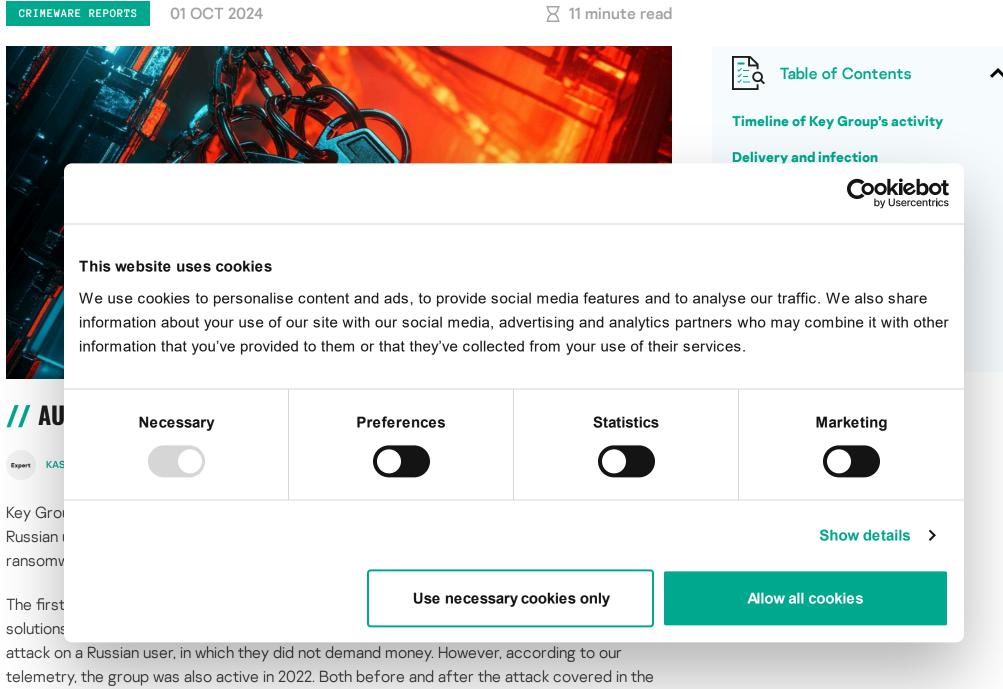


Key Group: another ransomware group using leaked builders



BI.ZONE report, the attackers demanded that money be transferred to a Bitcoin wallet.

We tracked Key Group's activity from the start of their attacks and found that the group used not only Chaos but also other leaked ransomware builders. By analyzing the samples created with their help, we were able to find loaders and malicious URLs on GitHub that showed a connection between the group and previously unknown attackers.

Timeline of Key Group's activity

The first variants of ransomware from Key Group's arsenal were discovered in April 2022. At that time, the group was using the source code of Xorist.

In August 2022, Key Group added the Chaos builder to its toolkit. Notably, on June 30, 2022, the creator of Chaos announced the launch of a RaaS (Ransomware-as-a-Service) partnership program.

In the Chaos variant, a new extension .huis_bn was added to encrypted files, and in the ransom note, the attackers requested that victims send a message on Telegram. This note contained

information in both Russian and English and went under the title "HOW TO DECRYPT FILES":

```
Attention! All your files are encrypted!

To restore your files and access them,
send an SMS with the text C32d4 to the User Telegram @[redacted]

You have 1 attempts to enter the code. If this
amount is exceeded, all data will irreversibly deteriorate. Be
careful when entering the code!

Glory @huis_bn

Baши файлы зашифрованы!

Чтобы восстановить свои файлы и получить к ним доступ,
топравьте смс с текстом C32d4 Юзеру Телеграм @[redacted]
```

The next Key Group samples based on Chaos were discovered in January 2023. Throughout the year, the group used this ransomware, primarily changing only the content of the ransom note.

Starting in April 2023, the attackers were active on the DarkStore forum in the dark web. They targeted Telegram channels with spam raids and tested the publicly available remote access Trojan NjRat, which has keylogging, stealing, reverse shell, and USB propagation capabilities.

In the summer of 2023, a new sample of Chaos from Key Group was discovered, named warnep.exe (MD5: C2E1048E1E5130E36AF297C73A83AFF6).

The content of the note was significantly different from previous ones and was of an ideological nature. Key Group no longer provided contact information but declared its motives



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Note from Key Group

In August 2023, we discovered the group using the Annabelle ransomware (MD5: 05FD0124C42461EF553B4B17D18142F9).

This ransomware is named after the American horror film "Annabelle". The sample observed in Key Group's attacks encrypts files and includes an MBR locker (MD5:

D06B72CEB10DFED5ECC736C85837F08E), as well as the following built-in evasion techniques.

- 1 Disabling Windows Firewall:
 - 1 NetSh Advfirewall set allprofiles state off
- 2 Disabling Windows Defender:
 - 1 HKLM\SOFTWARE\Policies\Microsoft\Windows Defender\
 2 "DisableAntiSpyware" = 1
 3 "DisableRealtimeMonitoring" = 1
- **3** Disabling UAC:
 - 1 HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
 2 "EnableLUA" = 0

4 Disabling the Registry Editor:

1	HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
2	"DisableRegistryTools" = 0

5 Disabling the Run command from the Windows Start menu:

```
1 HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\Explorer
2 "NoRun" = 1
```

6 Modifying Image File Execution Options by setting the RIP value instead of the debugger path for some processes, preventing them from launching correctly:

```
1 HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Image File Execution Options\[process]
2 "Debugger" = "RIP"
```

7 Deleting shadow copies:

```
1 "vssadmin delete shadows /all /quiet"
```

The ransomware adds the .Keygroup777tg.EXE extension to the encrypted files. After encryption, it restarts the computer and displays the following screens:

Screen from the MBR locker included in the Annabelle ransomware (displayed after reboot)

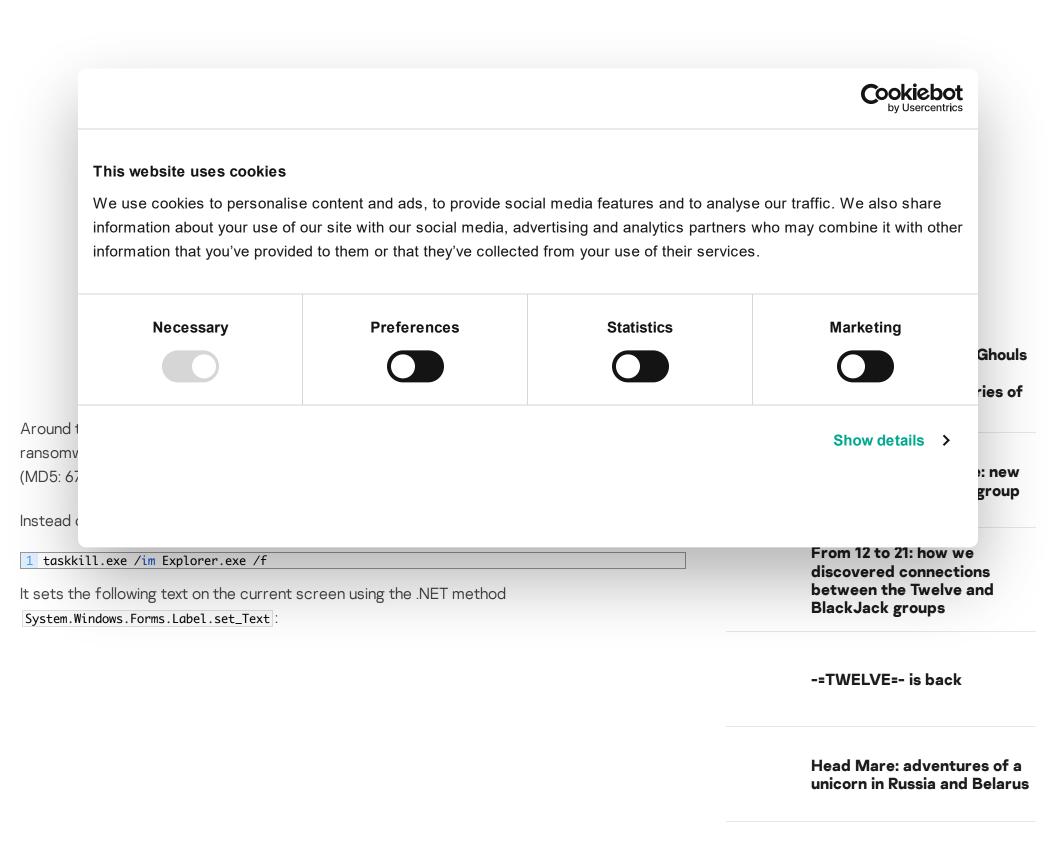
Around the same time, a sample of the Slam ransomware (MD5: 09CE91B4F137A4CBC1496D3791C6E75B) was detected in Key Group attacks. The Slam builder was also made publicly available back in 2021.

The Slam ransomware uses the AES-CBC encryption algorithm. It also utilizes the IP Logger service to track infected victims.

Upon execution, the ransomware encoded file names using Base64 and added the .keygroup777tg extension.

In September 2023, a wiper based on the RuRansom builder (MD5: 1FED852D312031974BF5EB988904F64E) was found.

RuRansom is a wiper that emerged in 2022 and targets Russia. The malware is written in .NET and uses the AES-CBC encryption algorithm to encrypt files. The Key Group variant is distributed under the name "Россия-обновление.docs.exe" (Russia-update) with a note modified for the group's objectives:



After that, UX-Cryptor additionally saves the ransom note in a file named <u>info-0v92.txt</u>, using output redirection of the <u>echo</u> command:

1 cmd.exe /c cd "%systemdrive%\Users\Public\Desktop"&attrib +h +s +r +i /D & echo [%RANDOM%]
2 Ooops! Your files are encrypted by the keygroup777tg hacker group! Telegram for contact:
3 @[redacted] 1>info-0v92.txt & attrib -h +s +r info-0v92.txt

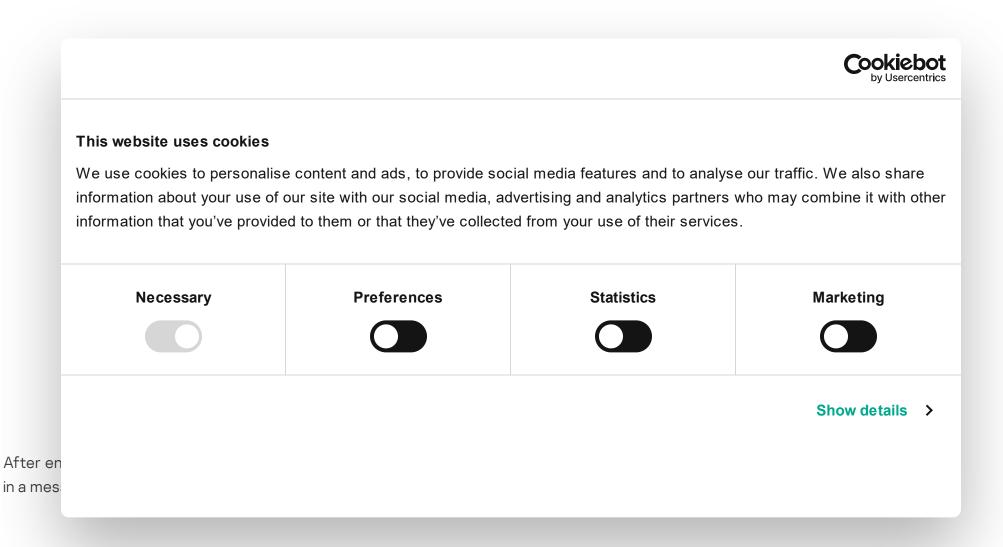
UX-Cryptor includes several methods for persistence and detection evasion. For example, it overwrites the registry key Software\Microsoft\Windows\CurrentVersion\Explorer\RunMRU:

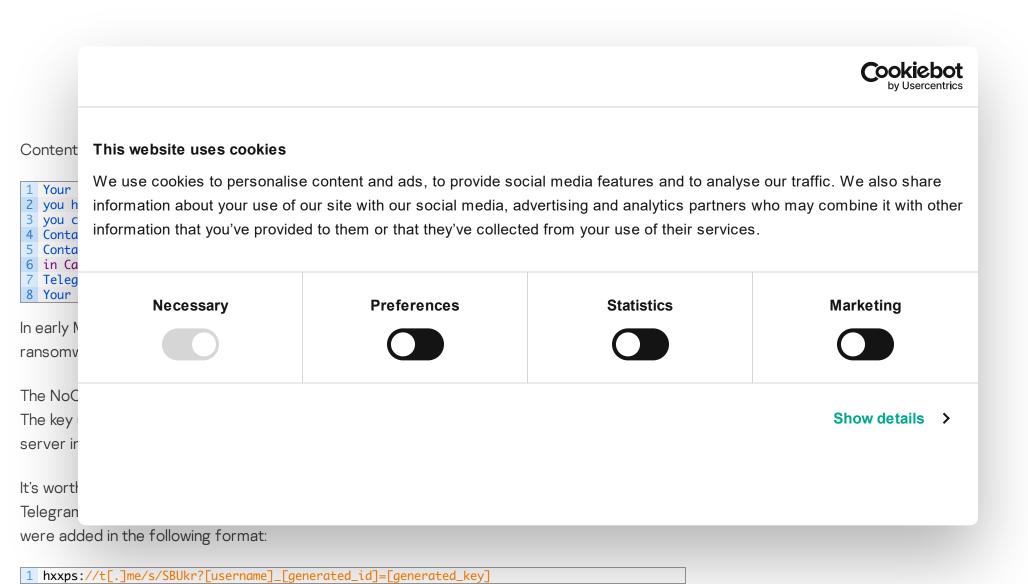
1 "Software\Microsoft\Windows\CurrentVersion\Explorer\RunMRU\MRUList" = "abc"

The RunMRU key is used by incident response specialists to examine commands executed through the Run utility.

In February 2024, Key Group switched from Chaos to the Hakuna Matata ransomware (MD5: DA09FCF140D3AAD0390FB7FAF7260EB5). The Hakuna Matata builder was published on the dark web in July 2023.

The Hakuna Matata variant encrypts files using AES-CBC and adds an extension of five random characters. Below is a snippet of Hakuna Matata running in our sandbox.





Indicating the C2 server in code

The channel's theme is not related to ransomware and consists of political news. This scheme

does not involve the attackers obtaining the data.

Function for sending requests to C2 server



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Necessary	Preferences	Statistics	Marketing

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A complete timeline of key Group's use of various ransomware ramilies is presented below.

Use of leaked Key Group builders

Delivery and infection

To deliver the Chaos and Xorist ransomware to the victim's computer, Key Group used multistage loaders.

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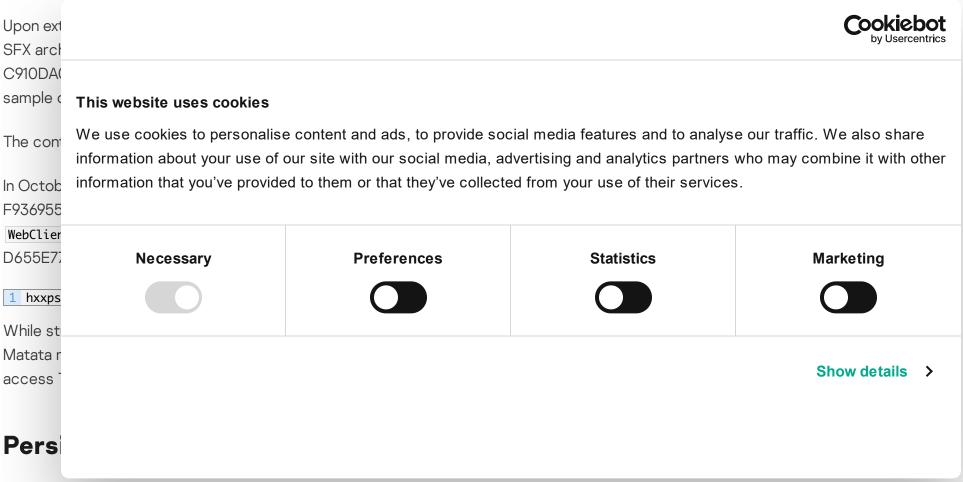
I agree to provide my email address to "AO Kaspersky Lab" to receive information about new posts on the site. I understand that I can withdraw this consent at any time via e-mail by clicking

We discovered an LNK file that was likely distributed via phishing emails. The LNK file contained an obfuscated PowerShell command that downloaded an SFX archive (self-extracting archive) from a remote resource:

the "unsubscribe" link that I find at the bottom of any e-mail sent to me for the purposes mentioned above.



Deobfuscated command:



Xorist

The first discovered sample of Key Group, the Xorist ransomware, established persistence in the system by changing file extension associations. When a file with the huis_bn extension, which was added to encrypted files, was opened, the ransomware would launch:

1 HKLM\SOFTWARE\Classes\.huis_bn = "LGDAGXRNCRZHPLD"
2
3 HKLM\SOFTWARE\Classes\LGDAGXRNCRZHPLD\shell\open\command =
4 "C:\Users\[redacted]\AppData\Local\Temp\fj6qD14qWC1unS2.exe"

The ransomware also added itself to startup:

1 HKLM\SOFTWARE\WOW6432Node\Microsoft\Windows\CurrentVersion\Run
2 "Alcmeter" = "C:\Users\[redacted]\AppData\Local\Temp\fj6qD14qWC1unS2.exe"

Chaos

1 URL=file:///\$user\\$appdata\cmd.exe

Annabelle

The Annabelle ransomware added itself to the Run and Winlogon registry keys.

```
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

"UpdateBackup" = "$selfpath"

HKLM\SOFTWARE\Wow6432Node\Microsoft\Windows\CurrentVersion\Run

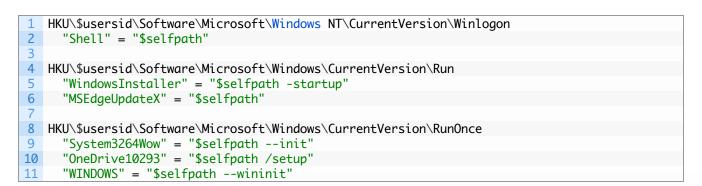
"UpdateBackup" = "$selfpath"

HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon

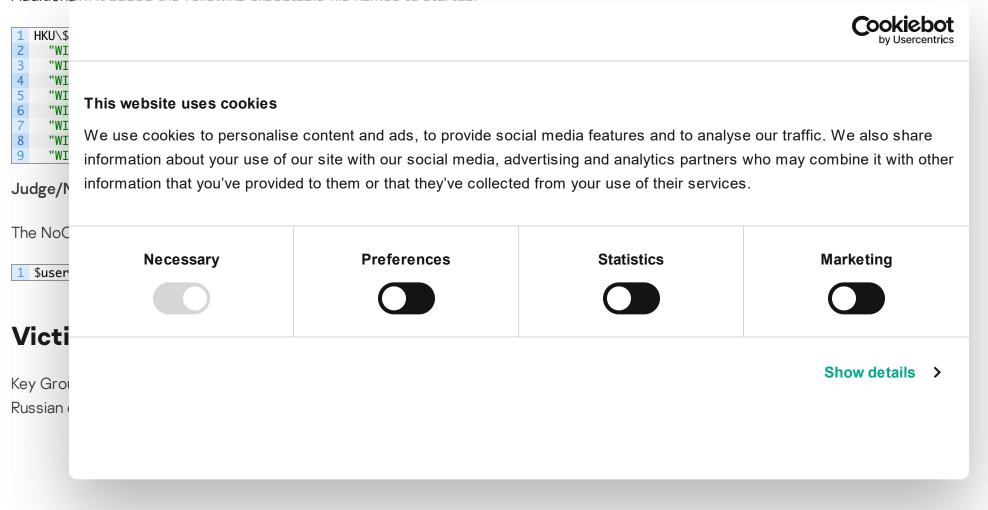
"Shell" = "$selfpath"
```

UX-Cryptor

UX-Cryptor added itself to the following registry keys to maintain persistence in the system:



Additionally, it added the following executable file names to startup:



Message from Key Group

About the attackers

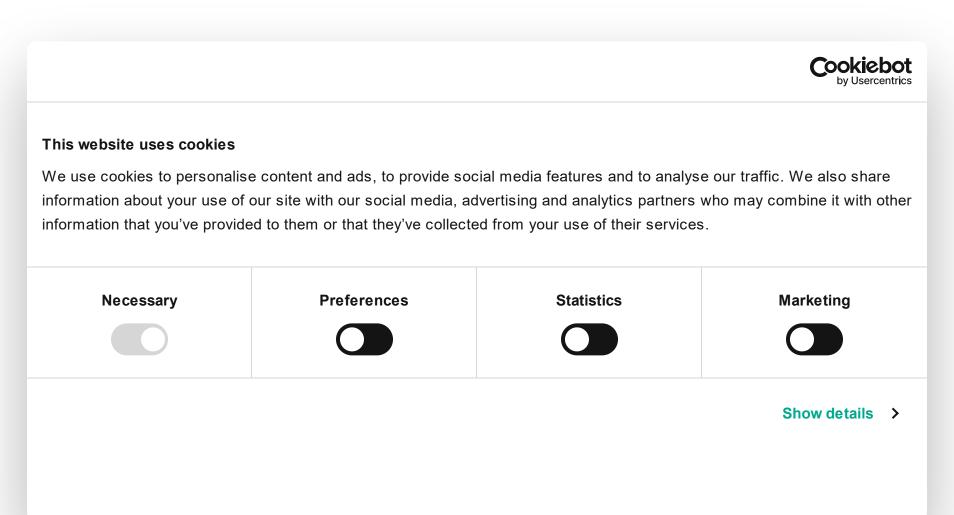
The .huis_bn extension added to encrypted files in the early versions of Key Group samples, Xorist and Chaos, refers to a Russian-speaking closed group "huis", known in the shadow community. The group primarily conducted spam raids on Telegram channels. We suspect that Key Group is a subsidiary project of the "huis" group. The group is currently inactive and, according to the latest Telegram post, has been rebranded.

Logo of the huis group (source: tgstat.com)

We also checked the GitHub repository from which the ransomware and wipers were downloaded. The account max444432 is subscribed to the account

hxxps://github[.]com/json1c . Its description contains the following contact on Telegram:

hxxps://t[.]me/json1c .



Description of the json1c account on GitHub

The Telegram user Bloody-Lord Destroyer-Crew, also known as "bloody" in the shadow community, was the owner of the "huis" group.

IN THE SAME CATEGORY

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Analysis of the Crypt Ghouls group: continuing the investigation into a series of attacks on Russia

Awaken Likho is awake: new techniques of an APT group

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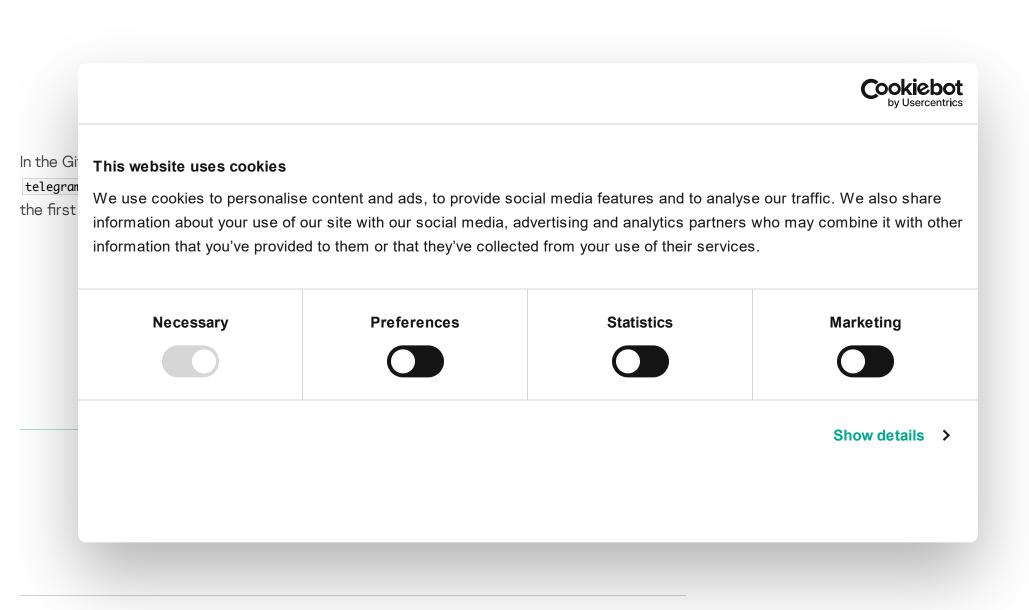
In the lat @[redact channel:

Necessary	Preferences	Statistics	Marketing

Show details >

Preview of the account on Telegram

This is a closed Telegram channel. Previously, the group also had an open channel <code>@[redacted]</code>, which the attackers used to communicate with victims; however, it is no longer available. In that channel, the group published news about Key Group, updates from other channels of both technical and ideological nature, leaks from other Telegram sources, and announcements about spam raids.



Commits for uploading samples to the RMS2 repository

In one of the ransom notes (MD5: 7E1577B6E42D47B30AE597EEE720D3B1), the attackers asked "not to touch Nikita's channels, bloody and nacha", which again indicates a connection to "huis":

I am the owner of keygroup777 and I was enraged by the work of the telegram technical suppor and I ask you not to touch Nikita's channels, bloody and nacha will be much worse time goes by, hello from Root)

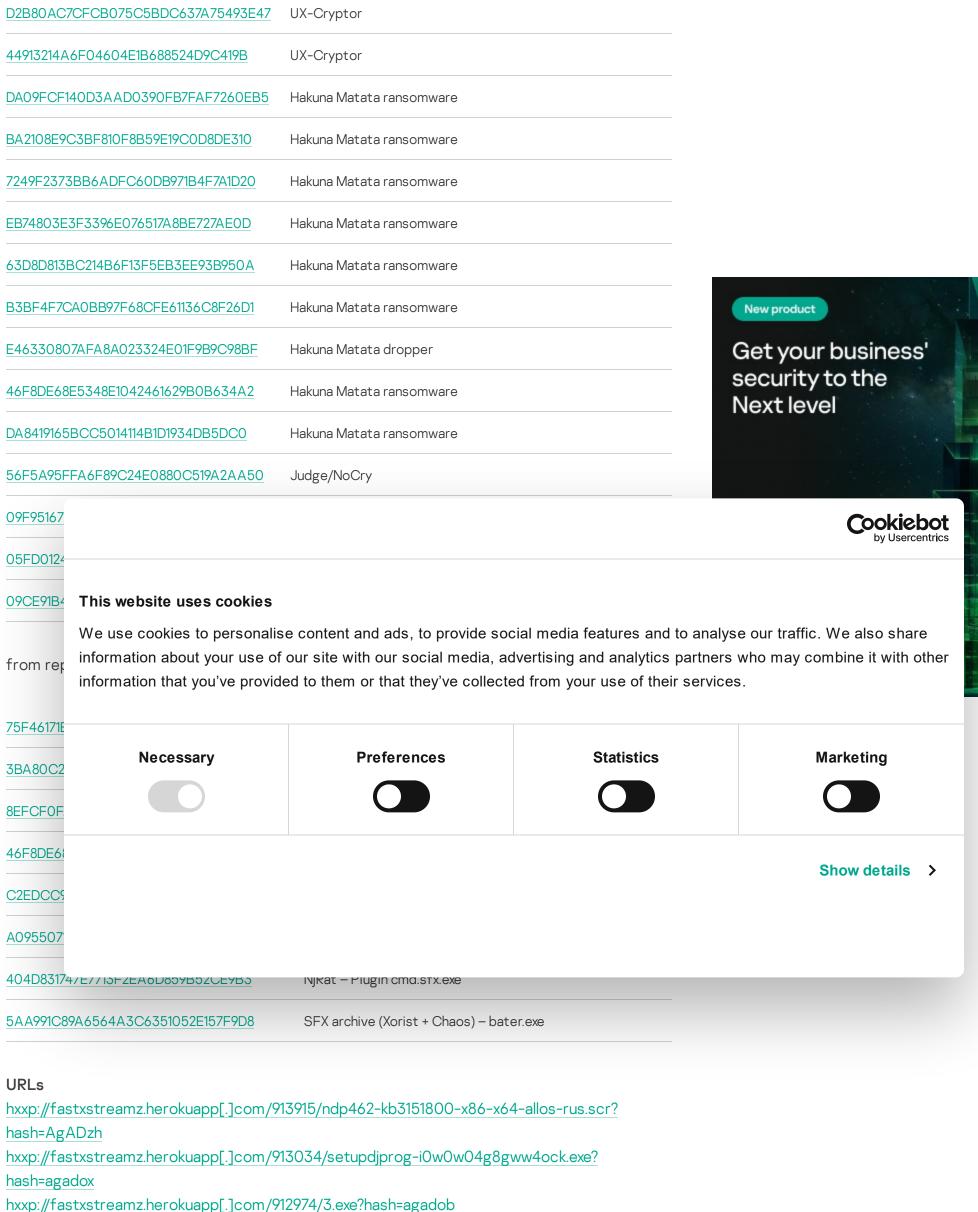
4 and quote Durov, Everything is just beginning - knees will become your only pose.

Takeaways

As we can see, Key Group, like many hacktivists, does not develop its own malware but actively uses leaked ransomware builders, and the primary C2 channel is a GitHub repository, which makes it easy to track their activities. It's also important to note that ransomware source code is increasingly becoming publicly available, and the number of groups using leaked builders or ransomware source code is on the rise. In the future, it is likely that there will be even more such groups.

Indicators of compromise

D2FFADEC5AA0A5CDD5E5CF1A7901EB29	Ransomware 1-st stage downloader		
5AA991C89A6564A3C6351052E157F9D8	Ransomware 2-nd stage dropper (SR	-X archive) – RegAsm.exe	
BC9B44D8E5EB1543A26C16C2D45F8AB7	Xorist ransomware – 1.exe		
ACEA7E35F8878AEA046A7EB35D0B8330	Chaos ransomware – 2.exe		
2737B1B3835242989F544A18D2DBAEFF	PowerShell LNK downloader		
843F24AFDA0E1B375F00A00B39CF4A6E	Ransomware 1-st stage dropper (SF	X archive)	
636E1A7083439E77920C5C902DE8E2AE	Ransomware 2-nd stage downloader	r	
1113BFBC7F3A62C87F1E090C57FA5D14	Ransomware 3-rd stage dropper (SF	-X archive)	
C910DA0BAA2E08CEFCE079D1F7CB3469	Chaos ransomware – 1.exe		
A0165523B0CB1A3AD28B995F100CC3C3	Xorist ransomware downloader – 2.e	xe	
E0C744162654352F5E048B7339920A76	Xorist ransomware – RegAsm.exe		
F9369556			Cookiebot by Usercentrics
D655E778			
This website uses cookies BC9B44C We use cookies to personalis	se content and ads, to provide so	cial media features and	to analyse our traffic. We also share
CE9D503 information about your use of	our site with our social media, ac	dvertising and analytics	partners who may combine it with other
information that you've provid A7ED004	ed to them or that they've collect	ed from your use of thei	r services.
Necessary	Preferences	Statistics	Marketing
Necessary C2E1048E	Preferences	Statistics	Marketing
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Necessary C2E1048E 7E1577B6 D655E778	Preferences	Statistics	
Necessary C2E1048E 7E1577B6 D655E778 C910DA0I	Preferences Chaos ransomware	Statistics	
C2E1048E 7E1577B6 D655E778 C910DA0I FBD7E50		Statistics	
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hxxps://raw.githubusercontent[.]com/max444432/RMS2/main/*

make-catherine.at.ply[.]gg - C2 XWorm V2.2

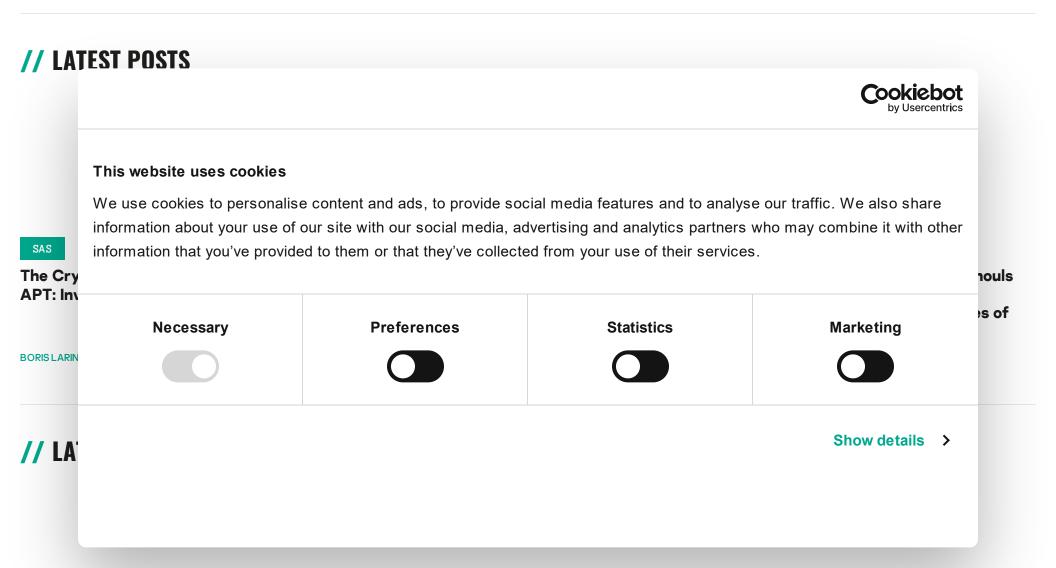
HACKTIVISTS MALWARE MALWARE DESCRIPTIONS MALWARE TECHNOLOGIES MICROSOFT WINDOWS MBR RAAS RANSOMWARE RAT TELEGRAM RAT TROJAN TARGETED ATTACKS WIPER

Key Group: another ransomware group using leaked builders

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