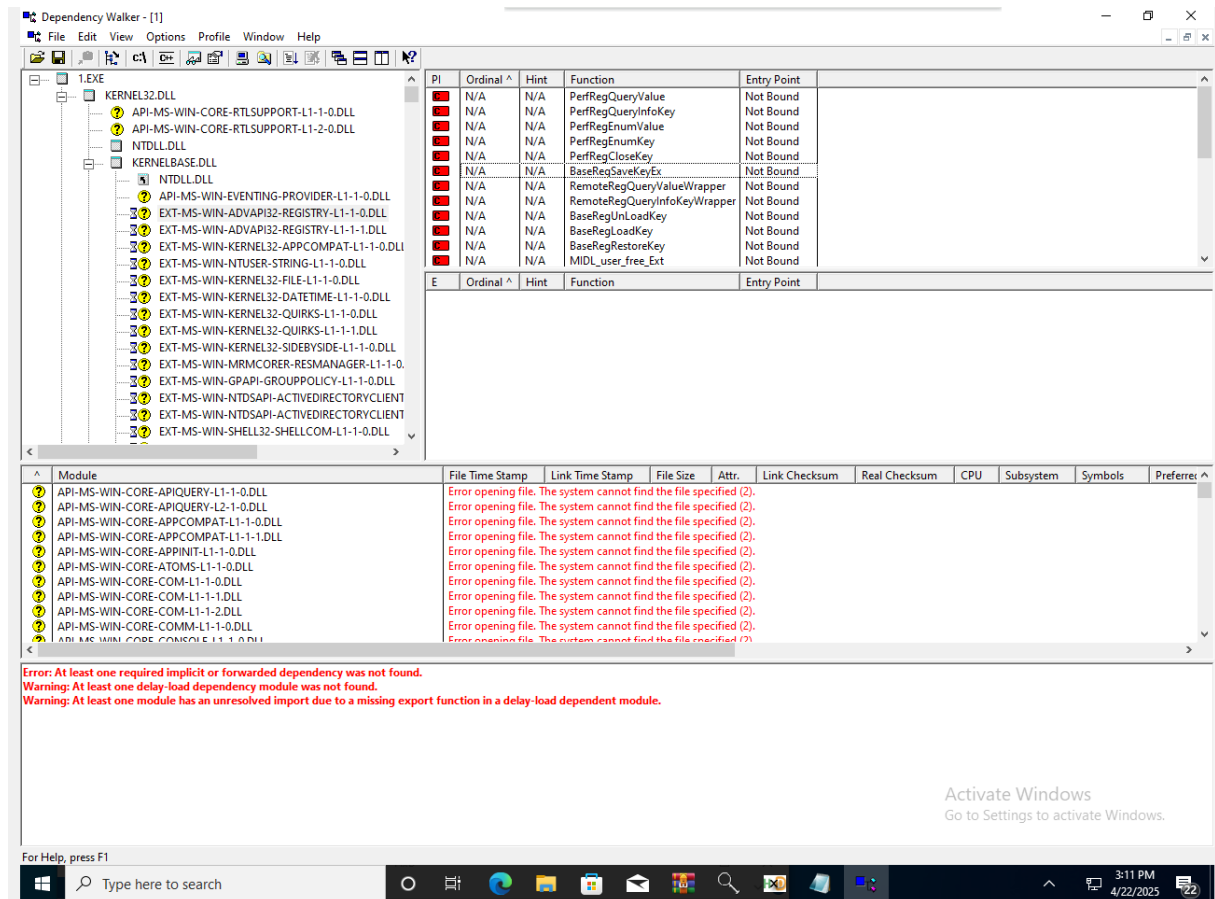


The malicious software operated by disguising the ransomware as the Firefox browser. While the process appeared to be Firefox and was visible in the system's process list, the actual browser window was not shown to the user. Instead, only the ransomware screen was displayed on the screen, making the deception invisible to the user.

Part 2



This image has increased magic bytes which indicates a nested program. 4D5A are magic bytes for .exe files.



[Sign in](#)
[Sign up](#)

59

/ 72

Community Score

59/72 security vendors flagged this file as malicious

[Reanalyze](#)
[Similar](#)
[More](#)

ff0817ebaebcd6e7556856e25e56a52ba55848aaf5ce99407073f9058e6469

Size100.20 KB

Last Analysis Date2 months ago

doge.exe

peexe

checks-user-input

runtime-modules

direct-cpu-clock-access

spreader

overlay

nsis

checks-cpu-name

DETECTION

DETAILS

RELATIONS

BEHAVIOR

COMMUNITY

Join our Community and enjoy additional community insights and crowdsourced detections, plus an API key to automate checks.

Popular threat labeltrojan.boaxxe/miuref

Threat categoriestrojan, dropper

Family labelsboaxxe, miuref, nsis

Security vendors' analysis

Do you want to automate checks?

AhnLab-V3	Trojan.Win.Inject.C4462124	Alibaba	VirTool:Win32/VBInject.19f8f1a3
ALYac	Trojan.Dropper.Agent.WGG	Antiy-AVL	Trojan/Win32.Inject
Arcabit	Trojan.Dropper.Agent.WGG	Arctic Wolf	Unsafe
Avast	NSIS:Dropper-IT [Drp]	AVG	NSIS:Dropper-IT [Drp]
Avira (no cloud)	TR/Dropper.Gen	BitDefender	Trojan.Dropper.Agent.WGG
Bkav Pro	W32.AIDetectMalware	ClamAV	Win.Trojan.Zusy-7590A077-D
CrowdStrike Falcon	Win/malicious_confidence_100% (W)	CTX	Exe.trojan.generic

Activate Windows

Go to Settings to activate Windows

This is confirm from totalvirus

