PRACTICAL 1

DATE: 05/01/2025

AIM: Scan Vulnerabilities Using Nmap.

Nmap:

- Nmap, or Network Mapper, is a free, open-source network security tool that scans networks for vulnerabilities and security issues.

Command Used To Scan Vulnerabilities:

- nmap --script <IP address> -v

Output:

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┌──(punit㉿kali)-[~]
└─$ nmap -p- --script vuln 192.168.40.129 -v
Starting Nmap 7.95 ( https://nmap.org ) at 2025-01-23 19:57 IST
NSE: Loaded 105 scripts for scanning.
NSE: Script Pre-scanning.
Initiating NSE at 19:57
Stats: 0:00:04 elapsed; 0 hosts completed (0 up), 0 undergoing Script Pre-Scan
NSE: Active NSE Script Threads: 1 (1 waiting)
NSE Timing: About 0.00% done
Completed NSE at 19:57, 10.01s elapsed
Initiating NSE at 19:57
Completed NSE at 19:57, 0.00s elapsed
Initiating ARP Ping Scan at 19:57
Scanning 192.168.40.129 [1 port]
Completed ARP Ping Scan at 19:57, 0.08s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 19:57
Completed Parallel DNS resolution of 1 host. at 19:57, 0.02s elapsed
Initiating SYN Stealth Scan at 19:57
Scanning 192.168.40.129 [65535 ports]
Discovered open port 25/tcp on 192.168.40.129
Discovered open port 80/tcp on 192.168.40.129
Discovered open port 21/tcp on 192.168.40.129
Discovered open port 3306/tcp on 192.168.40.129
Discovered open port 445/tcp on 192.168.40.129
Discovered open port 53/tcp on 192.168.40.129
Discovered open port 5900/tcp on 192.168.40.129
Discovered open port 23/tcp on 192.168.40.129
Discovered open port 139/tcp on 192.168.40.129
Discovered open port 111/tcp on 192.168.40.129
Discovered open port 22/tcp on 192.168.40.129
Discovered open port 56099/tcp on 192.168.40.129
Discovered open port 38509/tcp on 192.168.40.129
Discovered open port 42648/tcp on 192.168.40.129
Discovered open port 2121/tcp on 192.168.40.129
Discovered open port 5432/tcp on 192.168.40.129
Discovered open port 33306/tcp on 192.168.40.129
Discovered open port 8180/tcp on 192.168.40.129
Discovered open port 513/tcp on 192.168.40.129
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Not shown: 65505 closed tcp ports (reset)
PORT      STATE SERVICE
21/tcp    open  ftp
| ftp-vsftpd-backdoor:
|   VULNERABLE:
|   vsFTPd version 2.3.4 backdoor
|     State: VULNERABLE (Exploitable)
|     IDs:  CVE:CVE-2011-2523  BID:48539
|       vsFTPd version 2.3.4 backdoor, this was reported on 2011-07-04.
|     Disclosure date: 2011-07-03
|     Exploit results:
|       Shell command: id
|       Results: uid=0(root) gid=0(root)
|     References:
|       https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2011-2523
|       https://github.com/rapid7/metasploit-framework/blob/master/modules/exploits/unix/ftp/vsftpd_234_backdoor.rb
|       http://scarybeastsecurity.blogspot.com/2011/07/alert-vsftpd-download-backdoored.html
|_      https://www.securityfocus.com/bid/48539
22/tcp    open  ssh
23/tcp    open  telnet
25/tcp    open  smtp
| smtp-vuln-cve2010-4344:
|_  The SMTP server is not Exim: NOT VULNERABLE
| ssl-poodle:
|   VULNERABLE:
|   SSL POODLE information leak
|     State: VULNERABLE
|     IDs:  CVE:CVE-2014-3566  BID:70574
|           The SSL protocol 3.0, as used in OpenSSL through 1.0.1i and other
|           products, uses nondeterministic CBC padding, which makes it easier
|           for man-in-the-middle attackers to obtain cleartext data via a
|           padding-oracle attack, aka the "POODLE" issue.
|     Disclosure date: 2014-10-14
|     Check results:
|       TLS_RSA_WITH_AES_128_CBC_SHA
|     References:
|       https://www.imperialviolet.org/2014/10/14/poodle.html
|       https://www.securityfocus.com/bid/70574
|       https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2014-3566
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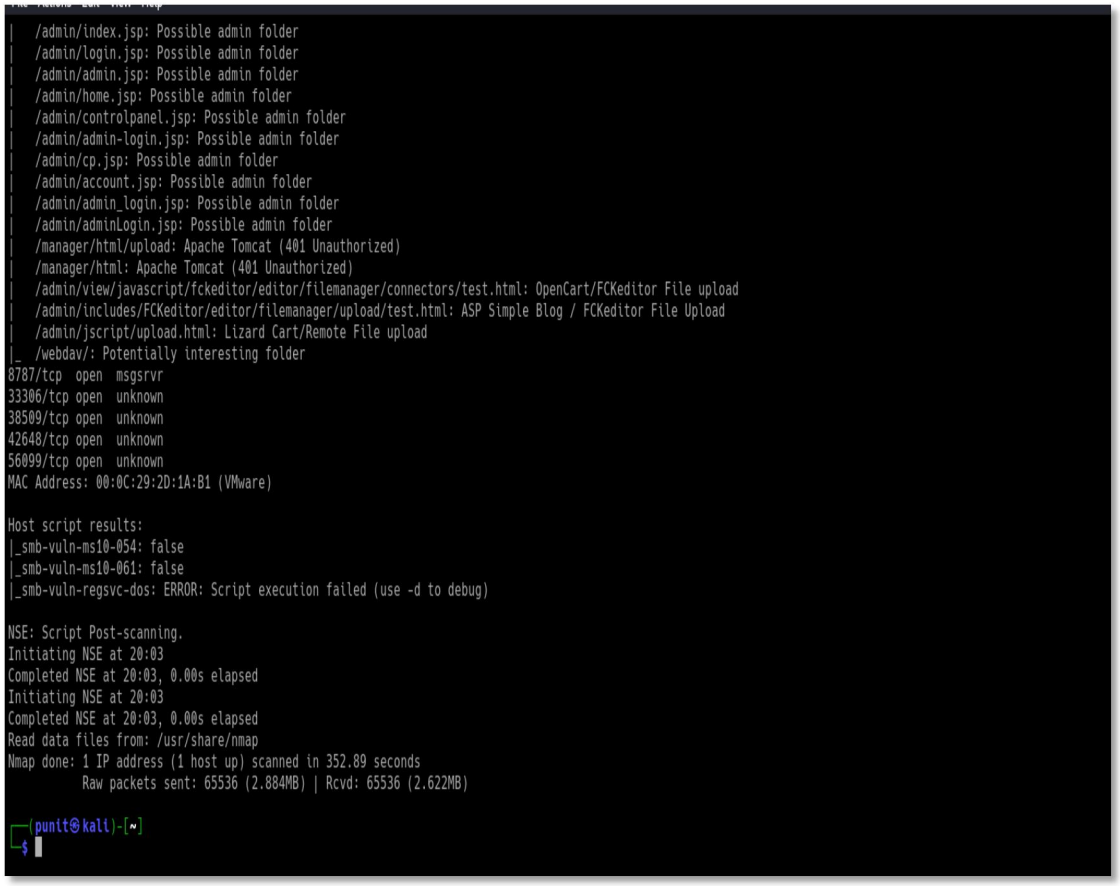
|   VULNERABLE:
|   Anonymous Diffie-Hellman Key Exchange MitM Vulnerability
|     State: VULNERABLE
|       Transport Layer Security (TLS) services that use anonymous
|       Diffie-Hellman key exchange only provide protection against passive
|       eavesdropping, and are vulnerable to active man-in-the-middle attacks
|       which could completely compromise the confidentiality and integrity
|       of any data exchanged over the resulting session.
|     Check results:
|       ANONYMOUS DH GROUP 1
|             Cipher Suite: TLS_DH_anon_EXPORT_WITH_RC4_40_MD5
|             Modulus Type: Safe prime
|             Modulus Source: Unknown/Custom-generated
|             Modulus Length: 512
|             Generator Length: 8
|             Public Key Length: 512
|     References:
|       https://www.ietf.org/rfc/rfc2246.txt
|
|   Transport Layer Security (TLS) Protocol DHE_EXPORT Ciphers Downgrade MitM (Logjam)
|     State: VULNERABLE
|     IDs:  CVE:CVE-2015-4000  BID:74733
|       The Transport Layer Security (TLS) protocol contains a flaw that is
|       triggered when handling Diffie-Hellman key exchanges defined with
|       the DHE_EXPORT cipher. This may allow a man-in-the-middle attacker
|       to downgrade the security of a TLS session to 512-bit export-grade
|       cryptography, which is significantly weaker, allowing the attacker
|       to more easily break the encryption and monitor or tamper with
|       the encrypted stream.
|     Disclosure date: 2015-5-19
|     Check results:
|       EXPORT-GRADE DH GROUP 1
|             Cipher Suite: TLS_DHE_RSA_EXPORT_WITH_DES40_CBC_SHA
|             Modulus Type: Safe prime
|             Modulus Source: Unknown/Custom-generated
|             Modulus Length: 512
|             Generator Length: 8
|             Public Key Length: 512
|     References:
```



Conclusion:

- Nmap is that it is a powerful tool for network security professionals to identify and address vulnerabilities on a network. Nmap is a free, open-source network scanning tool that can help network professionals to enhance their network understanding and strengthen their digital defenses.