

Assignment-2:

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In this lets explore Metasploit tool in kali Linux OS and scan the own computer and find the vulnerabilities and exploits in it.

- First we have to get the systems ipv4 address of the system we are checking and then scan the system using nmap.

```
(kali@kali)-[~]
$ nmap 192.168.10.35 -Pn
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-05 10:43 IST
Nmap scan report for VISHNU-PC (192.168.10.35)
Host is up (0.014s latency).
Not shown: 995 filtered tcp ports (no-response)
PORT      STATE SERVICE
135/tcp    open  msrpc
139/tcp    open  netbios-ssn
445/tcp    open  microsoft-ds
3306/tcp   open  mysql
5357/tcp   open  wsdapi

Nmap done: 1 IP address (1 host up) scanned in 5.36 seconds
```

```
(kali@kali)-[~]
$ nmap 192.168.10.35 -Pn -sV
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-05 10:45 IST
Nmap scan report for VISHNU-PC (192.168.10.35)
Host is up (0.0087s latency).
Not shown: 995 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?
3306/tcp   open  mysql?
5357/tcp   open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
1 service unrecognized despite returning data. If you know the service/version, please submit the following fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port3306-TCP:V=7.94%I=7%D=9/5%Time=64F6B975%P=x86_64-pc-linux-gnu%(NUL
SF:L,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\
SF:x20connect\\x20to\\x20this\\x20MySQL\\x20server")%(GenericLines,45,"\\0\\0\\0
SF:\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x
SF:20to\\x20this\\x20MySQL\\x20server")%(GetRequest,45,"\\0\\0\\0\\xffj\\x04Host\\
SF:x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x
SF:20MySQL\\x20server")%(HTTPOptions,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC
SF:\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\x20se
SF:rvr")%(RTSPRequest,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20no
SF:t\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\x20server")%(RPCC
SF:heck,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20
SF:t\\x20connect\\x20to\\x20this\\x20MySQL\\x20server")%(DNSVersionBindReqTCP
SF:,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x
SF:20connect\\x20to\\x20this\\x20MySQL\\x20server")%(DNSStatusRequestTCP,45,"
SF:\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20con
SF:nnect\\x20to\\x20this\\x20MySQL\\x20server")%(Help,45,"\\0\\0\\0\\xffj\\x04Host\\
SF:x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x
SF:20MySQL\\x20server")%(SSLSessionReq,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-
SF:PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\x20
SF:server")%(TerminalServerCookie,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\
SF:x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\x20serv
SF:er")%(TLSSessionReq,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20no
SF:t\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\x20server")%(Kerb
SF:eros,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20
SF:to\\x20connect\\x20to\\x20this\\x20MySQL\\x20server")%(SMBProgNeg,45,"\\0\\0\\
SF:0\\xffj\\x04Host\\x20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\
SF:x20to\\x20this\\x20MySQL\\x20server")%(X11Probe,45,"\\0\\0\\0\\xffj\\x04Host\\x
SF:20'VISHNU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x2
SF:0MySQL\\x20server")%(FourOhFourRequest,45,"\\0\\0\\0\\xffj\\x04Host\\x20'VISH
SF:NU-PC'\\x20is\\x20not\\x20allowed\\x20to\\x20connect\\x20to\\x20this\\x20MySQL\\
SF:x20server");
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Service detection performed. Please report any incorrect results at https://n
map.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 17.60 seconds
```

- We can see port no 139 and 445 resembles SMB. So we have to explore for exploits in smb.

- Now let's open Metasploit in our Kali Linux which is an exploitation framework that gives access to the system.

```
(kali@kali)-[~]
$ sudo msfconsole
[sudo] password for kali:

      .:ok000kdc'          'cdk000ko:.
      .x0000000000000c      c000000000000x.
      :00000000000000k,    ,k00000000000000:
      '000000000k00000:  :00000000000000000'
      o0000000.    .o000o0000l.    ,00000000o
      d0000000.    .c00000c.    ,00000000x
      l0000000.    ;d;    ,00000000l
      .0000000.    .;    ;    ,00000000.
      c0000000.    .00c.    'o00.    ,0000000c
      o000000.    .0000.    :0000.    ,000000o
      l00000.    .0000.    :0000.    ,00000l
      ;0000'    .0000.    :0000.    ;0000;
      .d00o    .0000occc0000.    x00d.
      ,k0l    .000000000000.    .d0k,
      :kk; .000000000000.    c0k:
      ;k00000000000000k:
      ,x000000000000x,
      .l0000000l.
      ,d0d,
      .

      =[ metasploit v6.3.27-dev
+ -- --=[ 2335 exploits - 1220 auxiliary - 413 post
+ -- --=[ 1382 payloads - 46 encoders - 11 nops
+ -- --=[ 9 evasion

Metasploit tip: After running db_nmap, be sure to
check out the result of hosts and services
Metasploit Documentation: https://docs.metasploit.com/
```

- We can enter "search smb" or "grep scanner search smb".

```
msf6 > grep scanner search smb
5  auxiliary/scanner/http/citrix_dir_traversal      2019-12-17      normal      No      Citrix ADC (NetScaler) Directory Traversal Scanner
6  auxiliary/scanner/smb/impacket/dcomexec          2018-03-19      normal      No      DCOM Exec
7  auxiliary/scanner/smb/impacket/secretsdump        normal         No      DCOM Exec
8  auxiliary/scanner/dcerpc/dfscoerce               normal         No      DFScoerce
48 auxiliary/scanner/smb/smb_ms17_010               normal         No      MS17-010 SMB RCE Detection
62 auxiliary/scanner/smb/psexec_loggedin_users      normal         No      Microsoft Windows Authenticated Logged In Users Enumeration
76 auxiliary/scanner/dcerpc/petitpotam              normal         No      PetitPotam
84 auxiliary/scanner/sap/sap_smb_relay              normal         No      SAP SMB Relay Abuse
86 auxiliary/scanner/sap/sap_soap_rfc_eps_get_directory_listing normal         No      SAP SOAP RFC EPS_GET_DIRECTORY_LISTING Directories Information Disclosure
87 auxiliary/scanner/sap/sap_soap_rfc_pfl_check_os_file_existence normal         No      SAP SOAP RFC PFL_CHECK_OS_FILE_EXISTENCE File Existence Check
88 auxiliary/scanner/sap/sap_soap_rfc_rzl_read_dir  normal         No      SAP SOAP RFC RZL_READ_DIR_LOCAL Directory Contents Listing
94 auxiliary/scanner/smb/smb_enumusers_domain        normal         No      SMB Domain User Enumeration
98 auxiliary/scanner/smb/smb_enumgpp                normal         No      SMB Group Policy Preference Saved Passwords Enumeration
99 auxiliary/scanner/smb/smb_login                  normal         No      SMB Login Check Scanner
103 auxiliary/scanner/smb/smb_lookupsid              normal         No      SMB SID User Enumeration (LookupSid)
105 auxiliary/scanner/smb/smb_pipe_auditor            normal         No      SMB Session Pipe Auditor
106 auxiliary/scanner/smb/pipe_dcerpc_auditor         normal         No      SMB Session Pipe DCERPC Auditor
107 auxiliary/scanner/smb/smb_enumshares             normal         No      SMB Share Enumeration
110 auxiliary/scanner/smb/smb_enumusers              normal         No      SMB User Enumeration (SAM EnumUsers)
111 auxiliary/scanner/smb/smb_version                 normal         No      SMB Version Detection
115 auxiliary/scanner/snmp/snmp_enumshares            normal         No      SNMP Windows SMB Share Enumeration
117 auxiliary/scanner/smb/smb_uninit_cred             normal         Yes      Samba _netr_ServerPasswordSet Uninitialized Credential State
131 auxiliary/scanner/smb/impacket/wmiexec            2018-03-19      normal         No      WMI Exec
```

```

msf6 > use auxiliary/scanner/smb/smb_ms17_010
msf6 auxiliary(scanner/smb/smb_ms17_010) > show options

Module options (auxiliary/scanner/smb/smb_ms17_010):



| Name        | Current Setting                                                | Required | Description                                                                                                                                 |
|-------------|----------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| CHECK_ARCH  | true                                                           | no       | Check for architecture on vulnerable hosts                                                                                                  |
| CHECK_DOPU  | true                                                           | no       | Check for DOUBLEPULSAR on vulnerable hosts                                                                                                  |
| CHECK_PIPE  | false                                                          | no       | Check for named pipe on vulnerable hosts                                                                                                    |
| NAMED_PIPES | /usr/share/metasploit-framework/data/wordlists/named_pipes.txt | yes      | List of named pipes to check                                                                                                                |
| RHOSTS      |                                                                | yes      | The target host(s), see <a href="https://docs.metasploit.com/docs/using-metasploit/">https://docs.metasploit.com/docs/using-metasploit/</a> |
| RPORT       | 445                                                            | yes      | The SMB service port (TCP)                                                                                                                  |
| SMBDomain   | .                                                              | no       | The Windows domain to use for authentication                                                                                                |
| SMBPass     |                                                                | no       | The password for the specified username                                                                                                     |
| SMBUser     |                                                                | no       | The username to authenticate as                                                                                                             |
| THREADS     | 1                                                              | yes      | The number of concurrent threads (max one per host)                                                                                         |



View the full module info with the info, or info -d command.

msf6 auxiliary(scanner/smb/smb_ms17_010) > set RHOSTS 192.168.10.35
RHOSTS => 192.168.10.35
msf6 auxiliary(scanner/smb/smb_ms17_010) > run

[-] 192.168.10.35:445 - An SMB Login Error occurred while connecting to the IPC$ tree.
[*] 192.168.10.35:445 - Scanned 1 of 1 hosts (100% complete)
[*] Auxiliary module execution completed

```

In this way we can run a scan on any system we can gain the access of the system too if it is we find the vulnerabilities in that auxiliary scan.