

ANALISI DINAMICA BASICA MALWARE

1. Identificazione di eventuali azioni del malware sul file system

[illegible]

2. Identificazione eventuali azioni del malware su processi e thread

| Time of Day | Process Name | PID | Operation | Path | Result | Detail |
|----------------|---------------------|------|----------------|--|---------|--|
| 12:21:16.32303 | Mahave_U3_W2_L2.exe | 2464 | Process Start | | SUCCESS | Parent PID: 212, Command line: "C:\Documents and Settings\Administrator\Desktop\Ejercicio_Pratico_U3_W2_L2\Mahave_U3_W2_L2.exe" |
| 12:21:16.32303 | Mahave_U3_W2_L2.exe | 2464 | Thread Create | | SUCCESS | Thread ID: 2468 |
| 12:21:16.32426 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Documents and Settings\Administrator\Desktop\Ejercicio_Pratico_U3_W2_L2\Mahave_U3_W2_L2.exe | SUCCESS | ImageBase: 04000000, Image Size: 0x0100 |
| 12:21:16.32442 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\ntdll.dll | SUCCESS | ImageBase: 0x7C900000, Image Size: 0x0000 |
| 12:21:16.35242 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\kernel32.dll | SUCCESS | ImageBase: 0x77D80000, Image Size: 0x0000 |
| 12:21:16.36235 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\user32.dll | SUCCESS | ImageBase: 0x77400000, Image Size: 0x0200 |
| 12:21:16.36635 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\version.dll | SUCCESS | ImageBase: 0x77C00000, Image Size: 0x0000 |
| 12:21:16.37464 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\advapi32.dll | SUCCESS | ImageBase: 0x774D0000, Image Size: 0x0000 |
| 12:21:16.37483 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\iprth.dll | SUCCESS | ImageBase: 0x77E70000, Image Size: 0x0000 |
| 12:21:16.37503 | Mahave_U3_W2_L2.exe | 2464 | Load Image | C:\Windows\System32\user32.dll | SUCCESS | ImageBase: 0x77400000, Image Size: 0x0200 |
| 12:21:16.37586 | Mahave_U3_W2_L2.exe | 2464 | Process Create | C:\Windows\System32\cmd.exe | SUCCESS | PID: 2472, Command line: "C:\Windows\System32\cmd.exe" |
| 12:21:17.38204 | Mahave_U3_W2_L2.exe | 2464 | Thread Exit | | SUCCESS | Thread ID: 2468, User Time: 0.000000s, Kernel Time: 0.001250s |
| 12:21:17.38215 | Mahave_U3_W2_L2.exe | 2464 | Process Exit | | SUCCESS | Exit Status: 0, User Time: 0.0156250 seconds, Kernel Time: 0.0156250 seconds, Private Bytes: 274,432, Peak Private Bytes: 307,200, Working |

3. Modifiche del registro dopo l'esecuzione del malware

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Regshot 1.9.0 x86 Unicode
Comments:
Datetime: 2023/1/10 13:18:04 , 2023/1/10 13:29:38
Computer: MALWARE_TEST , MALWARE_TEST
Username: Administrator , Administrator

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Keys deleted: 2
HKLM\SYSTEM\ControlSet001\Services\PROCMON24\Enum
HKLM\SYSTEM\CurrentControlSet\Services\PROCMON24\Enum

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Keys added: 2
HKLM\SYSTEM\ControlSet001\Enum\Root\LEGACY_PROCMON24\0000\Control
HKLM\SYSTEM\CurrentControlSet\Enum\Root\LEGACY_PROCMON24\0000\Control

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Values deleted: 6
HKLM\SYSTEM\ControlSet001\Services\PROCMON24\Enum\0: "Root\LEGACY_PROCMON24\0000"
HKLM\SYSTEM\ControlSet001\Services\PROCMON24\Enum\Count: 0x00000001
HKLM\SYSTEM\ControlSet001\Services\PROCMON24\Enum\NextInstance: 0x00000001
HKLM\SYSTEM\CurrentControlSet\Services\PROCMON24\Enum\0: "Root\LEGACY_PROCMON24\0000"
HKLM\SYSTEM\CurrentControlSet\Services\PROCMON24\Enum\Count: 0x00000001
HKLM\SYSTEM\CurrentControlSet\Services\PROCMON24\Enum\NextInstance: 0x00000001

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Values added: 24
HKLM\SYSTEM\ControlSet001\Enum\Root\LEGACY_PROCMON24\0000\Control\ActiveService: "PROCMON24"
HKLM\SYSTEM\ControlSet001\Services\kmixer\Enum\0: "sw{b7eafdc0-a680-11d0-96d8-00aa0051e51d}\{9B365890-165F-11D0-A195-0020AFD156E4}"
HKLM\SYSTEM\CurrentControlSet\Enum\Root\LEGACY_PROCMON24\0000\Control\ActiveService: "PROCMON24"
HKLM\SYSTEM\CurrentControlSet\Services\kmixer\Enum\0: "sw{b7eafdc0-a680-11d0-96d8-00aa0051e51d}\{9B365890-165F-11D0-A195-0020AFD156E4}"
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\MinPos1920x940(1).x: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\MinPos1920x940(1).y: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\MaxPos1920x940(1).x: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\MaxPos1920x940(1).y: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\WinPos1920x940(1).left: 0x0000009A
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\WinPos1920x940(1).top: 0x000000CB
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\WinPos1920x940(1).right: 0x000003BA
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\WinPos1920x940(1).bottom: 0x00000323
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\ScrollPos1920x940(1).x: 0x00000000
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\106\Shell\ScrollPos1920x940(1).y: 0x00000000
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\ScrollPos1920x940(1).x: 0x00000000
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\ScrollPos1920x940(1).y: 0x00000000
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\MinPos1920x940(1).x: 0xFFFF8300
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\MinPos1920x940(1).y: 0xFFFF8300
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\MaxPos1920x940(1).x: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\MaxPos1920x940(1).y: 0xFFFFFFFF
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\WinPos1920x940(1).left: 0x00000016
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\WinPos1920x940(1).top: 0x0000001b
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\WinPos1920x940(1).right: 0x00000336
HKU\S-1-5-21-1993962763-1606980848-725345543-500\Software\Microsoft\Windows\ShellNoRoam\Bags\26\Shell\WinPos1920x940(1).bottom: 0x00000275

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Values modified: 21
HKLM\SOFTWARE\Microsoft\Cryptography\RNG\Seed: A3 D5 BD 91 DC 89 D6 BF 7E 81 AE 12 FB 6C F5 03 91 D1 5F 8F 58 DC 72 59 67 C5 35 93 F8 83 C3 D
HKLM\SOFTWARE\Microsoft\Cryptography\RNG\Seed: E4 5C FA 49 9A E8 C8 D1 AF OD 5D 04 40 63 04 FB A6 57 3D BC 90 BB F0 90 E0 15 C5 E6 34 15 0D 7
HKLM\SYSTEM\ControlSet001\Services\kmixer\Enum\Count: 0x00000000
HKLM\SYSTEM\ControlSet001\Services\kmixer\Enum\NextInstance: 0x00000000

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Files added: 1
C:\Documents and Settings\Administrator\Desktop\1st shot.hivu

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Files deleted: 1
C:\WINDOWS\SoftwareDistribution\DataStore\Logs\tmp.edb

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Files [attributes?] modified: 17
C:\WINDOWS\Prefetch\APATEDNS.EXE-02BC24A6.pf
C:\WINDOWS\Prefetch\MALWARE_U3_W2_L2.EXE-1535026A.pf
C:\WINDOWS\Prefetch\PROCMON.EXE-0D936DEE.pf
C:\WINDOWS\Prefetch\REGSHOT-X86-UNICODE.EXE-32EDD4BA.pf
C:\WINDOWS\Prefetch\SVCHOST.EXE-3530F672.pf
C:\WINDOWS\Prefetch\TASKMGR.EXE-20256C55.pf
C:\WINDOWS\Prefetch\VERCLSID.EXE-3667BD89.pf
C:\WINDOWS\Prefetch\WMIPRVSE.EXE-28F301A9.pf
C:\WINDOWS\SoftwareDistribution\DataStore\DataStore.edb
C:\WINDOWS\SoftwareDistribution\DataStore\Logs\edb.chk
C:\WINDOWS\SoftwareDistribution\DataStore\Logs\edb.log
C:\WINDOWS\system32\config\SECURITY.LOG
C:\WINDOWS\system32\config\software.LOG
C:\WINDOWS\system32\config\system.LOG
C:\WINDOWS\system32\wbem\Logs\wbemcore.log
C:\WINDOWS\system32\wbem\Logs\wmiprov.log
C:\WINDOWS\WindowsUpdate.log

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Total changes: 74
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4. Spiegazione del malware in base a quanto visto

Il malware ha attaccato il processo svchost.exe

che è usato da Microsoft per nascondere più servizi dietro ad un unico processo, quindi bisogna capire intanto quale servizio è stato attaccato; andando a cercare i moduli usati, ci siamo accorti che il processo usava la libreria rpcrt4.dll

Event Properties

Event Process Stack

Image

Name: Malware_U3_W2_L2.exe

Version:

Path: C:\Documents and Settings\Administrator\Desktop\Esercizio_Pratico_U3_W2_L2\Malware_U3_W2_L2.exe

Command Line: "C:\Documents and Settings\Administrator\Desktop\Esercizio_Pratico_U3_W2_L2\Malware_U3_W2_L2.exe"

PID: 2464 Architecture: 32-bit

Parent PID: 212 Virtualized: n/a

Session ID: 0 Integrity: n/a

User: MALWARE_TEST\Administrator

Auth ID: 00000000:0001598d

Started: 1/10/2023 1:22:16 PM Ended: 1/10/2023 1:22:17 PM

Modules:

| Module | Address | Size | Path | Company | Version | Timestamp |
|-----------------|------------|---------|---------------------------------------|--------------------|-------------------|-------------------|
| Malware_U3_W... | 0x400000 | 0xd000 | C:\Documents and Settings\Administ... | | | 1/1/1970 12:00... |
| apphelp.dll | 0x77b40000 | 0x22000 | C:\WINDOWS\system32\apphelp.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| version.dll | 0x77c00000 | 0x8000 | C:\WINDOWS\system32\version.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| advapi32.dll | 0x77dd0000 | 0x9b000 | C:\WINDOWS\system32\advapi32.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| rpcrt4.dll | 0x77e70000 | 0x92000 | C:\WINDOWS\system32\rpcrt4.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| secur32.dll | 0x77fe0000 | 0x11000 | C:\WINDOWS\system32\secur32.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| kernel32.dll | 0x7c800000 | 0xf6000 | C:\WINDOWS\system32\kernel32.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |
| ntdll.dll | 0x7c900000 | 0xaf000 | C:\WINDOWS\system32\ntdll.dll | Microsoft Corpo... | 5.1.2600.5512 ... | 1/1/1970 12:00... |

che è usata per la comunicazione di rete e internet; cercando sempre su ProcMon nella sezione network activity, possiamo vedere infatti che il processo svchost tenta una connessione sia TCP che UDP ad un server esterno

| Time of Day | Process Name | PID | Operation | Path | Result |
|------------------|--------------|------|-------------|--|---------|
| 1:22:15.65212... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:22:15.65221... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:22:33.43616... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:22:33.43622... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:23:37.67586... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:23:37.67593... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:24:18.67562... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:24:18.67606... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:24:59.67796... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:25:40.67515... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:25:40.67523... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:26:21.79954... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:26:21.79961... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:27:02.79954... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:27:02.79960... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:27:43.79957... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:27:43.79965... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:28:24.92572... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:28:24.92578... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:29:05.92615... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:29:05.92626... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:29:47.04986... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:29:47.04992... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:30:28.05016... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:30:28.05026... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:30:33.30297... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:30:33.30303... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:30:33.31708... | svchost.exe | 1144 | UDP Send | Malware_test:ntp -> Malware_test:ntp | SUCCESS |
| 1:30:33.31709... | svchost.exe | 1144 | UDP Receive | Malware_test:ntp -> Malware_test:ntp | SUCCESS |
| 1:30:33.31718... | svchost.exe | 1144 | UDP Send | Malware_test:ntp -> Malware_test:ntp | SUCCESS |
| 1:30:33.31718... | svchost.exe | 1144 | UDP Receive | Malware_test:ntp -> Malware_test:ntp | SUCCESS |
| 1:31:09.06594... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:31:09.06601... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:31:50.19545... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:31:50.19555... | svchost.exe | 1192 | UDP Receive | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:32:31.41685... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:33:11.42458... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:33:51.42463... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:34:31.42456... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:35:11.45832... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:35:51.45676... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:36:32.31255... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:37:12.31521... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:37:52.31524... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:38:32.31648... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:39:12.31536... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:39:52.33196... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:40:32.92270... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:41:12.92482... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |
| 1:41:52.94018... | svchost.exe | 1192 | UDP Send | Malware_test:1025 -> Malware_test:domain | SUCCESS |

in questo caso possiamo ipotizzare si tratti di un Trojan in quanto il comportamento appena evidenziato fa parte dell'attività del suddetto, che può essere programmato appunto per trasformare il pc infetto in un computer zombie da utilizzare in una botnet.