Assignment-2

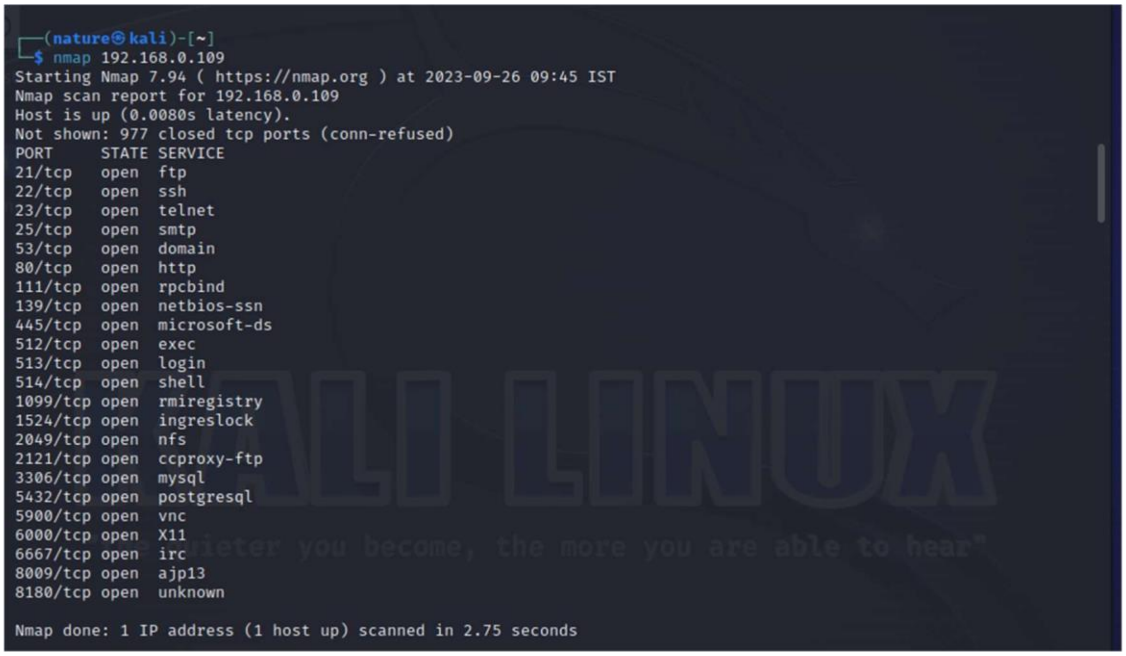
P. MONISH
21BCE9517

In this let's explore Metasploit tool in kali LinuxOS and scan the own computer and find the vulnerabilities and exploits in it.

Step-1

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

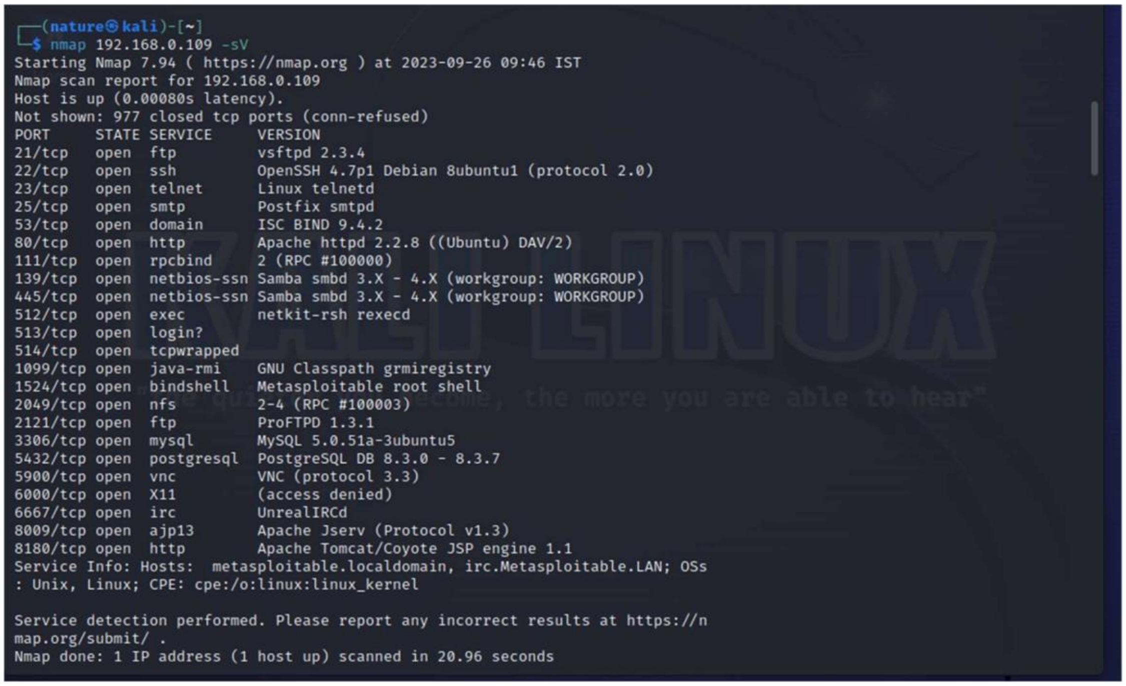
Command : map 192.168.0.109



```
┌──(nature㉿kali)-[~]
└─$ nmap 192.168.0.109
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-26 09:45 IST
Nmap scan report for 192.168.0.109
Host is up (0.0080s latency).
Not shown: 977 closed tcp ports (conn-refused)
PORT     STATE SERVICE
21/tcp   open  ftp
22/tcp   open  ssh
23/tcp   open  telnet
25/tcp   open  smtp
53/tcp   open  domain
80/tcp   open  http
111/tcp  open  rpcbind
139/tcp  open  netbios-ssn
445/tcp  open  microsoft-ds
512/tcp  open  exec
513/tcp  open  login
514/tcp  open  shell
1099/tcp open  rmiregistry
1524/tcp open  ingreslock
2049/tcp open  nfs
2121/tcp open  ccproxy-ftp
3306/tcp open  mysql
5432/tcp open  postgresql
5900/tcp open  vnc
6000/tcp open  X11
6667/tcp open  irc
8009/tcp open  ajp13
8180/tcp open  unknown

Nmap done: 1 IP address (1 host up) scanned in 2.75 seconds
```

Step-2

Command : map 192.168.0.109 -sV

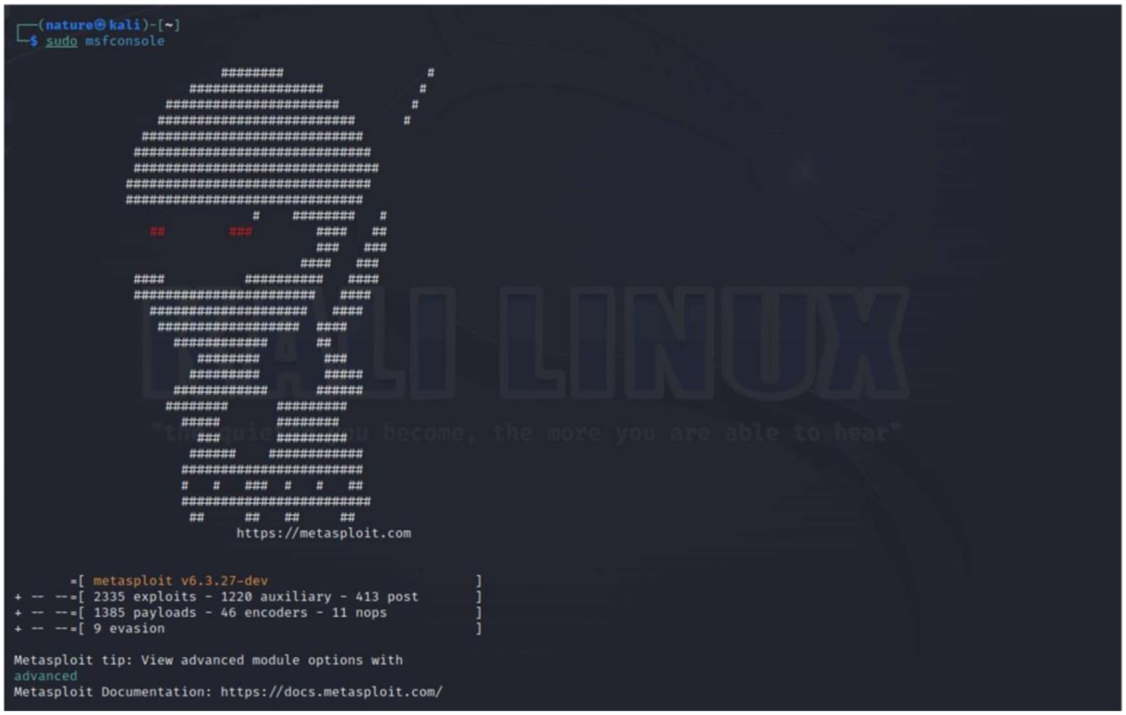


```
┌──(nature㉿kali)-[~]
└─$ nmap 192.168.0.109 -sV
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-26 09:46 IST
Nmap scan report for 192.168.0.109
Host is up (0.00080s latency).
Not shown: 977 closed tcp ports (conn-refused)
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 2.3.4
22/tcp   open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
23/tcp   open  telnet      Linux telnetd
25/tcp   open  smtp        Postfix smtpd
53/tcp   open  domain      ISC BIND 9.4.2
80/tcp   open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
111/tcp  open  rpcbind     2 (RPC #100000)
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
512/tcp  open  exec        netkit-rsh rexecd
513/tcp  open  login?
514/tcp  open  tcpwrapped
1099/tcp open  java-rmi    GNU Classpath grmiregistry
1524/tcp open  bindshell   Metasploitable root shell
2049/tcp open  nfs         2-4 (RPC #100003)
2121/tcp open  ftp         ProFTPD 1.3.1
3306/tcp open  mysql       MySQL 5.0.51a-3ubuntu5
5432/tcp open  postgresql  PostgreSQL DB 8.3.0 - 8.3.7
5900/tcp open  vnc         VNC (protocol 3.3)
6000/tcp open  X11         (access denied)
6667/tcp open  irc         UnrealIRCd
8009/tcp open  ajp13       Apache Jserv (Protocol v1.3)
8180/tcp open  http        Apache Tomcat/Coyote JSP engine 1.1
Service Info: Hosts:  metasploitable.localdomain, irc.Metasploitable.LAN; OSs
: Unix, Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://n
map.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 20.96 seconds
```

- We can see port no 139 and 445 resembles SMB. So we have to explore for exploits in smb.
- Now lets open Metasploit in our kali Linux which is exploit on framework that gives access to on resystem.

Step-3

Command : sudo msfconsole

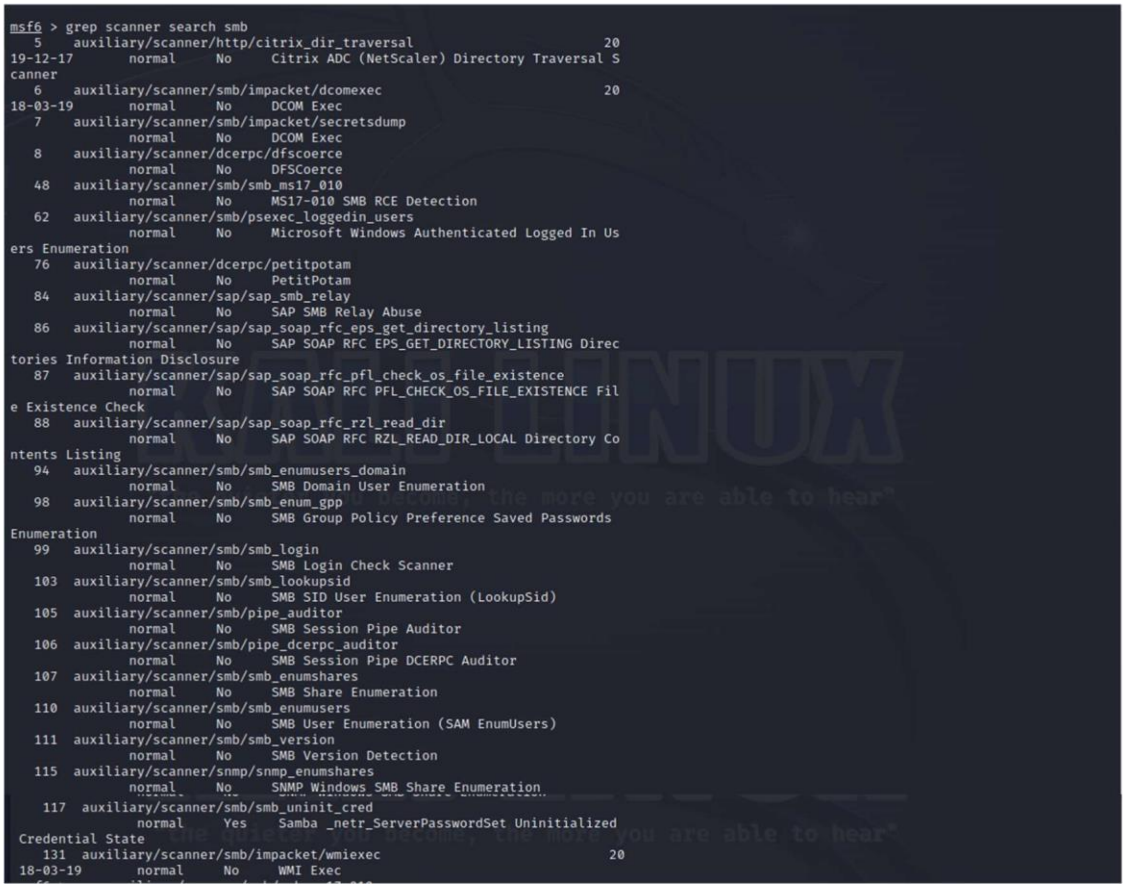


```
┌──(nature㉿kali)-[~]
└─$ sudo msfconsole
                          ########                  #
                      #################            #
                   ######################         #
                  #########################      #
                ############################
               ##############################
               ###############################
              ###############################
              ##############################
                              #    ########   #
                 ##        ###        ####   ##
                                      ###   ###
                                    ####   ###
               ####          ##########   ####
               #######################   ####
                 ####################   ####
                  ##################  ####
                    ############      ##
                       ########        ###
                      #########        #####
                    ############      ######
                   ########      #########
                     #####       ########
                       ###       #########
                      ######    ############
                     #######################
                     #   #   ###  #   #   ##
                     ########################
                      ##     ##   ##     ##
                            https://metasploit.com


       =[ metasploit v6.3.27-dev                          ]
+ -- --=[ 2335 exploits - 1220 auxiliary - 413 post       ]
+ -- --=[ 1385 payloads - 46 encoders - 11 nops           ]
+ -- --=[ 9 evasion                                       ]

Metasploit tip: View advanced module options with
advanced
Metasploit Documentation: https://docs.metasploit.com/
```

Step-4

Command: grep scanner search smb

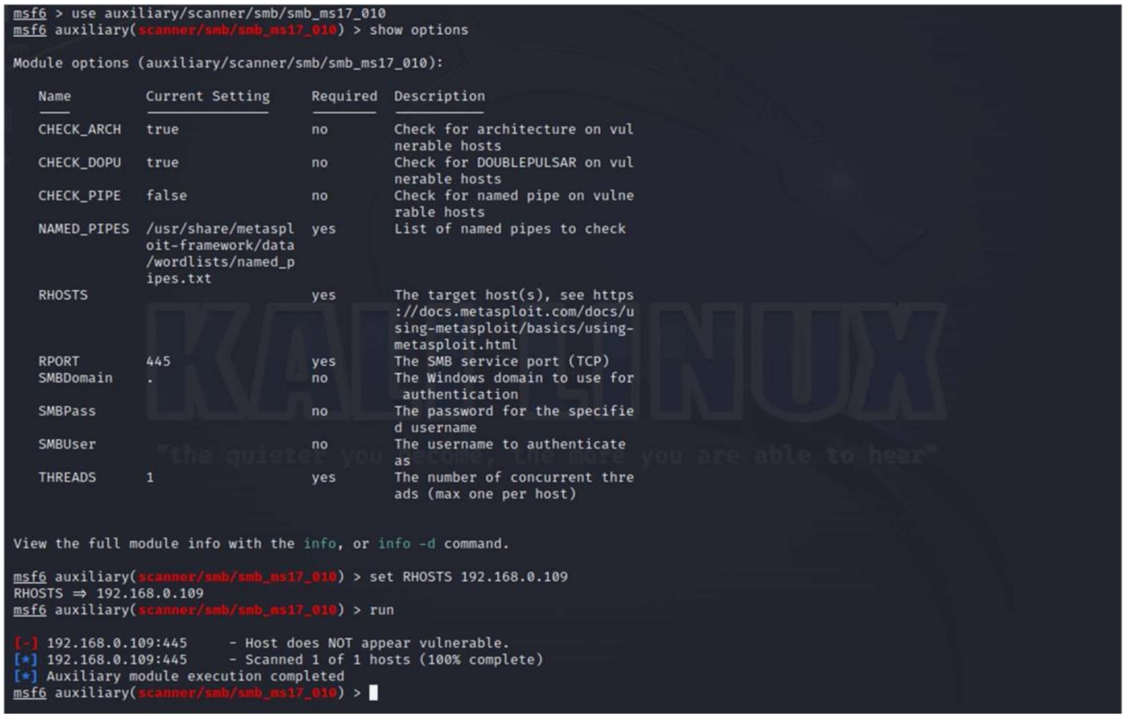
- We can enter “search smb” or “grep scanner search smb”.



```
msf6 > grep scanner search smb
   5    auxiliary/scanner/http/citrix_dir_traversal                            20
19-12-17       normal     No     Citrix ADC (NetScaler) Directory Traversal S
canner
   6    auxiliary/scanner/smb/impacket/dcomexec                                20
18-03-19       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 Us
ers 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 Direc
tories Information Disclosure
   87   auxiliary/scanner/sap/sap_soap_rfc_pfl_check_os_file_existence
               normal     No     SAP SOAP RFC PFL_CHECK_OS_FILE_EXISTENCE Fil
e Existence Check
   88   auxiliary/scanner/sap/sap_soap_rfc_rzl_read_dir
               normal     No     SAP SOAP RFC RZL_READ_DIR_LOCAL Directory Co
ntents Listing
   94   auxiliary/scanner/smb/smb_enumusers_domain
               normal     No     SMB Domain User Enumeration
   98   auxiliary/scanner/smb/smb_enum_gpp
               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/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                                 20
18-03-19       normal     No     WMI Exec
```

Step-5

Command: use auxiliary/scanner/smb/smb_ms17_010



```
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 vul
                                              nerable hosts
   CHECK_DOPU   true                no        Check for DOUBLEPULSAR on vul
                                              nerable hosts
   CHECK_PIPE   false               no        Check for named pipe on vulne
                                              rable hosts
   NAMED_PIPES  /usr/share/metaspl  yes       List of named pipes to check
                oit-framework/data
                /wordlists/named_p
                ipes.txt
   RHOSTS                           yes       The target host(s), see https
                                              ://docs.metasploit.com/docs/u
                                              sing-metasploit/basics/using-
                                              metasploit.html
   RPORT        445                 yes       The SMB service port (TCP)
   SMBDomain    .                   no        The Windows domain to use for
                                               authentication
   SMBPass                          no        The password for the specifie
                                              d username
   SMBUser                          no        The username to authenticate
                                              as
   THREADS      1                   yes       The number of concurrent thre
                                              ads (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 192.168.0.109
RHOSTS ⇒ 192.168.0.109
msf6 auxiliary(scanner/smb/smb_ms17_010) > run

[-] 192.168.0.109:445     - Host does NOT appear vulnerable.
[*] 192.168.0.109:445     - Scanned 1 of 1 hosts (100% complete)
[*] Auxiliary module execution completed
msf6 auxiliary(scanner/smb/smb_ms17_010) > █
```

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