

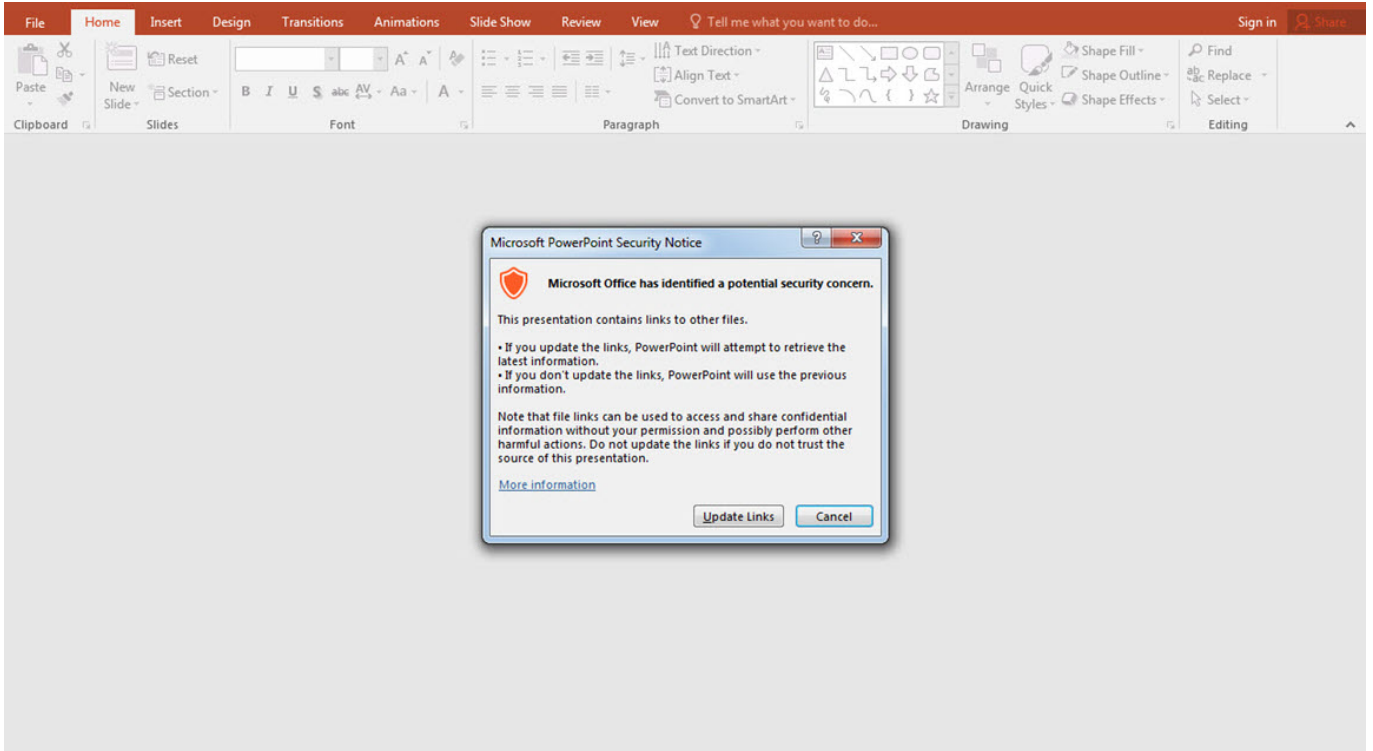
# Önüm Arkam Sağım Solum Cobalt Strike

written by Mert SARICA | 1 February 2019

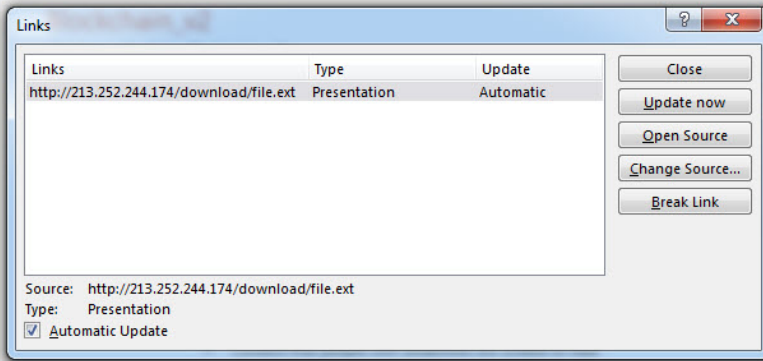
Son yıllarda özellikle finansal kurumlara gerçekleştirilen hedeflenmiş siber saldırılara (APT) bakıldığında, sızma testi uzmanlarının da yakından bildiği Cobalt Strike aracının kullanıldığını görebilirsiniz. Hatta Rusya'nın merkez bankası yetkililerine kulak vererseniz, 2017 yılında bu araçla 240 bankaya yapılan siber saldırılar sonucunda 17 milyon doların çalındığını öğrenebilirsiniz. Siber saldırganların taktik, teknik ve prosedürlerinin başarılı bir şekilde simülasyonunu yapmaya imkan tanıyan, özellikle gizli haberleşme özelliği ile istismar sonrası (post exploitation) kullanılan bir araç olan Cobalt Strike, özellikle güvenlik teknolojileri ve insan kaynağı yatırımdan yoksun kurumlara karşı kullanıldığında ciddi derecede sıkıntılara yol açabilmektedir.

Bu hikaye 2018 yılının Nisan ayında, finansal kurumlara ödeme sistemleri ve çözümleri sunan bir firmanın çalışanının kurumsal e-posta adresinden, bir bankanın çalışanına e-posta gönderilmesiyle başlar. E-postanın ekinde yer alan Powerpoint sunum dosyasına bakıldığında firma tarafından hazırlanmış masum bir dosya gibi görünse de, güvenlik sistemlerinde alarm üretip engellenmesi sebebiyle şüpheleri üzerine çeker ve ardından bankanın güvenlik analistleri tarafından analiz edilmeye başlanır.

Powerpoint dosyası açıldığında ortaya çıkan uyarı mesajı, dosyanın içeriğinde bağlantılar olduğunu işaret eder. Bağlantılara detaylı olarak bakıldığında, uyarı mesajında çıkan "Update Links" butonuna basıldığında Litvanya'daki bir sunucuya ait olan [http://213\[.\]252.244.174/download/](http://213[.]252.244.174/download/) web adresinden file.ext dosyasının indirilip çalıştırılacağı anlaşılır.



## Info



### Properties

Size	4,13MB
Slides	30
Hidden slides	0
Title	PowerPoint Presentation
Tags	Add a tag
Categories	Add a category

### Related Dates

Last Modified	03.04.2018 09:26
Created	15.09.2014 10:14
Last Printed	

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Bu bağlantının sunum dosyasının neresinde olduğunun öğrenilmesi için ise sunum.pptx dosyası 7-Zip aracı ile açılıp ortaya çıkan klasörlerde 213[.]252.244.174 adresi aratıldığında bu adresin sunum\ppt\slides\\_rels\slide29.xml.rels dosyası içinde, 29. slaytta olduğu anlaşılır. 29. slayta dikkatlice bakıldığında ise bağlantının sağ alt köşeye gizlendiği görülür.

## Haberler

### “Festy Unveils Digital Currency Payments Wristband”

**Amaç:** Festivalde ödemeleri Dash dijital para birimini kullanarak yapmak

**Kurumlar:** Festy

Combining two of the most hyped trends in fintech, wearables and cryptocurrencies, Irish startup Festy has unveiled a wristband that lets festival-goers make contactless payments in Dash.

User add the Dash currency to their QR code and NFC-integrated wristband and then use it to pay for food and drinks at POS terminals where Visa contactless is accepted as well as on phones with NFC tags.

Festy is linked directly to a consumer's Dash account so transactions occur within seconds, while merchants have the ability to cash out their Dash for the equivalent fiat currency.

Dash claims to be the world's leading digital currency for payments and is currently the sixth most valued cryptocurrency at over \$1.3 billion. Festy argues that the currency is ideal for festivals, where party-goers often have long waits in line to use ATMs that can charge several euros per withdrawal.

Graham de Barra, CEO, Festy: "Unlike existing traditional bank payments that take a 2-5% fee, there is no cost on receiving Dash for merchants. Merchants accepting payments will never have a chargeback, and there are potentially enormous savings to be made compared to the crippling fees from existing payment solutions."



## Haberler

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[Loading...Please wait](#)

file.ext dosyasının içeriğine bakıldığında, VBS (Visual Basic Script) betiği içerisinde çağrılan, base64 ile gizlenmiş (encode) bir powershell betiği olduğu görülür. Bu betik çözüldükten (decode) sonra ise bu defa bellekte bir alana enjekte edildikten sonra CreateThread API'si ile çalıştırılan, base64 ile gizlenmiş başka bir kod ortaya çıkar. Çoğunlukla son adımda ortaya çıkan bu kod parçası bir kabuk kodu olur. (shellcode)





Kabuk kodunu dinamik olarak analiz etmeden önce 213.252.244.174 IP adresi çevrimdışı olduğu için daha önce dinamik sistem analizi esnasında Fiddler aracı ile elde edilen, https://213[.]252.244.174/QYkG adresinden indirilen ancak okunaklı olmayan pakedin (2. stage payload), Charles Proxy aracı ile test.com adresine yönlendirilmesi ve daha önce elde edilen paketi diskten okuyup istekte bulunan herhangi bir programa göndermesi sağlanır.

The screenshot displays the Fiddler Web Debugger interface. The main window shows a list of intercepted requests with columns for Protocol, Host, URL, Body, Caching, Content-Type, and Process. The selected request is an HTTPS request to https://213.252.244.174/QYkG with a body size of 206,900 bytes and content type application/javascript. The right-hand pane shows the details of this request, including the Request Headers (GET /QYkG HTTP/1.1), Cache (no-cache), Client (Mozilla/5.0), and Transport (Host: 213.252.244.174). The bottom pane shows the raw hex data of the request body.

Pro...	Host	URL	Body	Caching	Content-Type	Process
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /QYkG	206.900		application/...	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /en_US/all.js	48		application/...	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:3104
00	HTTPS	213.252.244.174 /submit.php?id=69555	0		text/html	powershell:3104
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /QYkG	206.900		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900
00	HTTP	Tunnel to 213.252.244.174:443	613			powershell:2900
00	HTTPS	213.252.244.174 /en_US/all.js	0		application/...	powershell:2900

```
00000000 48 54 54 50 2F 31 2E 31 20 HTTP/1.1
00000009 32 30 30 20 4F 4B 0D 0A 43 200 OK..C
00000012 6F 6E 74 65 6E 74 2D 54 79 ontent-Ty
0000001B 70 65 3A 20 61 70 70 6C 69 pe: appli
00000024 63 61 74 69 6F 6E 2F 6F 63 cation/oc
0000002D 74 65 74 2D 73 74 72 65 61 tet-strea
00000036 6D 0D 0A 44 61 74 65 3A 20 m..Date:
0000003F 57 65 64 2C 20 34 20 41 70 Wed, 4 Ap
00000048 72 20 32 30 31 38 20 31 31 r 2018 11
00000051 3A 30 39 3A 35 36 20 47 4D :09:56 GM
0000005A 54 0D 0A 43 6F 6E 74 65 6E T..Conten
00000063 74 2D 4C 65 6E 67 74 68 3A t-Length:
0000006C 20 32 30 36 39 30 30 0D 0A 206900..
00000075 0D 0A EB 25 58 60 8B 48 04 ..ëX'.H.
0000007E 33 08 EB F9 C1 E9 02 BB 5C 3..ùé.\
00000087 07 04 31 6C 07 08 83 EF 04 ..\...i.
00000090 49 75 F2 B8 18 31 58 08 61 Iuð..lX.a
00000099 83 C0 08 FF E0 E8 D6 FF FF .À.ÿääöÿÿ
000000A2 FF S1 8F DA 4C S1 A7 D9 4C ÿQ.ÛLQsÛL
000000AB 1C D5 32 4C 1C D5 32 17 4E .ÖzL.Öz.N
000000B4 90 67 9E AB 11 A4 EC 2B 11 .g.«.ñi+.
```

174:443 613 powers Client

Telerik Fiddler Options

General HTTPS Connections Gateway Appearance Extensions Performance Tools

By default, Fiddler "chains" to the system's default proxy (Client -> Fiddler -> Gateway -> Web). These settings allow you to override that behavior.

Use System Proxy (recommended)  
 Automatically Detect Proxy using WPAD  
 Manual Proxy Configuration:  
  
  
 No Proxy

[Show Current Gateway Info](#)

Help Note: Changes may not take effect until Fiddler is restarted. OK Cancel

Charles 4.1.4 - Session 1 \*

File Edit View Proxy Tools Window Help

Structure Sequence

- No Caching... Ctrl+Alt+N
- Block Cookies... Ctrl+Alt+C
- Map Remote... Ctrl+Alt+M
- Map Local... Ctrl+Alt+L
- Rewrite... Ctrl+Alt+R
- Black List... Ctrl+Alt+B
- White List... Ctrl+Alt+W
- DNS Spoofing... Ctrl+Alt+D
- Mirror... Ctrl+Alt+I
- Auto Save... Ctrl+Alt+A
- Client Process...
- Compose Ctrl+M
- Compose New... Ctrl+Shift+M
- Repeat Ctrl+Shift+R
- Repeat Advanced...
- Validate
- Publish Gist
- Import/Export Settings...
- Profiles...
- Publish Gist Settings...

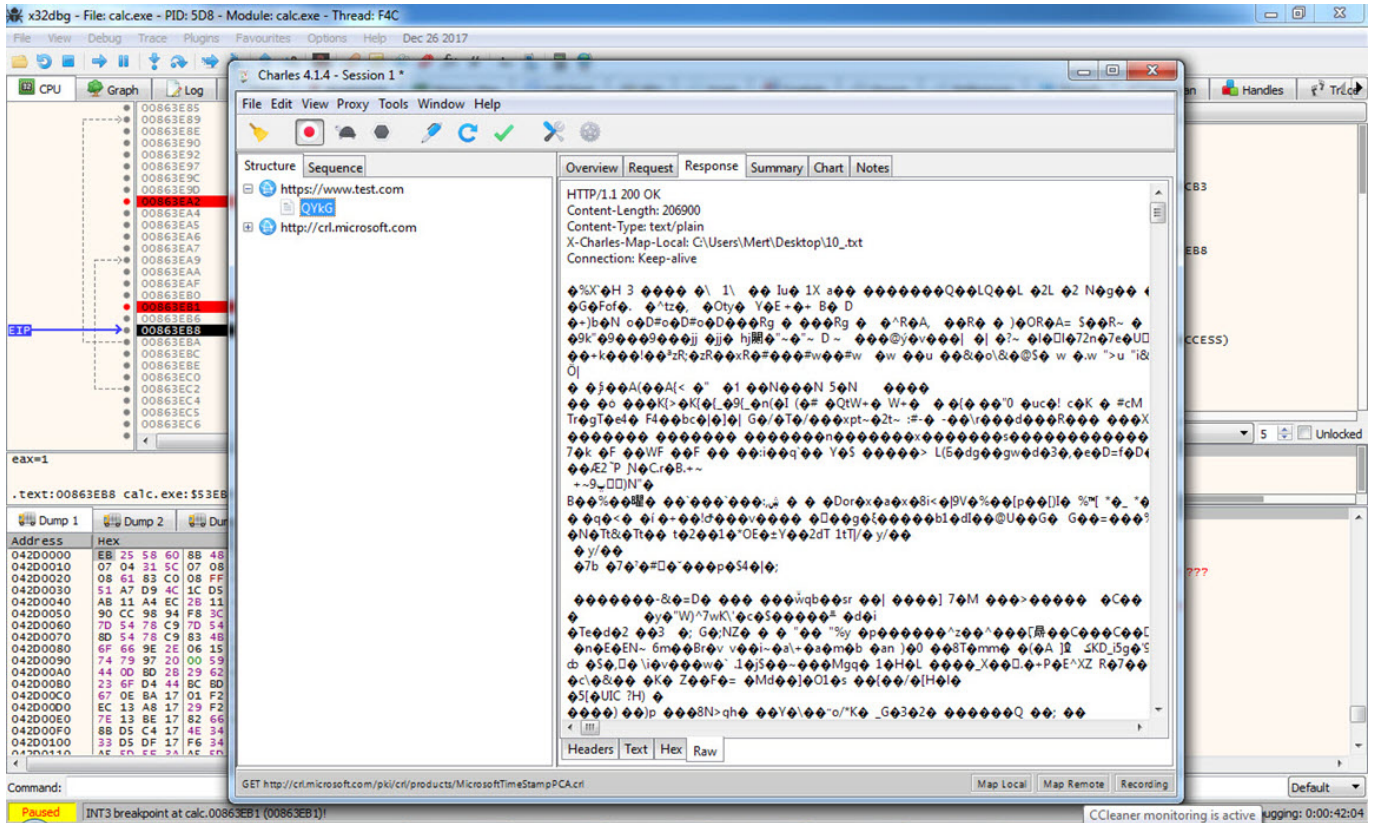
CONNECT https://ssl.gstatic.com

Map Local Map Remote Recording



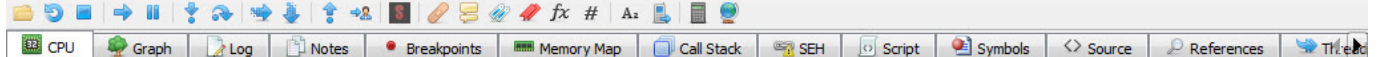






Dinamik sistem analizi esnasında Fiddler ile kayıt edilen HTTPS trafiğinde yer alan gizlenmiş Cookie bilgisine göre bu kabuk kodunun Cobalt Strike aracına ait olduğu ihtimali güçlenir.





Address	Disassembly
008A3C98	63 2E arpl word ptr ds:[esi],bp
008A3C9D	70 64 jg calc.8A3D03
008A3C9F	62 00 bound eax,qword ptr ds:[eax]
008A3CA1	00 00 add byte ptr ds:[eax],al
008A3CA3	00 00 add byte ptr ds:[eax],al
008A3CA5	00 00 add byte ptr ds:[eax],al
008A3CA7	00 00 add byte ptr ds:[eax],al
008A3CA9	00 00 add byte ptr ds:[eax],al
008A3CAB	00 00 add byte ptr ds:[eax],al
008A3CAD	00 00 add byte ptr ds:[eax],al
008A3CAF	00 00 add byte ptr ds:[eax],al
008A3CB1	00 00 add byte ptr ds:[eax],al
008A3CB3	00 00 add byte ptr ds:[eax],al
008A3CB5	00 00 add byte ptr ds:[eax],al
008A3CB7	00 00 add byte ptr ds:[eax],al
008A3CB9	00 00 add byte ptr ds:[eax],al
008A3CBB	00 00 add byte ptr ds:[eax],al
008A3CBD	00 00 add byte ptr ds:[eax],al
008A3CBF	00 00 add byte ptr ds:[eax],al
008A3CC1	00 00 add byte ptr ds:[eax],al
008A3CC3	00 00 add byte ptr ds:[eax],al
008A3CC5	00 00 add byte ptr ds:[eax],al
008A3CC7	00 00 add byte ptr ds:[eax],al
008A3CC9	00 00 add byte ptr ds:[eax],al
008A3CCB	00 00 add byte ptr ds:[eax],al
008A3CCD	00 00 add byte ptr ds:[eax],al
008A3CCF	00 00 add byte ptr ds:[eax],al
008A3CD1	00 00 add byte ptr ds:[eax],al
008A3CD3	00 00 add byte ptr ds:[eax],al
008A3CD5	00 00 add byte ptr ds:[eax],al

Hide FPU

EAX 00000000  
EBX 00000000  
ECX 2E9D0000  
EDX 0021E1C8  
EBP 0013F90C  
ESP 0013F8E0  
ESI FFFFFFFE  
EDI 00000000

EIP 77DD0ED5 ntdll.77DD0ED5

EFLAGS 00000246  
ZE 1 PE 1 AE 0  
OF 0 SE 0 DF 0  
CF 0 TF 0 IF 1

LastError 00000000 (ERROR\_SUCCESS)  
LastStatus 00000000 (STATUS\_SUCCESS)

GS 002B FS 0053  
ES 002B DS 002B  
CS 0023 SS 002B

x87r0 00000000000000000000 ST0 Empty 0.00  
x87r1 00000000000000000000 ST1 Empty 0.00

byte ptr [eax]=[0]=???  
al=0  
.text:008A3CA7 calc.exe:\$53CA7 #530A7

Default (stdcall) 5 Unlocked

1: [esp+4] 00000000  
2: [esp+8] 00000000  
3: [esp+C] 7EFDE000  
4: [esp+10] 0013FAC8

Address	Hex	ASCII
008A3CA7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3CB7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3CC7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3CD7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3CE7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3CF7	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3D07	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3D17	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3D27	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3D37	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....
008A3D47	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	.....

0013F8 76A8662  
0013F8 00000000  
0013F8 00000000  
0013F8 7EFDE000  
0013F8 0013FAC8  
0013F8 0165F000  
0013F8 0013FAC8 pointer to SEH\_Record[1]  
0013F9 77DA58C5 ntdll.77DA58C5  
0013F9 016E2100  
0013F9 00000000  
0013F9 0013FAC8  
0013F9 77DB0F00 return to ntdll.77DB0FC7 from ntdll.77DD0ED5  
0013F9 7EFDD000  
0013F9 7EFDE000

Command: Default

x32dbg - File: calc.exe - PID: 518 - Module: calc.exe - Thread: Main Thread B54

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CPU Graph Log Notes Breakpoints Memory Map Call Stack SEH Script Symbols Source References

008A3C98 63 2E arp1 word ptr ds:[esi],bp  
 008A3C9D 70 64 jo calc.8A3D03  
 008A3C9F 62 00 bound eax,qword ptr ds:[eax]  
 008A3CA1 00 00 add byte ptr ds:[eax],al  
 008A3CA3 00 00 add byte ptr ds:[eax],al  
 008A3CA5 00 00 add byte ptr ds:[eax],al  
 008A3CA7 00 00 add byte ptr ds:[eax],al  
 008A3CA9 00 00 add byte ptr ds:[eax],al  
 008A3CAB 00 00 add byte ptr ds:[eax],al  
 008A3CAD 00 00 add byte ptr ds:[eax],al  
 008A3CAF 00 00  
 008A3CB1 00 00  
 008A3CB3 00 00  
 008A3CB5 00 00  
 008A3CB7 00 00  
 008A3CB9 00 00  
 008A3CBB 00 00  
 008A3CBD 00 00  
 008A3CBF 00 00  
 008A3CC1 00 00  
 008A3CC3 00 00  
 008A3CC5 00 00  
 008A3CC7 00 00  
 008A3CC9 00 00  
 008A3CCB 00 00  
 008A3CCD 00 00  
 008A3CCF 00 00  
 008A3CD1 00 00  
 008A3CD3 00 00  
 008A3CD5 00 00

byte ptr [eax]=[0]===  
 al=0  
 .text:008A3CA7 calc.exe:\$53CA7 #530A7

Fill data at 008A3C7

ASCII:  
 ĸWh Svñ -káyõ.Àtí< Ā.ĀuáxĀē yyy213.252.244.174

UNICODE:  
 ĸWh Svñ -káyõ.Àtí< Ā.ĀuáxĀē yyy213.252.244.174

Last Codepage: Codepage...

Hex:  
 FC E8 89 00 00 00 60 89 E5 31 D2 64 88 52 30 88  
 52 0C 88 52 14 88 72 28 0F B7 4A 26 31 FF 31 C0  
 AC 3C 61 7C 02 2C 20 C1 CF 0D 01 C7 E2 F0 52 57  
 88 52 10 88 42 3C 01 D0 88 40 78 85 C0 74 4A 01  
 D0 50 88 48 18 88 58 20 01 D3 E3 3C 49 8B 34 88  
 01 D6 31 FF 31 C0 AC C1 CF 0D 01 C7 38 E0 75 F4  
 03 7D F8 3B 7D 24 75 E2 58 88 58 24 01 D3 66 88  
 0C 48 88 58 1C 01 D3 88 04 88 01 D0 89 44 24 24

Hide FPU  
 EAX 00000000  
 EBX 00000000  
 ECX 2E9D0000  
 EDX 0021E1C8  
 EBP 0013F90C  
 ESP 0013F8E0  
 ESI FFFFFFFE  
 EDI 00000000  
 EIP 77DD0ED5 ntdll.77DD0ED5  
 EFLAGS 00000246  
 ZE 1 PE 1 AE 0  
 OE 0 SE 0 DF 0  
 CE 0 TF 0 IF 1  
 GetLastError 00000000 (ERROR\_SUCCESS)  
 LastStatus 00000000 (STATUS\_SUCCESS)  
 GS 002B FS 0053  
 ES 002B DS 002B  
 CS 0023 SS 002B  
 x87r0 00000000000000000000 ST0 Empty 0.00  
 x87r1 00000000000000000000 ST1 Empty 0.00

Default (stdcall) 5 Unlocked  
 1: [esp+4] 00000000  
 2: [esp+8] 00000000  
 3: [esp+C] 7EFDE000  
 4: [esp+10] 0013FAC8

Address Hex  
 008A3DF7 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E07 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E17 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E27 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E37 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E47 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E57 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E67 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E77 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E87 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 008A3E97 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Command: Default

Initialized calc.exe: 008A3C7 -> 008A3E6 (0x00001A0 bytes) Time Wasted Debugging: 0:00:10:26

file shellcode-ctek CAUsers\Mer... x32dbg - File: ... Hex Worksho... 15:43

x32dbg - File: calc.exe - PID: 5D8 - Module: calc.exe - Thread: Main Thread BC8

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CPU Graph Log Notes Breakpoints Memory Map Call Stack SEH Script Symbols Source References

00863CAD FC E8 89 00 00 00 cld  
 00863CAE E8 89 00 00 00 00 call calc.863D3C  
 00863CAB 60 pushad  
 00863CB4 89 E5 mov ebp,esp  
 00863CB6 31 D2 xor edx,edx  
 00863CB8 64 88 52 30 mov edx,dword ptr ds  
 00863CBC 88 52 0C mov edx,dword ptr ds  
 00863CBF 88 52 14 mov edx,dword ptr ds  
 00863CC2 88 72 28 mov esi,dword ptr ds  
 00863CC5 0F B7 4A 26 movzx ecx,dword ptr d  
 00863CC9 31 FF xor edi,edi  
 00863CCB 31 C0 xor eax,eax  
 00863CCD AC lodsb  
 00863CCE C9 cmp al,61  
 00863CD0 7C 02 jnc  
 00863CD2 C2 20 sub al,20  
 00863CD4 C1 CF 0D ror edi,d  
 00863CD7 01 C7 add edi,edx  
 00863CD9 E2 F0 loop calc.863CCB  
 00863CDB 52 push edx  
 00863CDD 57 push edi  
 00863CDE 88 52 10 mov edx,dword ptr ds  
 00863CE0 88 42 3C mov eax,dword ptr ds  
 00863CE3 01 D0 add eax,edx  
 00863CE5 88 40 78 mov eax,dword ptr ds  
 00863CE8 85 C0 test eax,eax  
 00863CEA 74 4A jle calc.863D36  
 00863CEC 01 D0 add eax,edx  
 00863CEE 50 push eax  
 00863CEF 88 48 18 mov ecx,dword ptr ds

.text:00863CAD calc.exe:\$53CAD #530AD

Address Hex  
 00863C3D 73 72 65 76 00 90 90 00 00 00 00 90 E7 4C 00  
 00863C4D 00 00 00 02 00 00 00 21 00 00 00 80 3C 05 00 80  
 00863C5D 30 05 00 00 00 00 00 97 E7 4C 35 02 7E 19 0A  
 00863C6D 00 00 00 04 00 00 00 7C 3C 05 00 7C 30 05 00 7E  
 00863C7D 19 03 88 52 53 44 53 45 29 1D 97 98 E9 8C 43 84  
 00863C8D 76 43 A9 D8 39 C8 8E 02 00 00 00 63 61 6C 63 2E  
 00863C9D 70 64 62 00 00 00 00 00 00 00 00 00 00 00 00  
 00863CAD FC E8 89 00 00 00 60 89 E5 31 D2 64 88 52 30 88  
 00863CBD 52 0C 88 52 14 88 72 28 0F B7 4A 26 31 FF 31 C0  
 00863CDD AC 3C 61 7C 02 2C 20 C1 CF 0D 01 C7 E2 F0 52 57  
 00863CDE 88 52 10 88 42 3C 01 D0 88 40 78 85 C0 74 4A 01

Binary  
 Copy  
 Restore selection Ctrl+Backspace  
 Breakpoint  
 Follow in Dump  
 Follow in Memory Map  
 Decompile  
 Graph G  
 Help on mnemonic Ctrl+F1  
 Show mnemonic brief Ctrl+Shift+F1  
 Highlighting mode H  
 Label  
 Trace record  
 Comment ;  
 Toggle Bookmark Ctrl+D  
 Analysis  
 Download Symbols for This Module  
 Assemble Space  
 Patches Ctrl+P  
 Yara... Ctrl+Y  
 Set New Origin Here Ctrl+\*  
 Create New Thread Here  
 Go to  
 Search for  
 Find references to  
 xAnalyzer

Address Hex  
 00000000  
 00000000  
 EFD000  
 0025F698

EH\_Record[1]  
 CS  
 d11.77DB0FC7 from ntdll.77DD0ED5

Command: Default

Paused calc.exe: 00863CAD -> 00863CAD (0x0000001 bytes) VMware Tools logging: 0:00:08:55









olmalarını öneririm.

Bir sonraki yazıda grşmek dileęiyle herkese güvenli gnler dilerim.

Not:

1. Bu yazı ayrıca Pi Hediye Var #15 oyununun zm yolunu da iermektedir.