ITA1471

ETHICAL HACKING FOR NETWORK HACKING

B. Siva sai kumar

192211164

1st YEAR, CSE DEPARTMENT

ITA1471-ETHICAL HACKING

LAB MANUAL

Exercise No 1: Nmap Scan

Aim:

To install and perform Nmap scan (note :- you may use ip address or website name)

Procedure:

Step 1: Open Nmap from Kali Linux (Goto Applications->select Information Gathering->select Nmap)

Step 2: Perform different types of scan (Tcp, Udp, Ack, Syn, Fin, Null, Xmas, Rpc, Idle)- scan types

Scanning Techniques

Flag	Use	Example
-sS	TCP syn port scan	nmap -sS 192.168.1.1
-sT	TCP connect port scan	nmap -sT 192.168.1.1
- sU	UDP port scan	nmap - sU 192.168.1.1
- sA	TCP ack port scan	nmap - sA 192.168.1.1

Step 3:-

To perform host discovery

-Pn	only port scan	nmap -Pn192.168.1.1
-sn	only host discover	nmap -sn192.168.1.1
-PR	arp discovery on a local network	nmap -PR192.168.1.1
-n	disable DNS resolution	nmap -n 192.168.1.1

Step4:-

Port Specification

Flag	Use	Example
-p	specify a port or port range	nmap -p 1-30 192.168.1.1
-p-	scan all ports	nmap -p- 192.168.1.1
F	fast port scan	nmap -F 192.168.1.1

Step 5:-

Service Version and OS Detection

Flag	Use	Example
-sV	detect the version of services running	nmap -sV 192.168.1.1
-A	aggressive scan	nmap -A 192.168.1.1
-O	detect operating system of the target	nmap -O 192.168.1.1

Step 6:-

Timing and Performance

Flag	Use	Example
-T0	paranoid IDS evasion	nmap -T0 192.168.1.1
-T1	sneaky IDS evasion	nmap -T1 192.168.1.1
-T2	polite IDS evasion	nmap -T2 192.168.1.1
-T3	normal IDS evasion	nmap -T3 192.168.1.1
-T4	aggressive speed scan	nmap -T4 192.168.1.1
-T5	insane speed scan	nmap -T5 192.168.1.1

Output:

```
┌──(root㉿kali)-[~]
└─# nmap -sS 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 13:48 IST
Nmap scan report for 192.168.1.1
Host is up (0.0016s latency).
All 1000 scanned ports on 192.168.1.1 are in ignored states.
Not shown: 1000 filtered tcp ports (no-response)

Nmap done: 1 IP address (1 host up) scanned in 5.38 seconds

┌──(root㉿kali)-[~]
└─# nmap -sT 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 13:48 IST
Nmap scan report for 192.168.1.1
Host is up (0.0011s latency).
All 1000 scanned ports on 192.168.1.1 are in ignored states.
Not shown: 1000 filtered tcp ports (no-response)

Nmap done: 1 IP address (1 host up) scanned in 25.39 seconds

┌──(root㉿kali)-[~]
└─# nmap -sU 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 13:49 IST
Stats: 0:02:10 elapsed; 0 hosts completed (1 up), 1 undergoing UDP Scan
UDP Scan Timing: About 29.25% done; ETC: 13:57 (0:05:17 remaining)
Stats: 0:06:12 elapsed; 0 hosts completed (1 up), 1 undergoing UDP Scan
UDP Scan Timing: About 40.75% done; ETC: 14:05 (0:09:01 remaining)
Stats: 0:06:13 elapsed; 0 hosts completed (1 up), 1 undergoing UDP Scan
UDP Scan Timing: About 40.80% done; ETC: 14:05 (0:09:01 remaining)
Nmap scan report for 192.168.1.1
Host is up (0.00090s latency).
All 1000 scanned ports on 192.168.1.1 are in ignored states.
Not shown: 1000 open|filtered udp ports (no-response)

Nmap done: 1 IP address (1 host up) scanned in 1719.23 seconds

┌──(root㉿kali)-[~]
└─# nmap -sA 192.168.56.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 13:51 IST
Nmap scan report for 192.168.56.1
Host is up (0.00031s latency).
All 1000 scanned ports on 192.168.56.1 are in ignored states.
Not shown: 1000 unfiltered tcp ports (reset)

Nmap done: 1 IP address (1 host up) scanned in 0.50 seconds
```

2)

```
┌──(root㉿kali)-[~]
└─# nmap -Pn 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:24 EDT
Nmap scan report for 192.168.1.1
Host is up (0.00098s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell

Nmap done: 1 IP address (1 host up) scanned in 14.42 seconds

┌──(root㉿kali)-[~]
└─# nmap -sn 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:26 EDT
Nmap scan report for 192.168.1.1
Host is up (0.00074s latency).
Nmap done: 1 IP address (1 host up) scanned in 13.06 seconds

┌──(root㉿kali)-[~]
└─# nmap -PR 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:26 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0011s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell

Nmap done: 1 IP address (1 host up) scanned in 14.49 seconds

┌──(root㉿kali)-[~]
└─# nmap -n 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:28 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0021s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell

Nmap done: 1 IP address (1 host up) scanned in 1.42 seconds
```

3)

```
┌──(root㉿kali)-[~]
└─# nmap -p 1-30 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:31 EDT
Nmap scan report for 192.168.1.1
Host is up (0.00061s latency).
All 30 scanned ports on 192.168.1.1 are in ignored states.
Not shown: 30 closed tcp ports (reset)

Nmap done: 1 IP address (1 host up) scanned in 13.21 seconds

┌──(root㉿kali)-[~]
└─# nmap -p- 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:31 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0019s latency).
Not shown: 65534 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell

Nmap done: 1 IP address (1 host up) scanned in 20.17 seconds

┌──(root㉿kali)-[~]
└─# nmap -F 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:33 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0026s latency).
Not shown: 99 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell

Nmap done: 1 IP address (1 host up) scanned in 14.40 seconds
```

4)

```
┌──(root㉿kali)-[~]
└─# nmap -O 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:55 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0016s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE
514/tcp filtered shell
Warning: OSScan results may be unreliable because we could not find at least
1 open and 1 closed port
Device type: general purpose
Running: Linux 2.4.X|3.X
OS CPE: cpe:/o:linux:linux_kernel:2.4.37 cpe:/o:linux:linux_kernel:3.2 cpe:/o
:linux:linux_kernel:4.4
OS details: DD-WRT v24-sp2 (Linux 2.4.37), Linux 3.2, Linux 4.4

OS detection performed. Please report any incorrect results at https://nmap.o
rg/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 15.67 seconds
```

5)

```
┌──(root㉿kali)-[~]
└─# nmap -sV 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:54 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0017s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE VERSION
514/tcp filtered shell

Service detection performed. Please report any incorrect results at https://n
map.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 15.64 seconds

┌──(root㉿kali)-[~]
└─# nmap -A 192.168.1.1
Starting Nmap 7.93 ( https://nmap.org ) at 2023-05-15 04:54 EDT
Nmap scan report for 192.168.1.1
Host is up (0.0013s latency).
Not shown: 999 closed tcp ports (reset)
PORT    STATE    SERVICE VERSION
514/tcp filtered shell
Warning: OSScan results may be unreliable because we could not find at least
1 open and 1 closed port
Device type: general purpose
Running: Linux 2.4.X|3.X
OS CPE: cpe:/o:linux:linux_kernel:2.4.37 cpe:/o:linux:linux_kernel:3.2 cpe:/o
:linux:linux_kernel:4.4
OS details: DD-WRT v24-sp2 (Linux 2.4.37), Linux 3.2, Linux 4.4
Network Distance: 2 hops

TRACEROUTE (using port 80/tcp)
HOP RTT     ADDRESS
1   0.77 ms 192.168.50.2
2   1.25 ms 192.168.1.1

OS and Service detection performed. Please report any incorrect results at ht
tps://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 35.22 seconds
```

Result:

The following experiment is done using Nmap tool in root terminal in kali Linux server. I have used all the commands that are available in Nmap tool.

6)

Ex. No.2- ENUMERATION - Enumerating information from windows and Samba Host Using Enum4linux

Requirements:

- Kali linux running as an attacker machine
- Windows 7 running as virtual machine
- Admin privileges **Procedure:**

1.Start the kali linux machine and open a terminal window

2.Type "sudo apt-get update" command

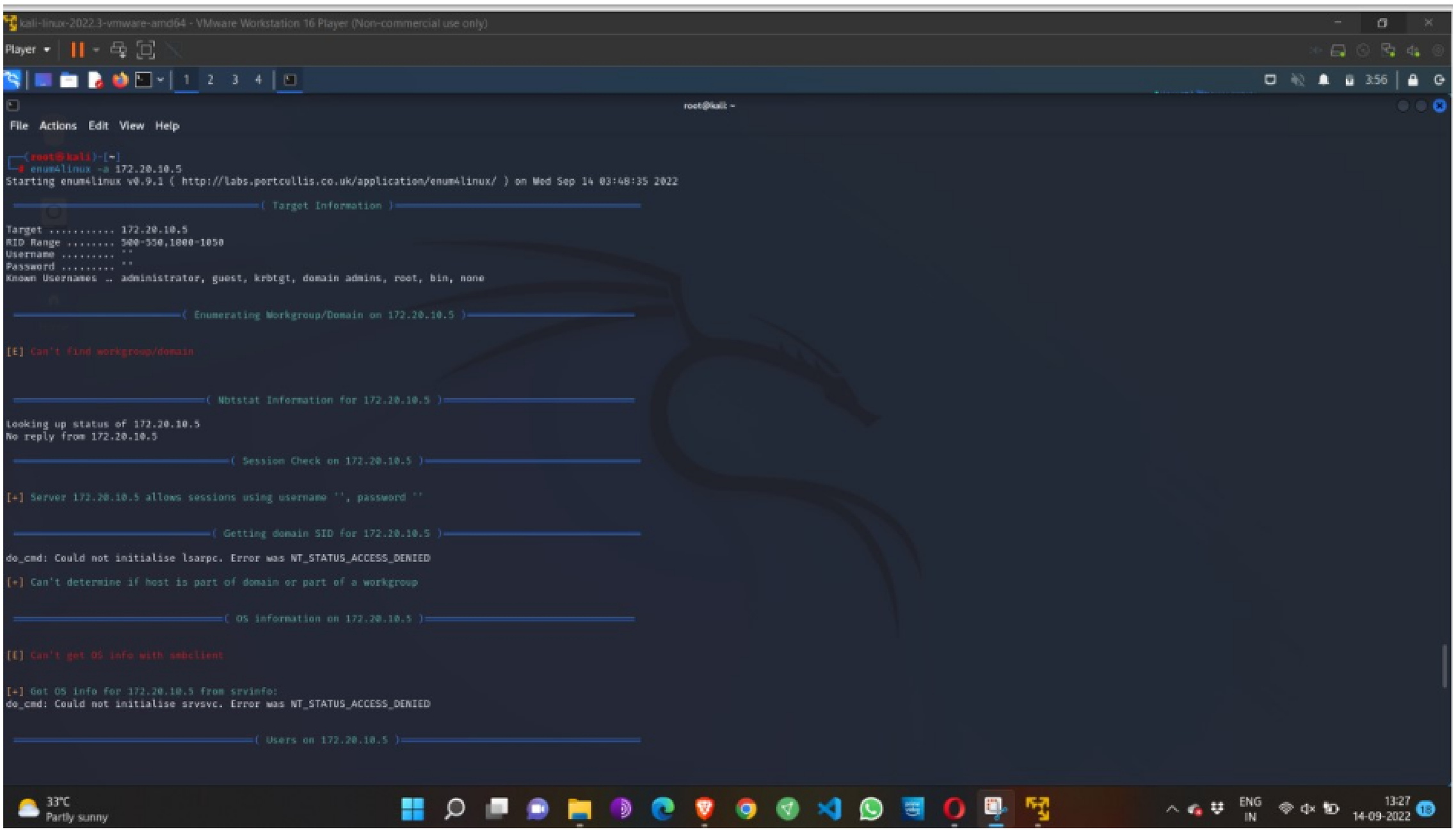
3.Now type enum4linux-h and hit enter to get help options With the help options conduct the enumeration on target machine

4.In the terminal window type enum4linux -u -p -U and hit enter to run this tool using the user list options

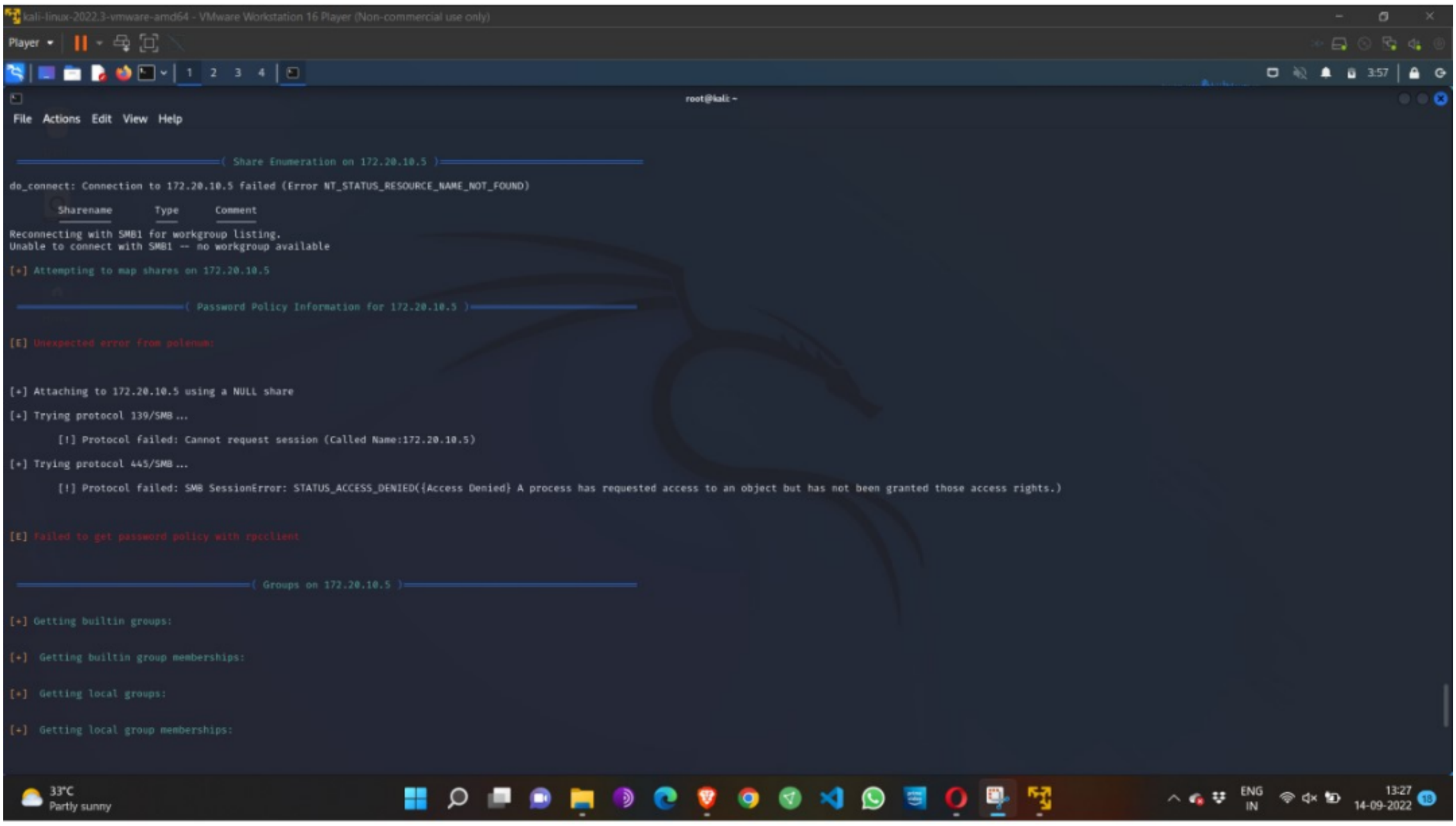
5.Enum4linux starts enumerating the workgroups/domain names first and display the results

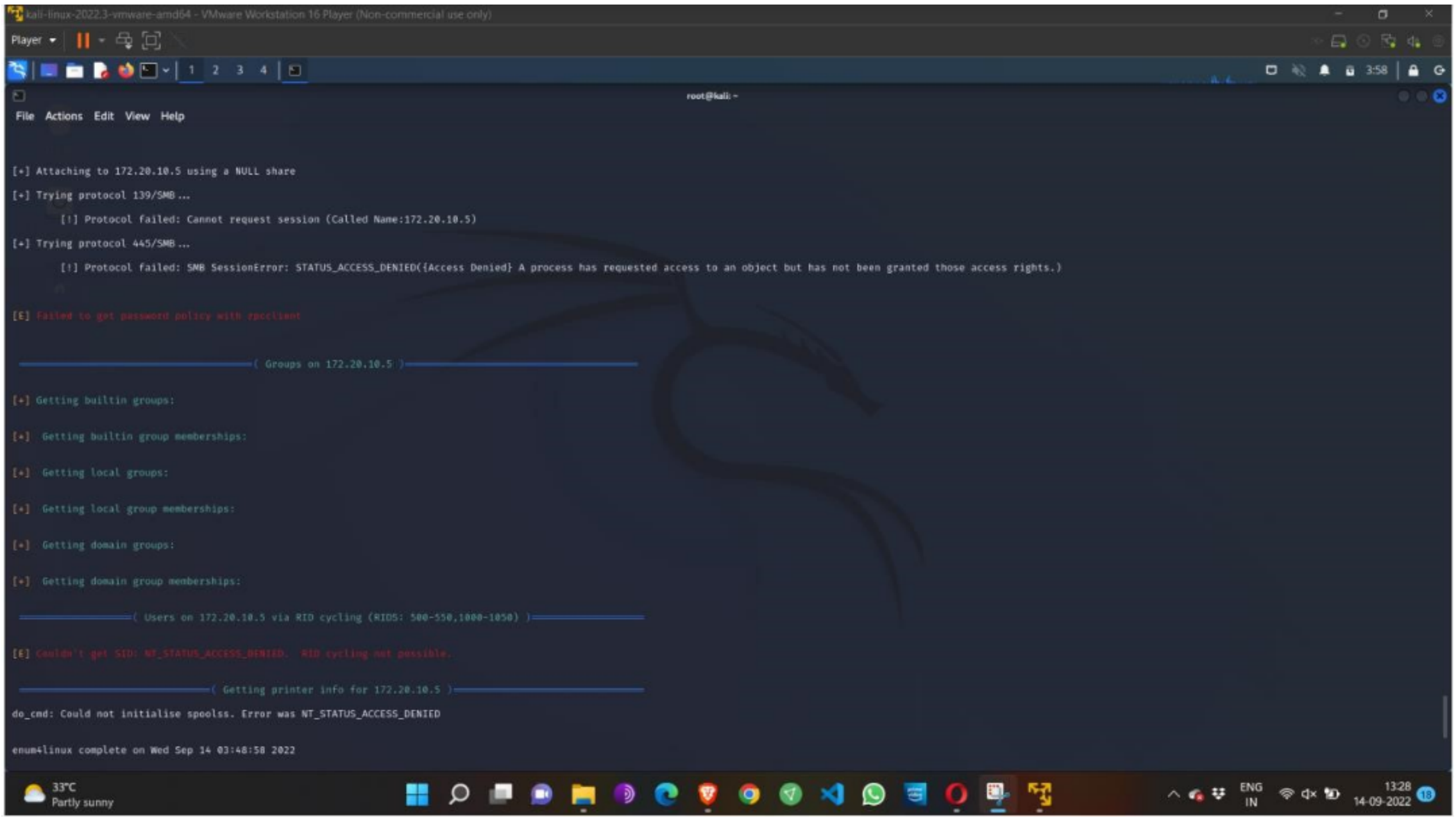
7)

6.To enumerate all the information Use this command enum4linux -a.



8)


kali-linux-2022.3-vmware-amd64 - VMware Workstation 16 Player (Non-commercial use only)
Player
1 2 3 4
3:57
root@kali: ~
File Actions Edit View Help
(Share Enumeration on 172.20.10.5)
do_connect: Connection to 172.20.10.5 failed (Error NT_STATUS_RESOURCE_NAME_NOT_FOUND)
Sharename Type Comment
Reconnecting with SMB1 for workgroup listing.
Unable to connect with SMB1 -- no workgroup available
[+] Attempting to map shares on 172.20.10.5
(Password Policy Information for 172.20.10.5)
[E] Unexpected error from polenum:
[+] Attaching to 172.20.10.5 using a NULL share
[+] Trying protocol 139/SMB ...
[!] Protocol failed: Cannot request session (Called Name:172.20.10.5)
[+] Trying protocol 445/SMB ...
[!] Protocol failed: SMB SessionError: STATUS_ACCESS_DENIED({Access Denied} A process has requested access to an object but has not been granted those access rights.)
[E] Failed to get password policy with rpcclient
(Groups on 172.20.10.5)
[+] Getting builtin groups:
[+] Getting builtin group memberships:
[+] Getting local groups:
[+] Getting local group memberships:
33°C
Partly sunny
ENG
IN
13:27
14-09-2022


kali-linux-2022.3-vmware-amd64 - VMware Workstation 16 Player (Non-commercial use only)
Player
1 2 3 4
3:58
root@kali: ~
File Actions Edit View Help
[+] Attaching to 172.20.10.5 using a NULL share
[+] Trying protocol 139/SMB ...
[!] Protocol failed: Cannot request session (Called Name:172.20.10.5)
[+] Trying protocol 445/SMB ...
[!] Protocol failed: SMB SessionError: STATUS_ACCESS_DENIED({Access Denied} A process has requested access to an object but has not been granted those access rights.)
[E] Failed to get password policy with rpcclient
(Groups on 172.20.10.5)
[+] Getting builtin groups:
[+] Getting builtin group memberships:
[+] Getting local groups:
[+] Getting local group memberships:
[+] Getting domain groups:
[+] Getting domain group memberships:
(Users on 172.20.10.5 via RID cycling (RIDS: 500-550,1000-1050))
[E] Couldn't get SID: NT_STATUS_ACCESS_DENIED. RID cycling not possible.
(Getting printer info for 172.20.10.5)
do_cmd: Could not initialise spoolss. Error was NT_STATUS_ACCESS_DENIED
enum4linux complete on Wed Sep 14 03:48:58 2022
33°C
Partly sunny
ENG
IN
13:28
14-09-2022

9)

```
┌──(root㉿kali)-[~]
└─# enum4linux -a 172.20.10.5
Starting enum4linux v0.9.1 ( http://labs.portcullis.co.uk/application/enum4linux/ ) on Sat May 13 14:43:48 2023

 ========================( Target Information )========================

Target ........... 172.20.10.5
RID Range ........ 500-550,1000-1050
Username ......... ''
Password ......... ''
Known Usernames .. administrator, guest, krbtgt, domain admins, root, bin, none


 ======================( Enumerating Workgroup/Domain on 172.20.10.5 )======================


[E] Can't find workgroup/domain


 ============================( Nbtstat Information for 172.20.10.5 )============================

Looking up status of 172.20.10.5
No reply from 172.20.10.5

 =================================( Session Check on 172.20.10.5 )=================================


[E] Server doesn't allow session using username '', password ''.  Aborting remainder of tests.


┌──(root㉿kali)-[~]
└─#
```

Output:

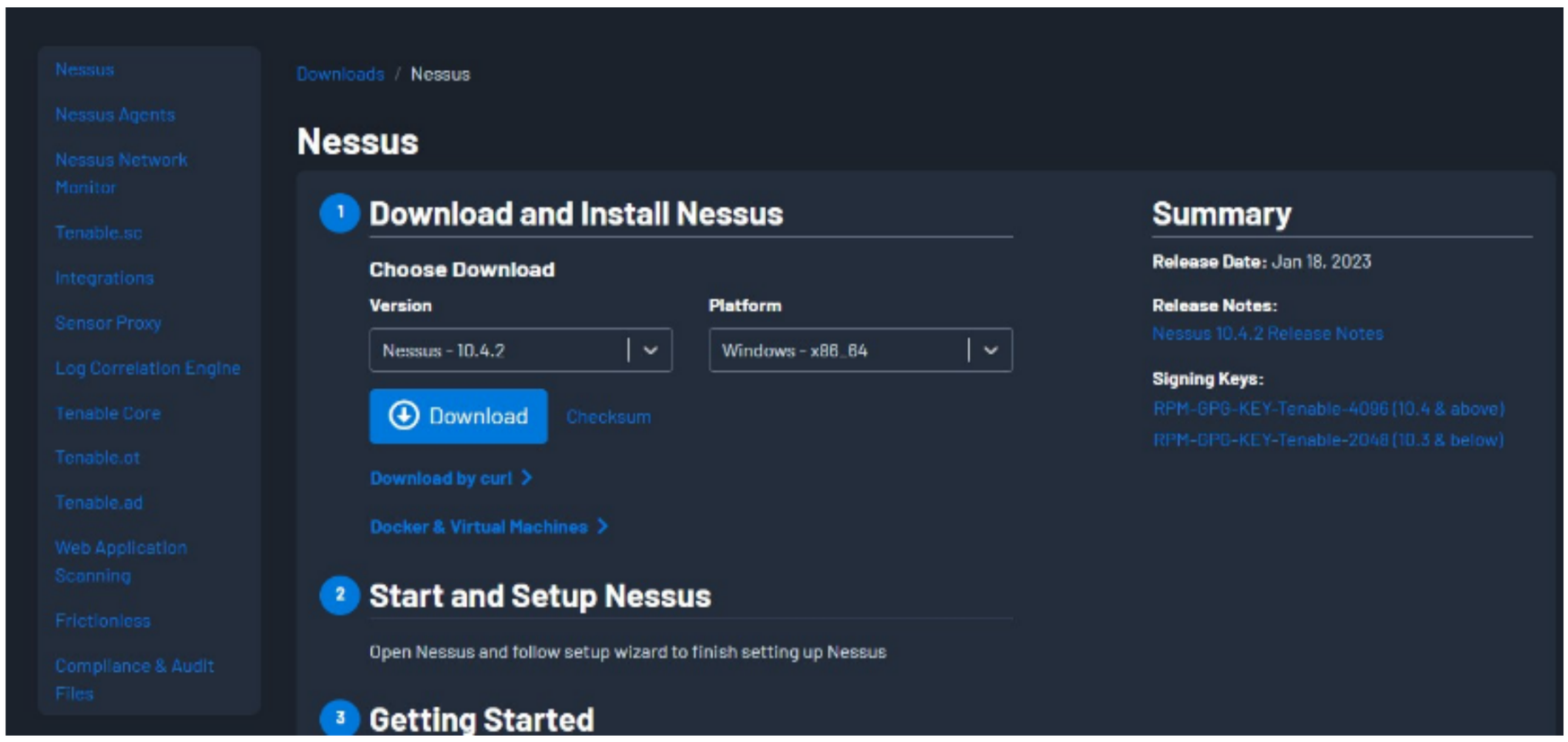
Result:

The above experiment is done using enum4linux command. This experiment is about Enumerating information from windows and Samba Host Using Enum4linux. This experiment is carried out in root terminal using kali linux Operating System.

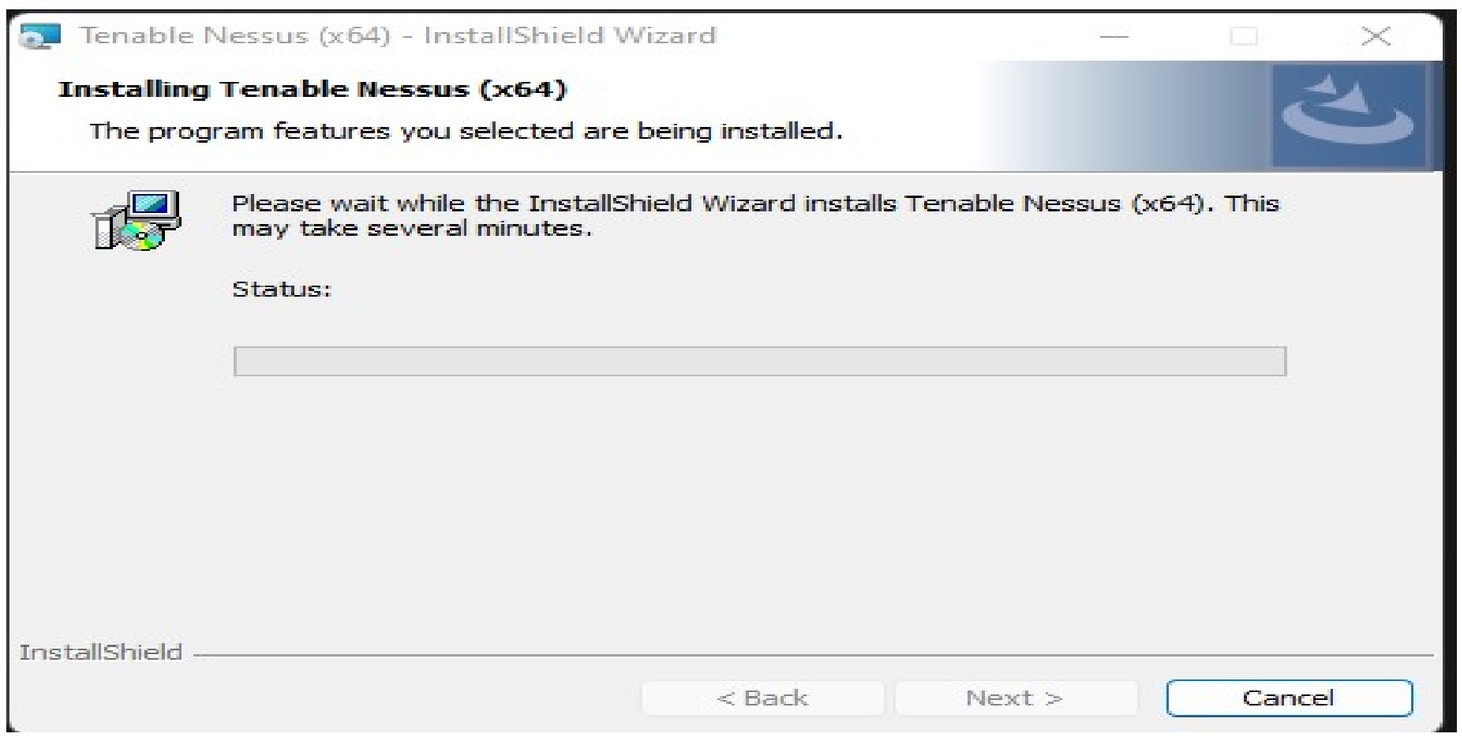
Exercise No 3: Vulnerability Access Scan Using Nessus

Aim : To Download and install Nessus tool and perform a Vulnerability Access scan in kali Linux Operating systems.

Step 1:- https://www.tenable.com/downloads/nessus?loginAttempted=true

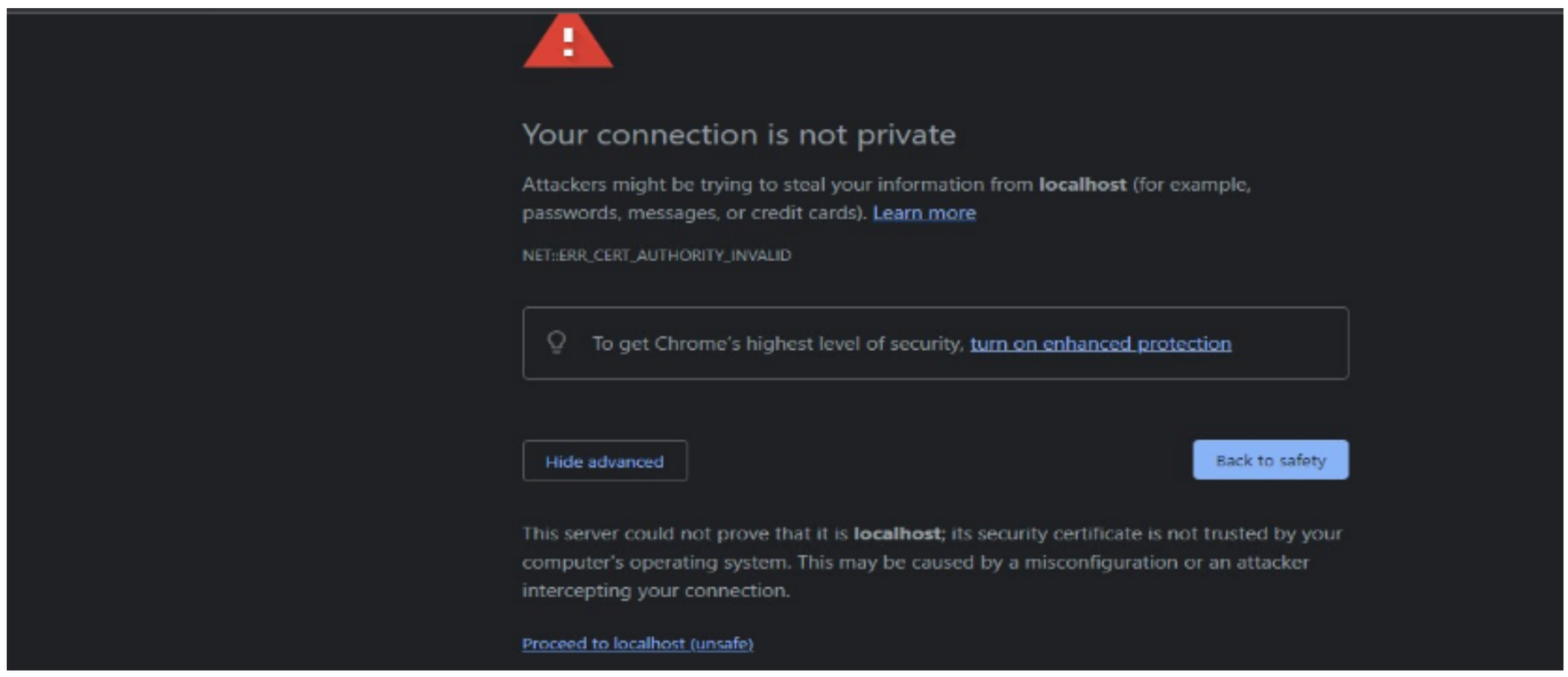


Step 2: Choose your OS and download , install

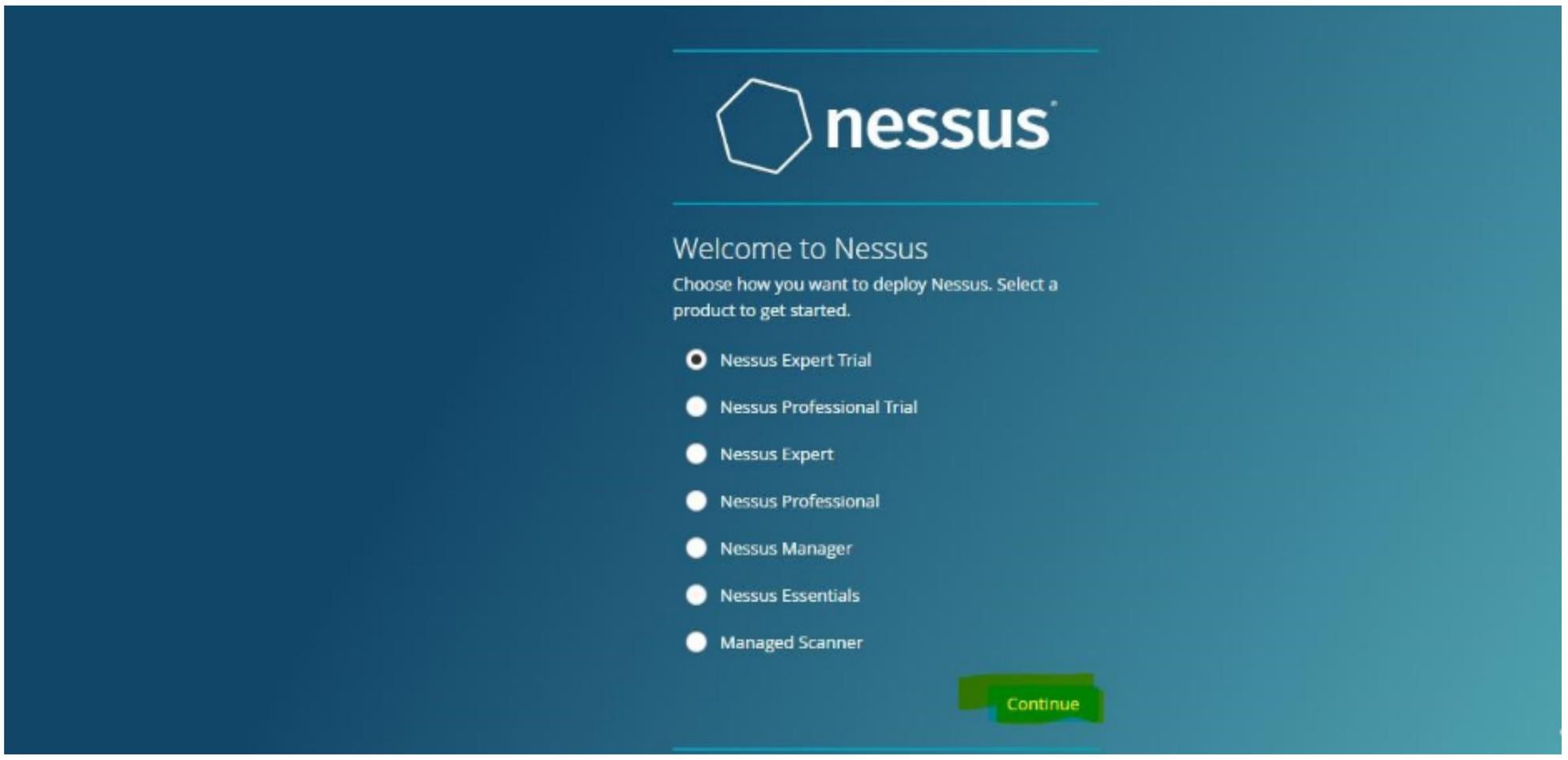


Step 3: Once installation is completed it will open in default browser

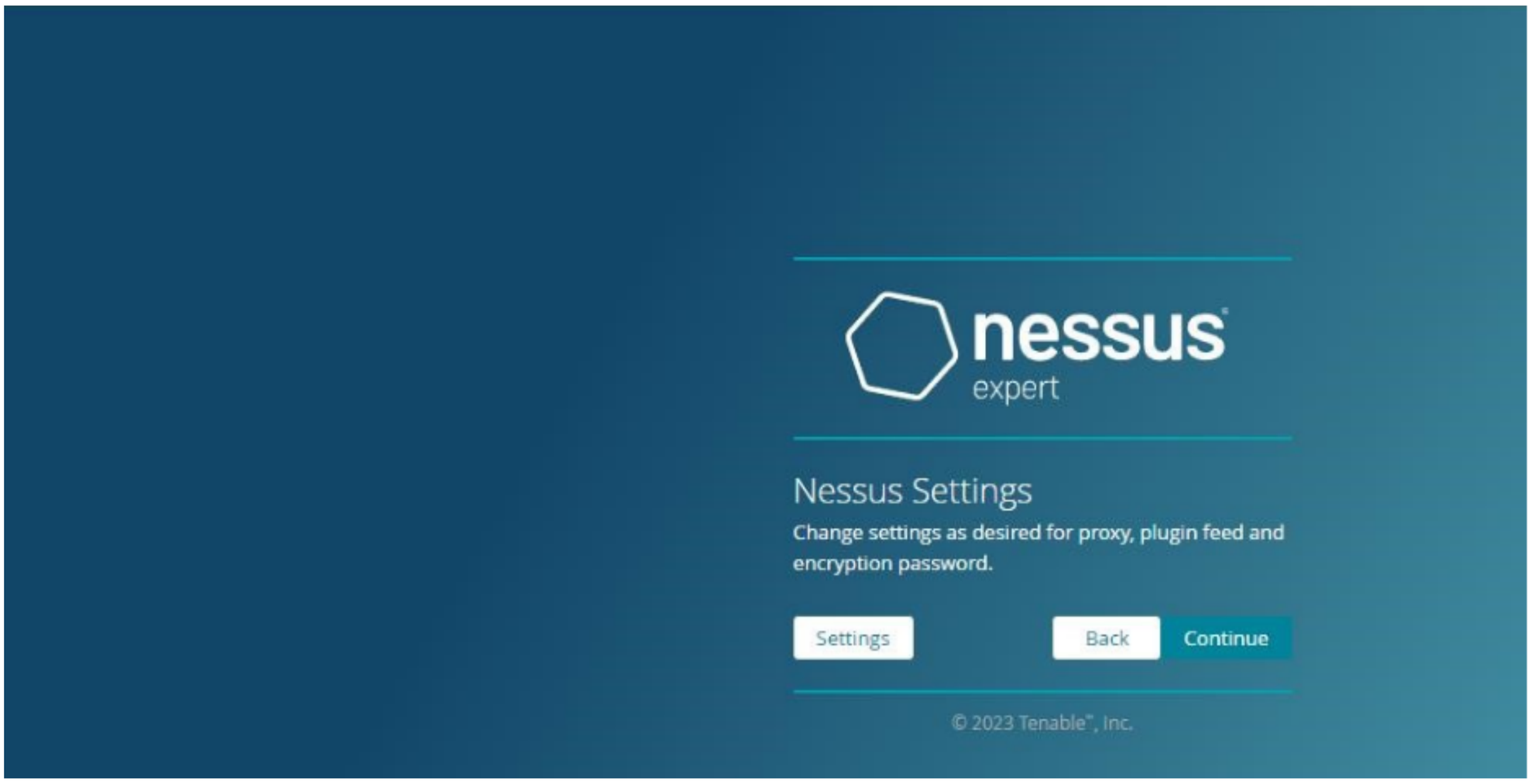
Step 5:- (click on the proceed to local host)



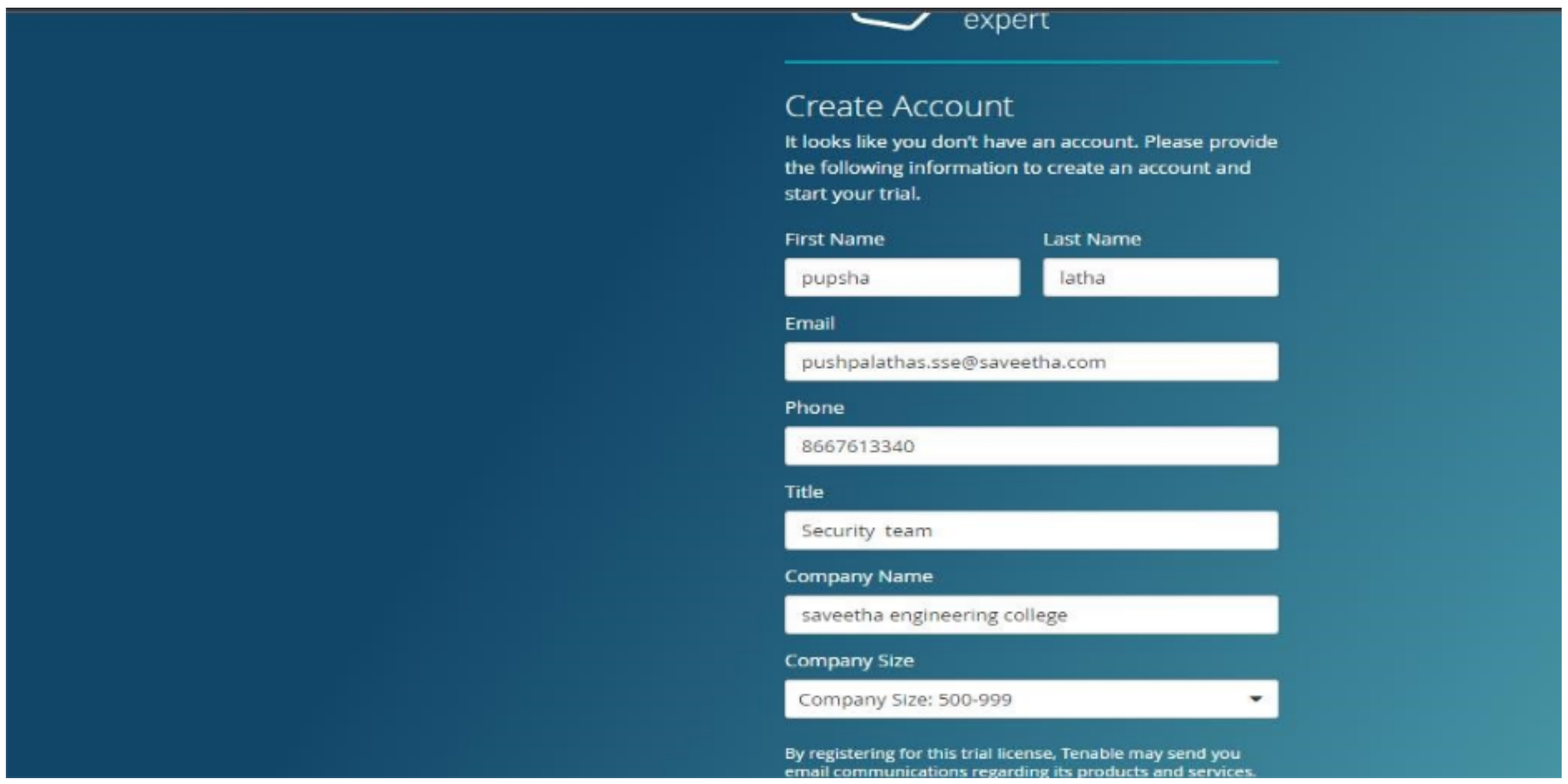
Step 6:- Please choose the Nessus Expert



Step 7: Click on continue

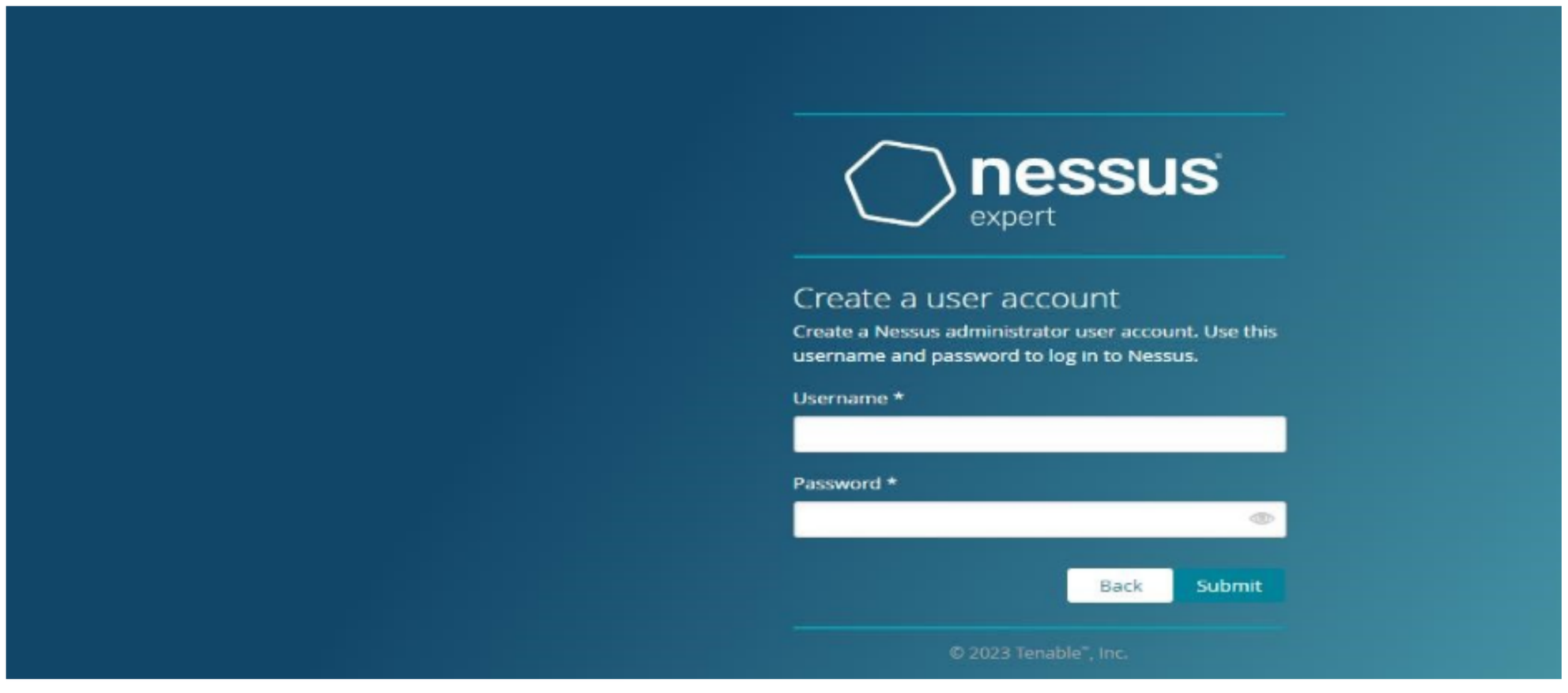


Step 8:- Register with your organizational email id

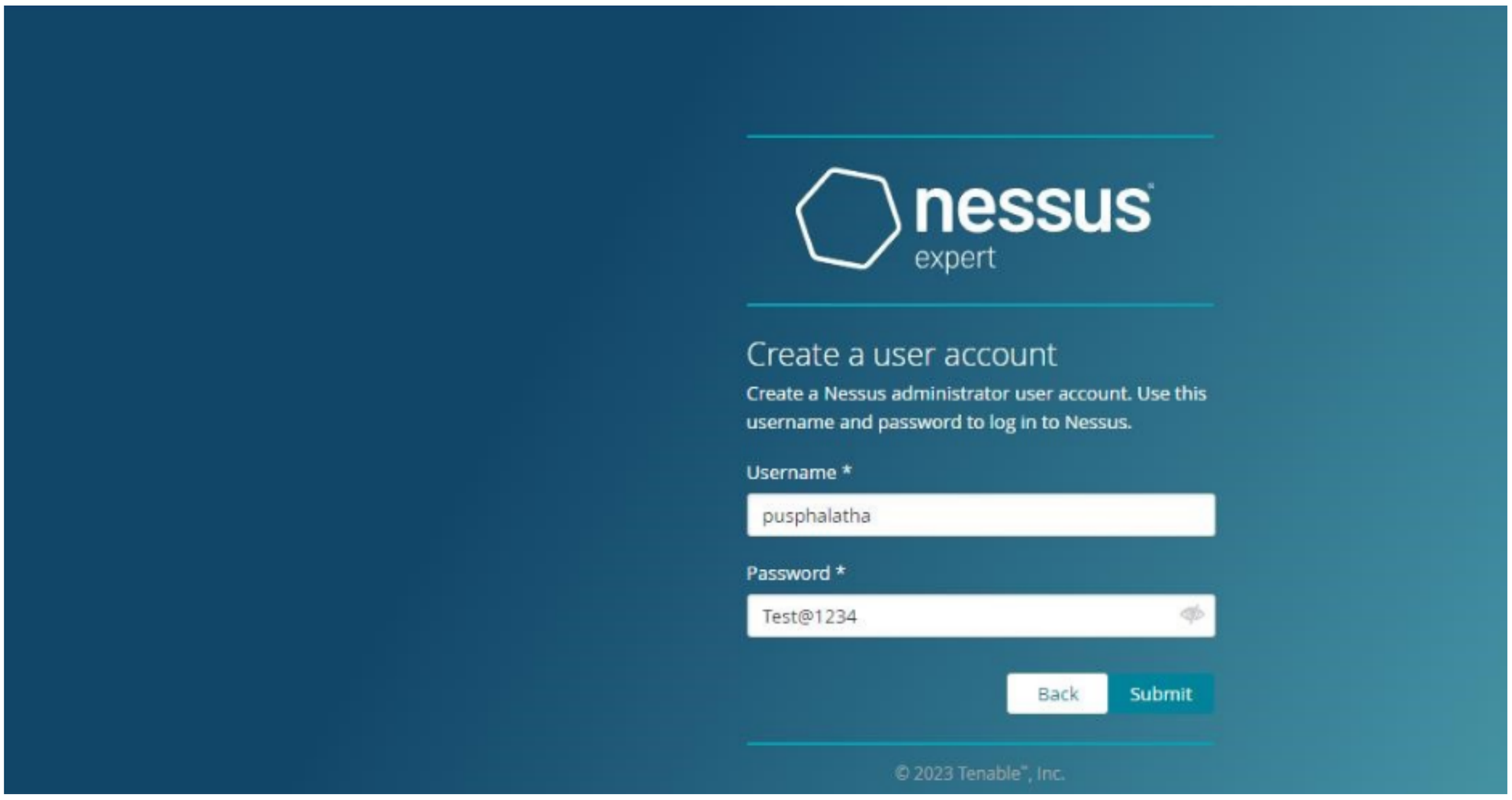


Step 9:- please note down the activation key

Step 10:- set up your username & password

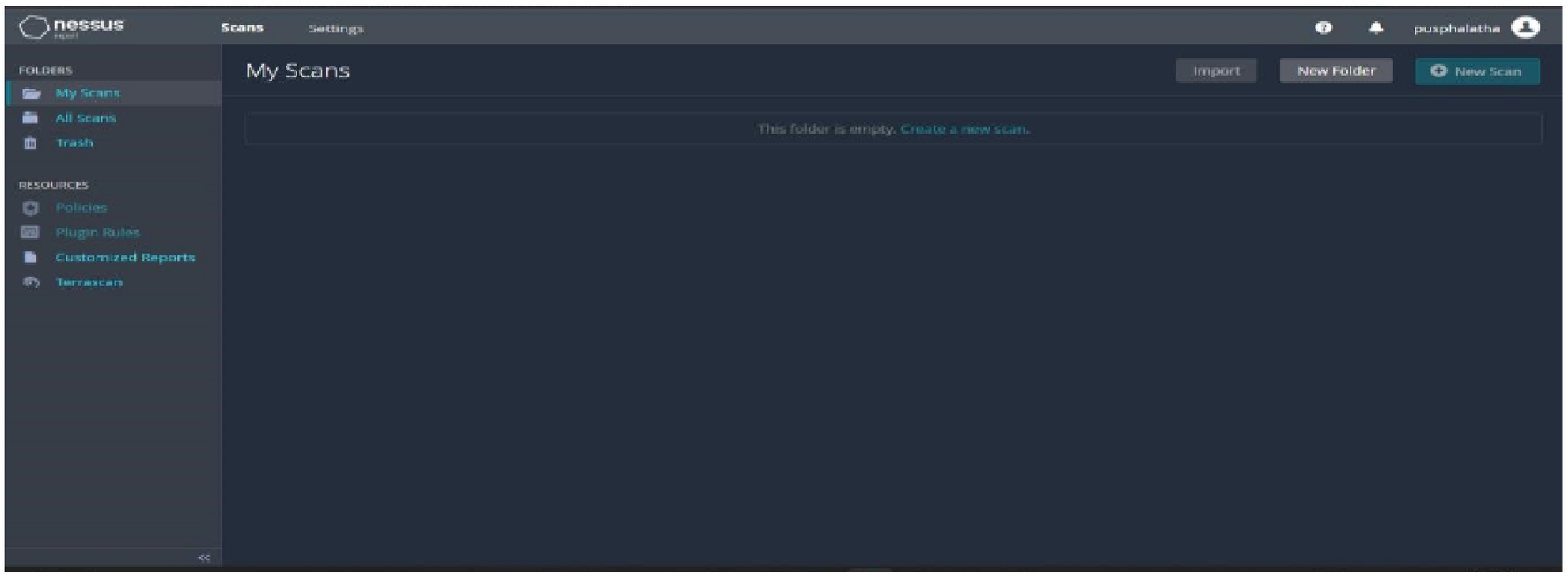


Step 11:-Type username and password

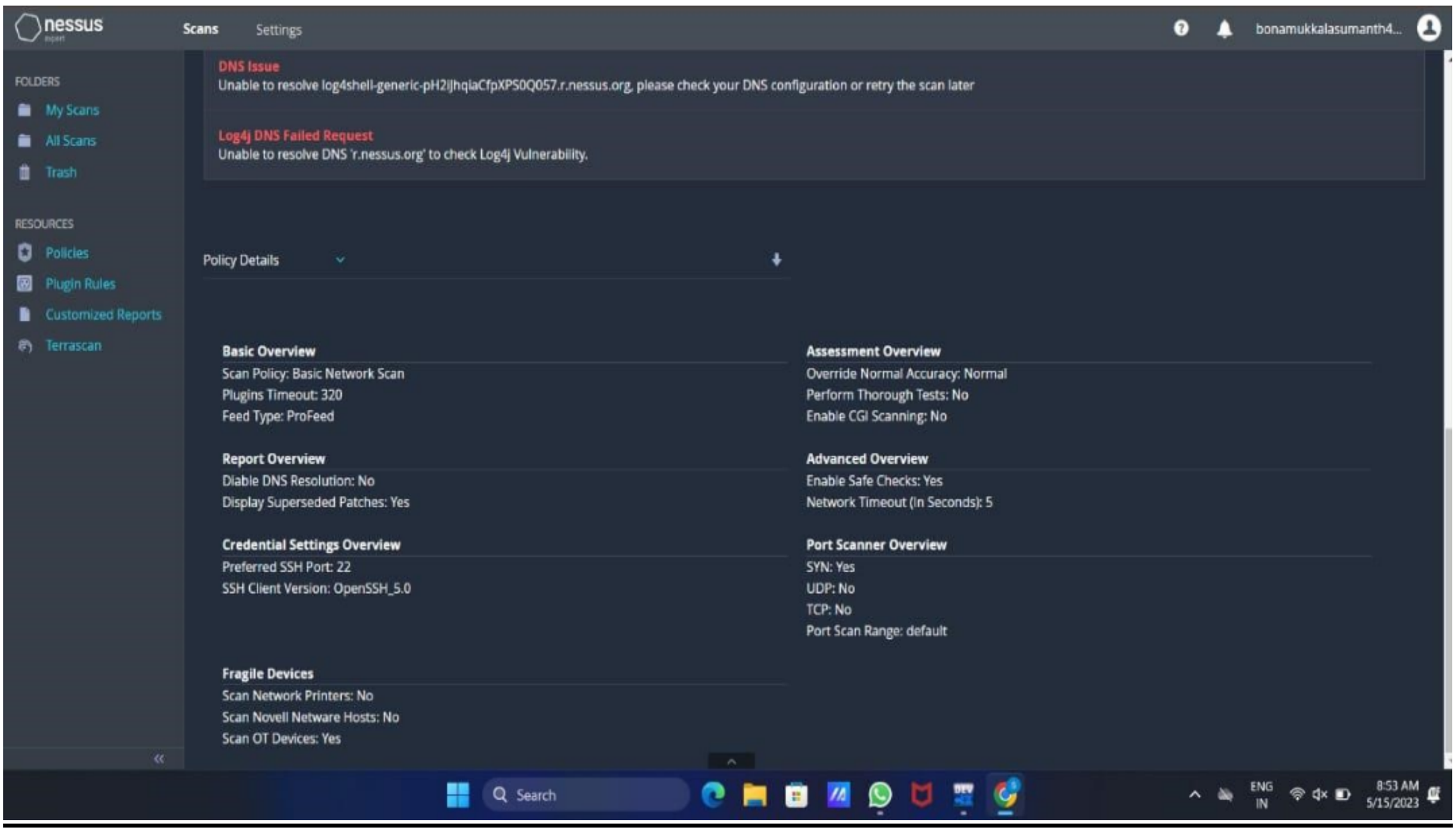


Step 12:- Please wait until download is completed

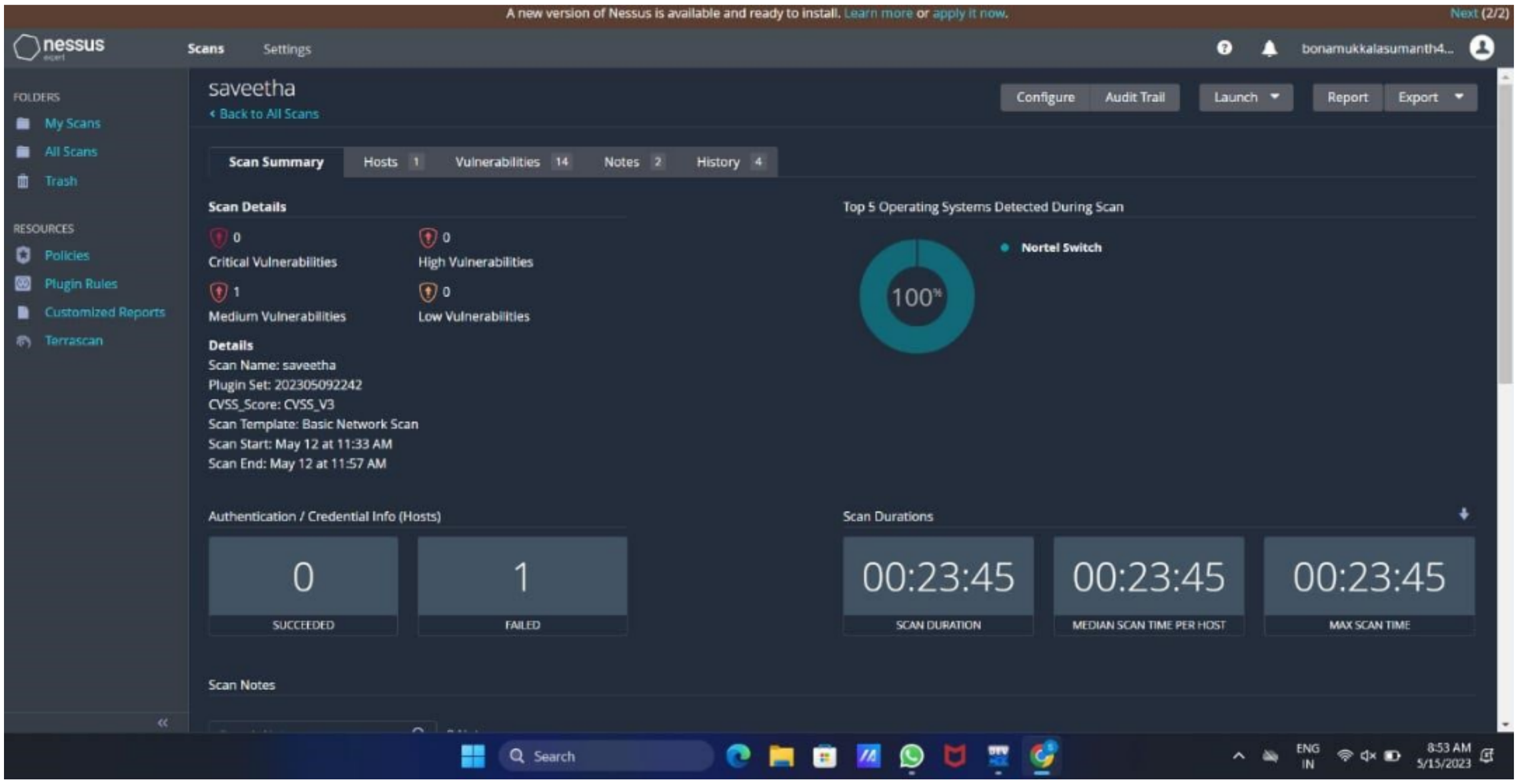
Step 13: Select My Scans


nessus
Scans
Settings
pusphalatha
FOLDERS
My Scans
All Scans
Trash
RESOURCES
Policies
Plugin Rules
Customized Reports
Terrascan
My Scans
Import
New Folder
New Scan
This folder is empty. Create a new scan.

Output:


nessus
Scans
Settings
bonamukkalasumanth4...
FOLDERS
My Scans
All Scans
Trash
RESOURCES
Policies
Plugin Rules
Customized Reports
Terrascan
DNS Issue
Unable to resolve log4shell-generic-pH2jJhqiaCfpXPS0Q057.r.nessus.org, please check your DNS configuration or retry the scan later
Log4j DNS Failed Request
Unable to resolve DNS 'r.nessus.org' to check Log4j Vulnerability.
Policy Details
Basic Overview
Scan Policy: Basic Network Scan
Plugins Timeout: 320
Feed Type: ProFeed
Report Overview
Diable DNS Resolution: No
Display Superseded Patches: Yes
Credential Settings Overview
Preferred SSH Port: 22
SSH Client Version: OpenSSH_5.0
Fragile Devices
Scan Network Printers: No
Scan Novell Netware Hosts: No
Scan OT Devices: Yes
Assessment Overview
Override Normal Accuracy: Normal
Perform Thorough Tests: No
Enable CGI Scanning: No
Advanced Overview
Enable Safe Checks: Yes
Network Timeout (In Seconds): 5
Port Scanner Overview
SYN: Yes
UDP: No
TCP: No
Port Scan Range: default
Search
ENG
IN
8:53 AM
5/15/2023

Result:



The following experiment is done using Nessus website in windows operating system. I have done this experiment in google chrome of windows operating system.

EX.NO: 4 BATCH FILE EXECUTION

AIM:

To create a Windows batch file.

PROCEDURE:

Step 1: Open a text file, such as a Notepad or WordPad document.

Step 2: Add your commands, starting with @echo [off], followed by, each in a new line, title [title of your batch script], echo [first line], and pause.

Step 3: Save your file with the file extension BAT, for example, test.bat.

Step 4: To run your batch file, double-click the BAT file you just created.

Step 5: To edit your batch file, right-click the BAT file and select Edit. And here's the corresponding command window for the example above:

1.Create a New Text Document:

A batch file simplifies repeatable computer tasks using the Windows command prompt. Below is an example of a batch file responsible for displaying some text in your command prompt. Create a new BAT file by right-clicking an empty space within a directory and selecting New, then Text Document.

1.CODE:

Double-click this New Text Document to open your default text editor. Copy and paste the following code into your text entry:

>> @echo off

>> echo hello

>> Pause

>> echo This is new

>> echo this is second one >>

pause

1. TO SAVE a BAT File

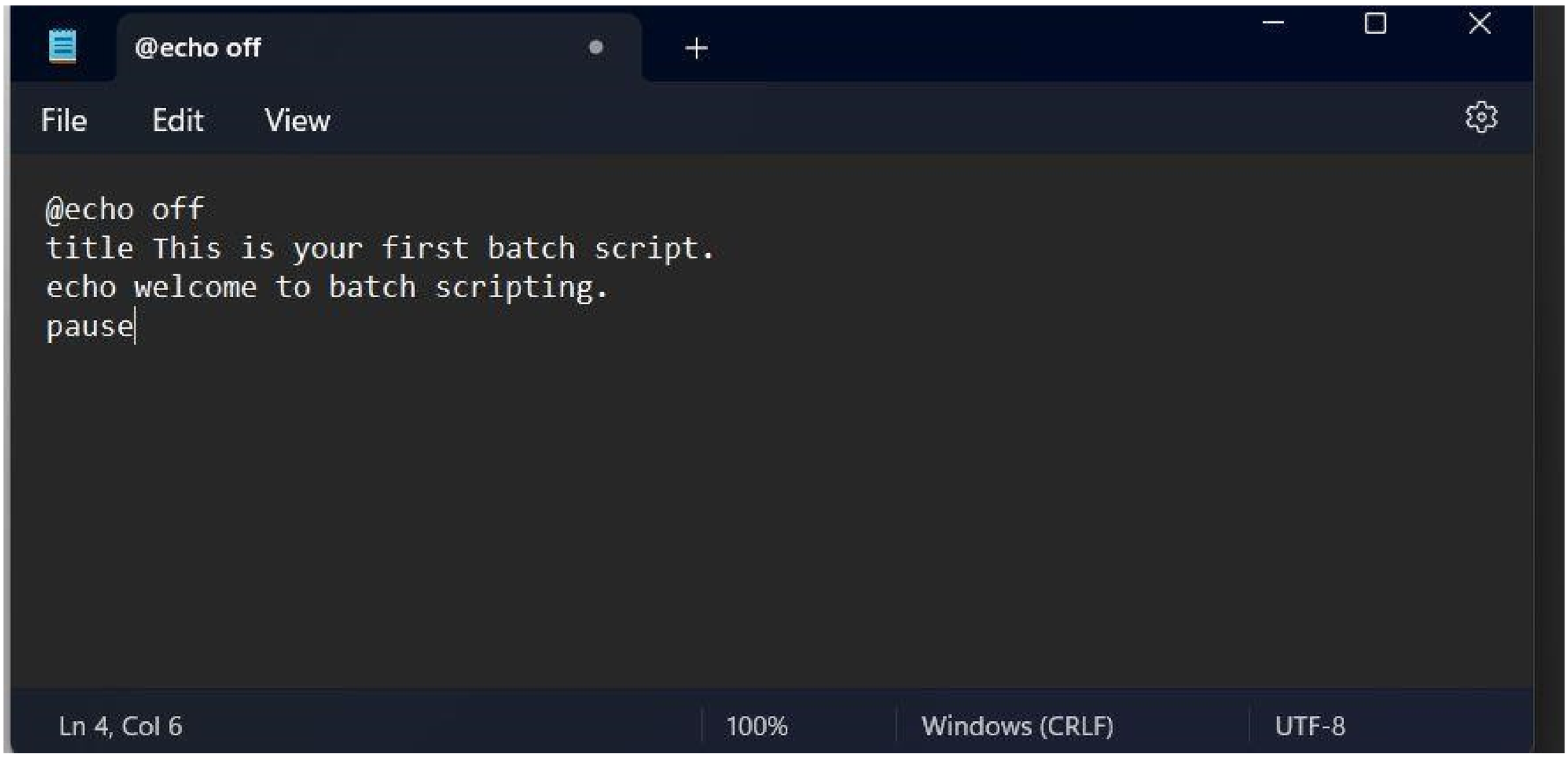
The above script echoes back the text "Welcome to batch scripting!" Save your file by heading to File > Save As, and then name your file what you'd like. End your file name with the added BAT extension, for example test.bat, and click OK. This will finalize the batch process. Now, double-click on your newly created batch file to activate it.

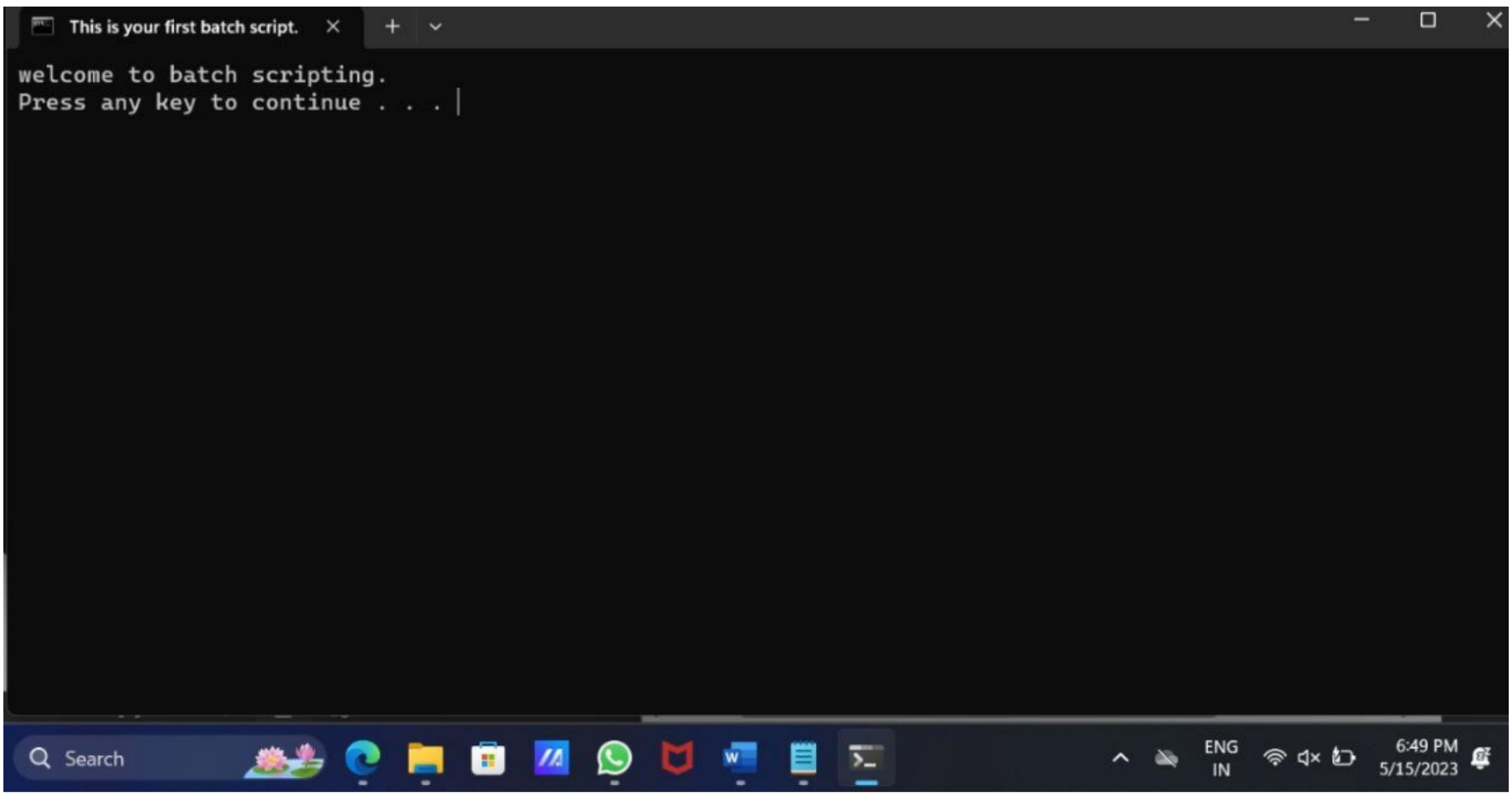
2.To RUN as BAT File

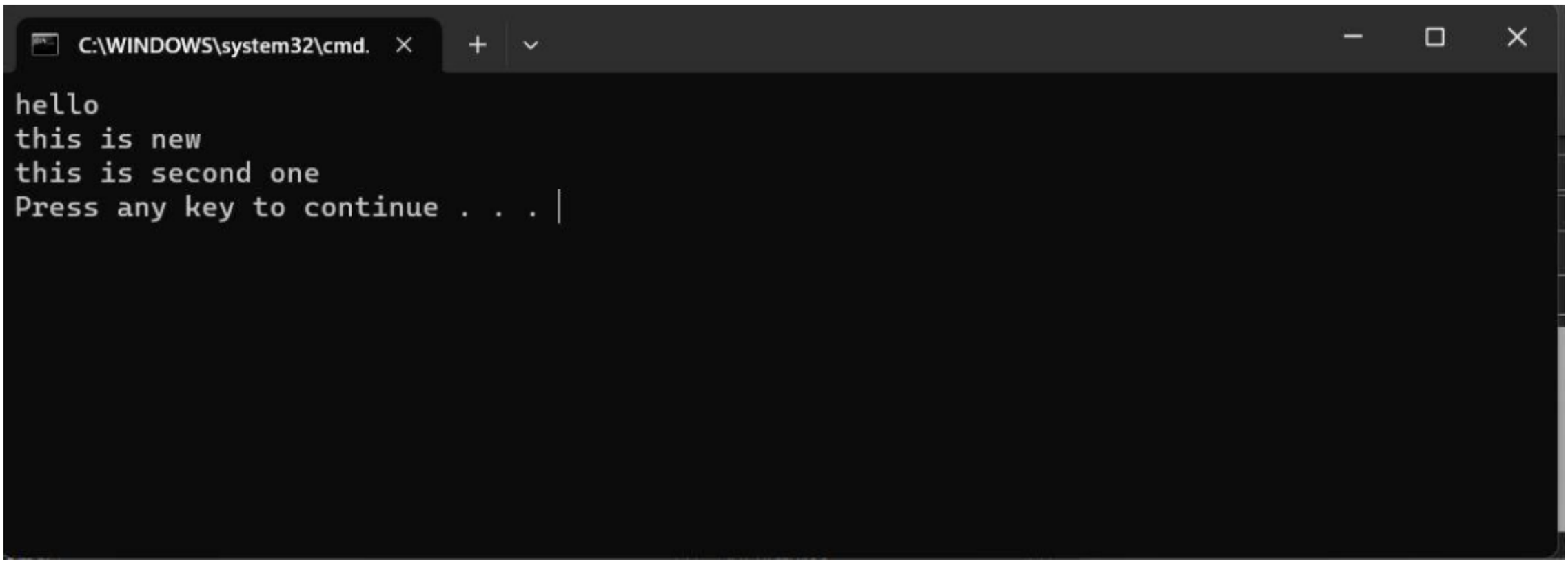
Once you'd saved your file, all you need to do is double-click your BAT file. Instantly, your web pages will open. If you'd like, you can place this file on your desktop. This will allow you to access all of your favorite websites at once.

OUTPUT:

Result:







The above experiment is carried out using windows command prompt. The main aim of this experiment is to create a windows batch file using batch file extension. After this experiment, I was able to create a windows batch file using sufficient data.

Exercise No 5: Information gathering using theHarvester

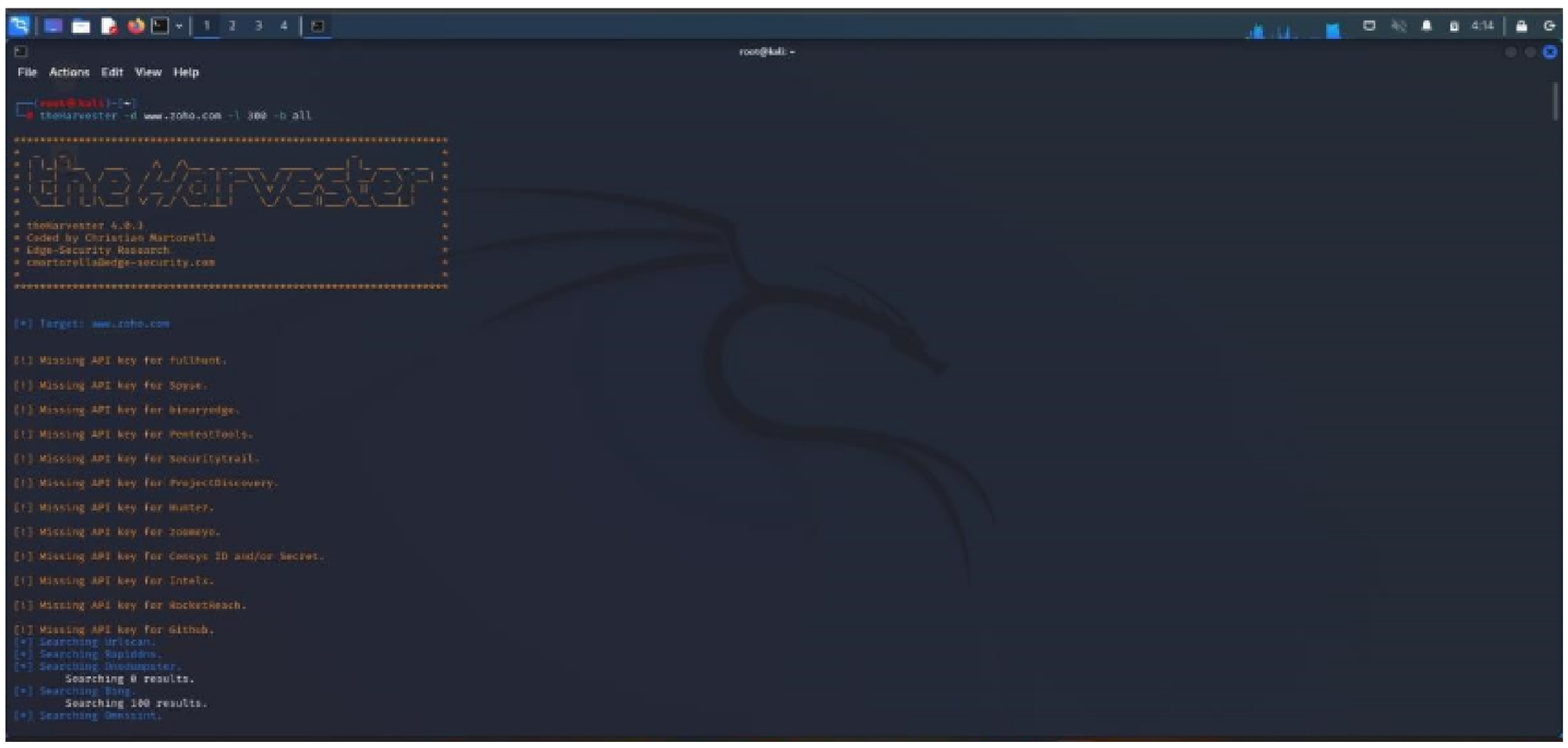
Aim: To demonstrate information gathering using theHarvester **Procedure:**

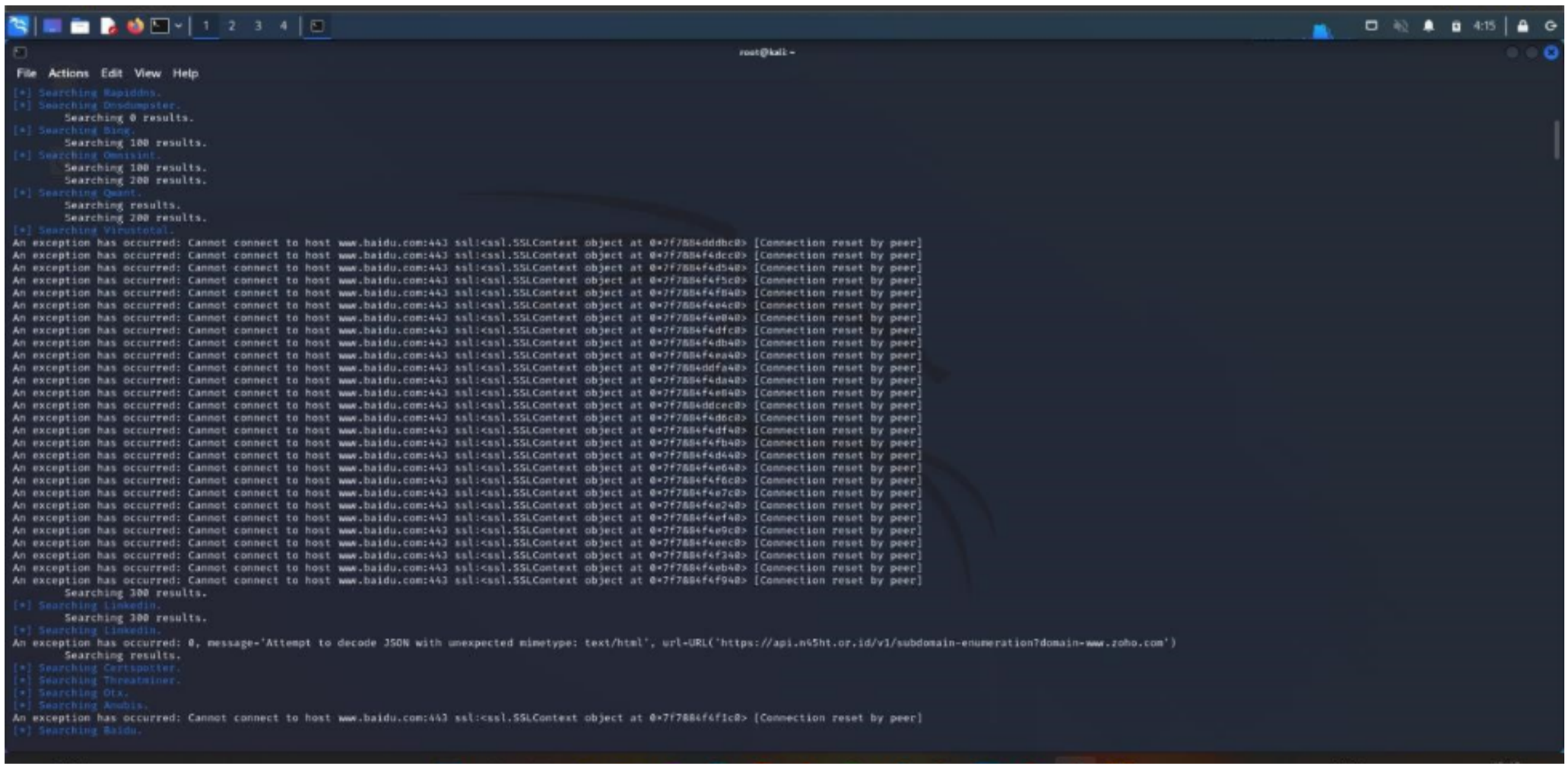
STEP 1: Open Terminal in the kali linux

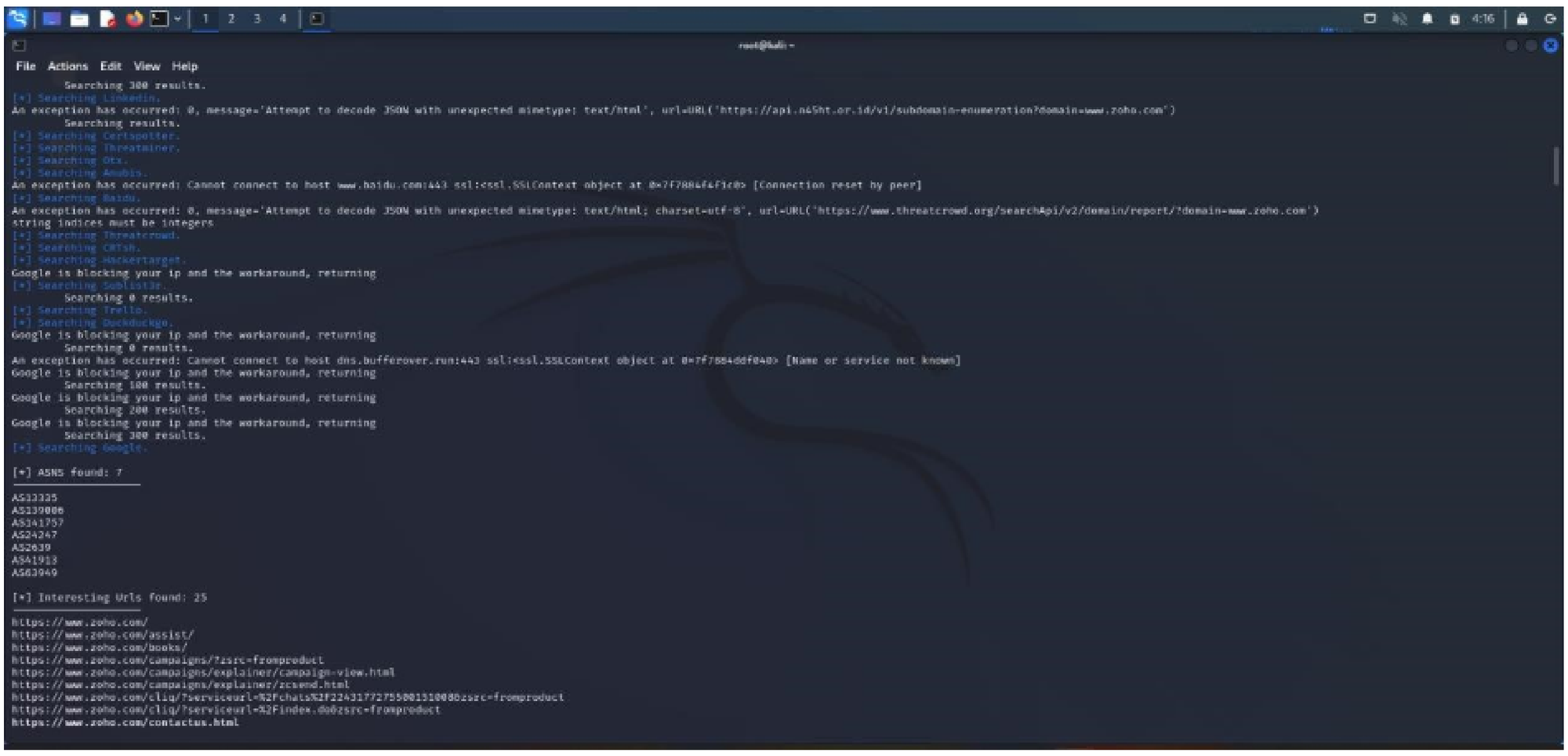
```
-d [url] will be the remote site from which you wants to fetch


-l will limit the search for specified number.


-b is used to specify search engine name.
```

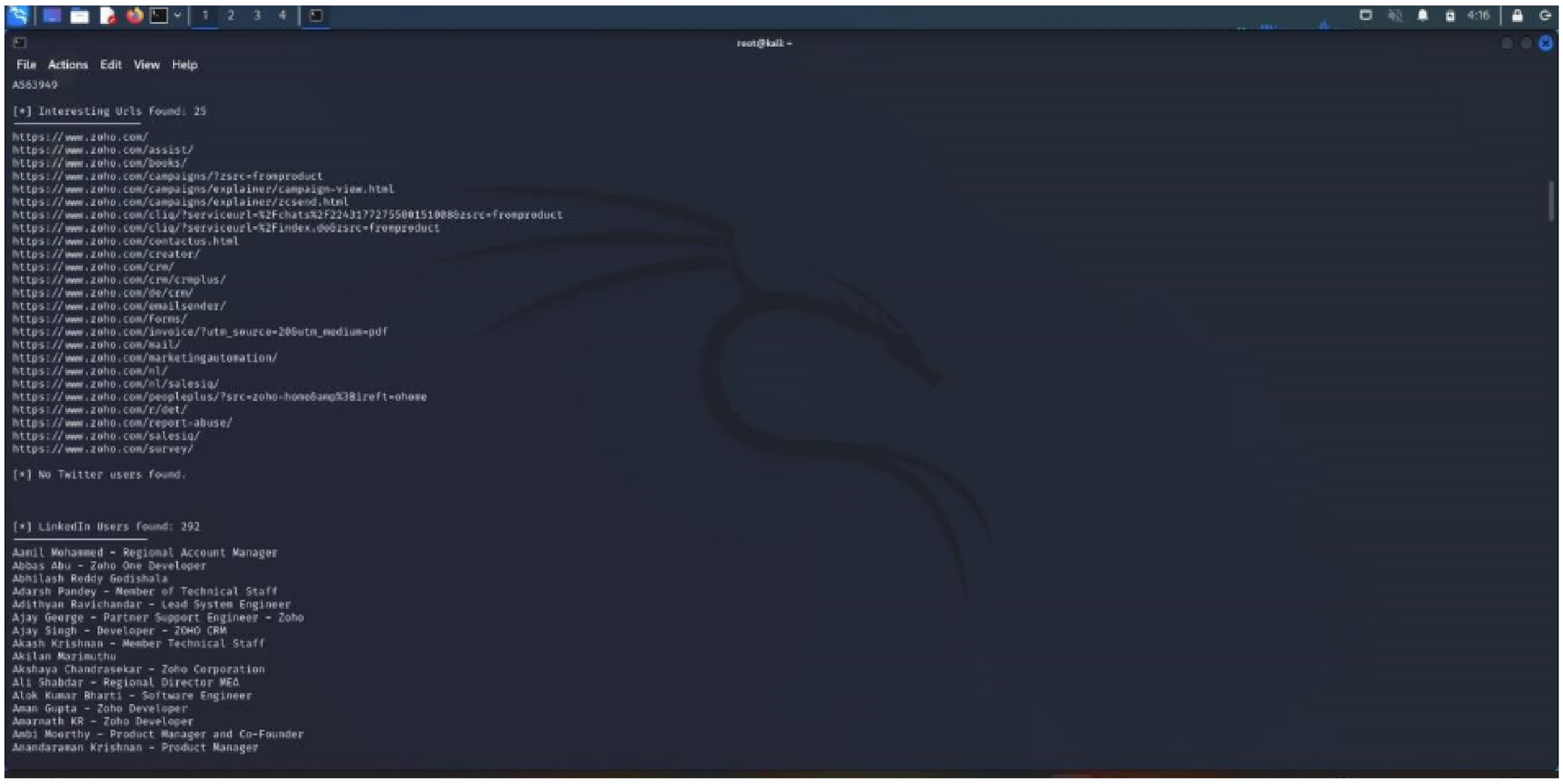
STEP 2: Run the following command

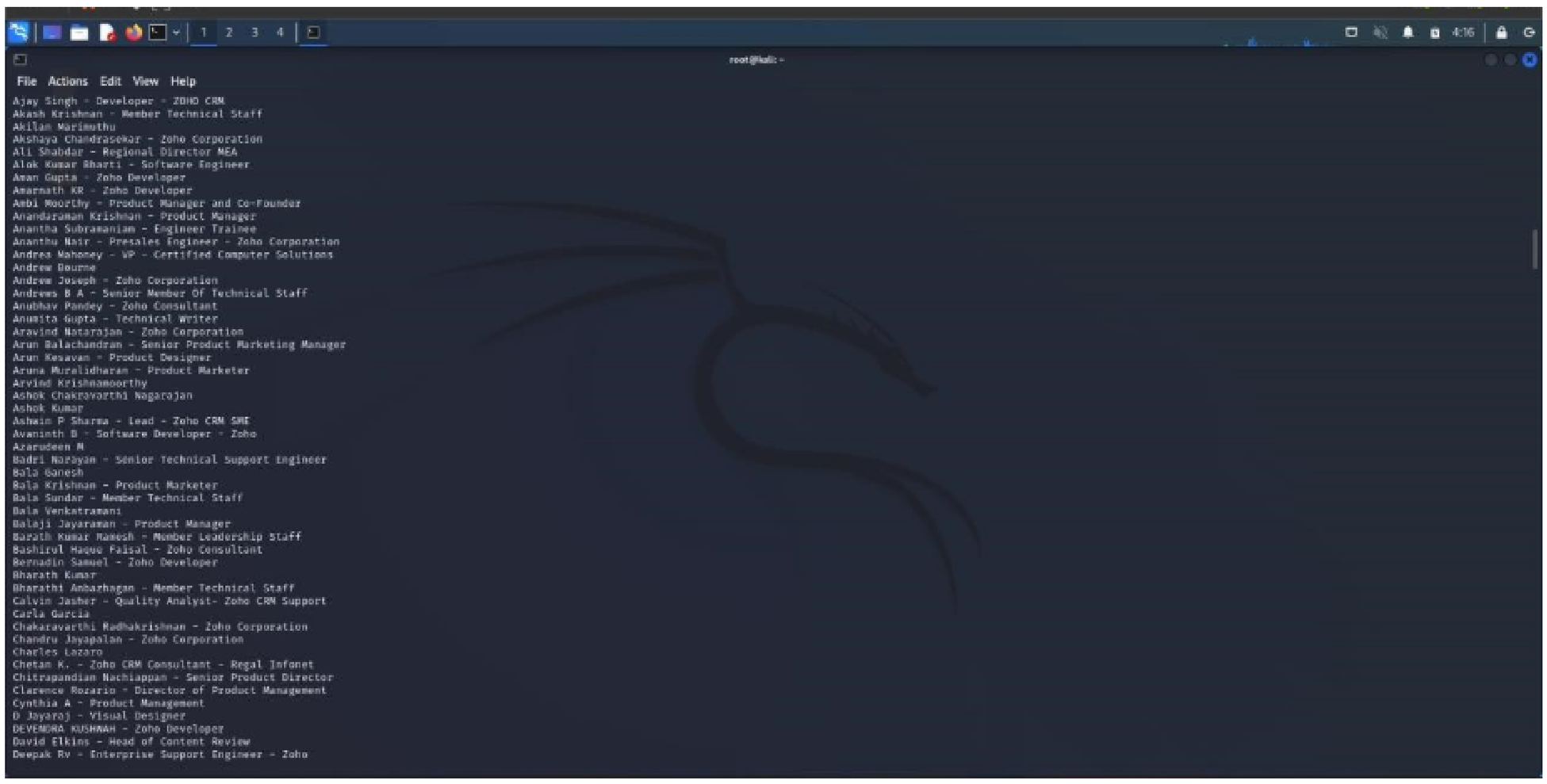
Command: theHarvester -d www.zoho.com -l 300 -b all

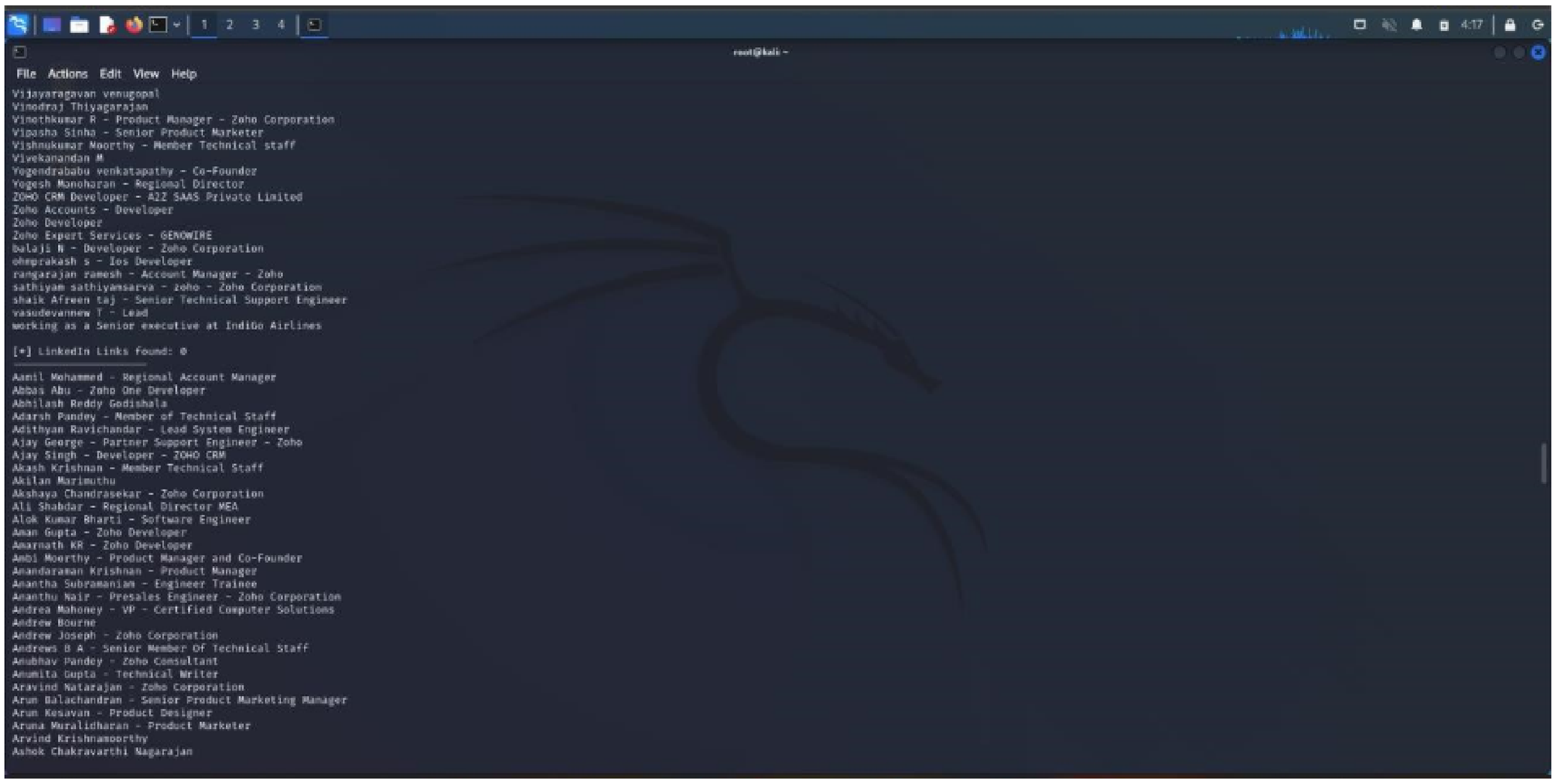


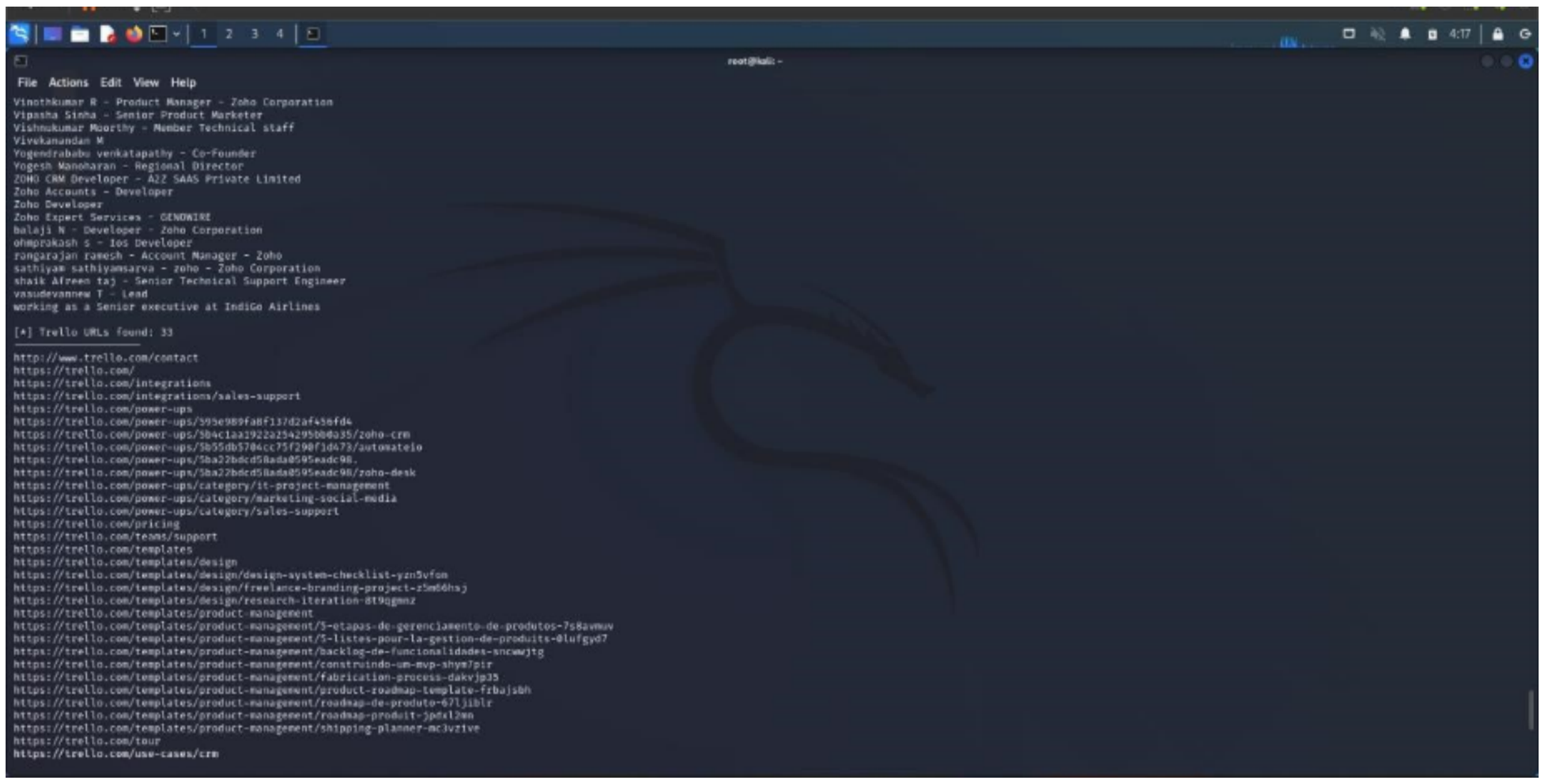

File Actions Edit View Help
[*] Searching Rapiddns.
[*] Searching Dnsdumpster.
Searching 0 results.
[*] Searching Bing.
Searching 100 results.
[*] Searching Omnisint.
Searching 100 results.
Searching 200 results.
[*] Searching Quant.
Searching results.
Searching 200 results.
[*] Searching Virustotal.
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884dddbc0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4dcc0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4d540> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f5c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f840> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e4c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e040> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4dfc0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4db40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4ea40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884ddfa40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4da40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e840> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884ddcec0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4d6c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4df40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4fb40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4d440> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e640> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f6c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e7c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e240> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4ef40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4e9c0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4eec0> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f240> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4eb40> [Connection reset by peer]
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f940> [Connection reset by peer]
Searching 300 results.
[*] Searching Linkedin.
Searching 300 results.
[*] Searching Linkedin.
An exception has occurred: 0, message='Attempt to decode JSON with unexpected mimetype: text/html', url=URL('https://api.n45ht.or.id/v1/subdomain-enumeration?domain=www.zoho.com')
Searching results.
[*] Searching Certspotter.
[*] Searching Threatminer.
[*] Searching Otx.
[*] Searching Anubis.
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f1c0> [Connection reset by peer]
[*] Searching Baidu.

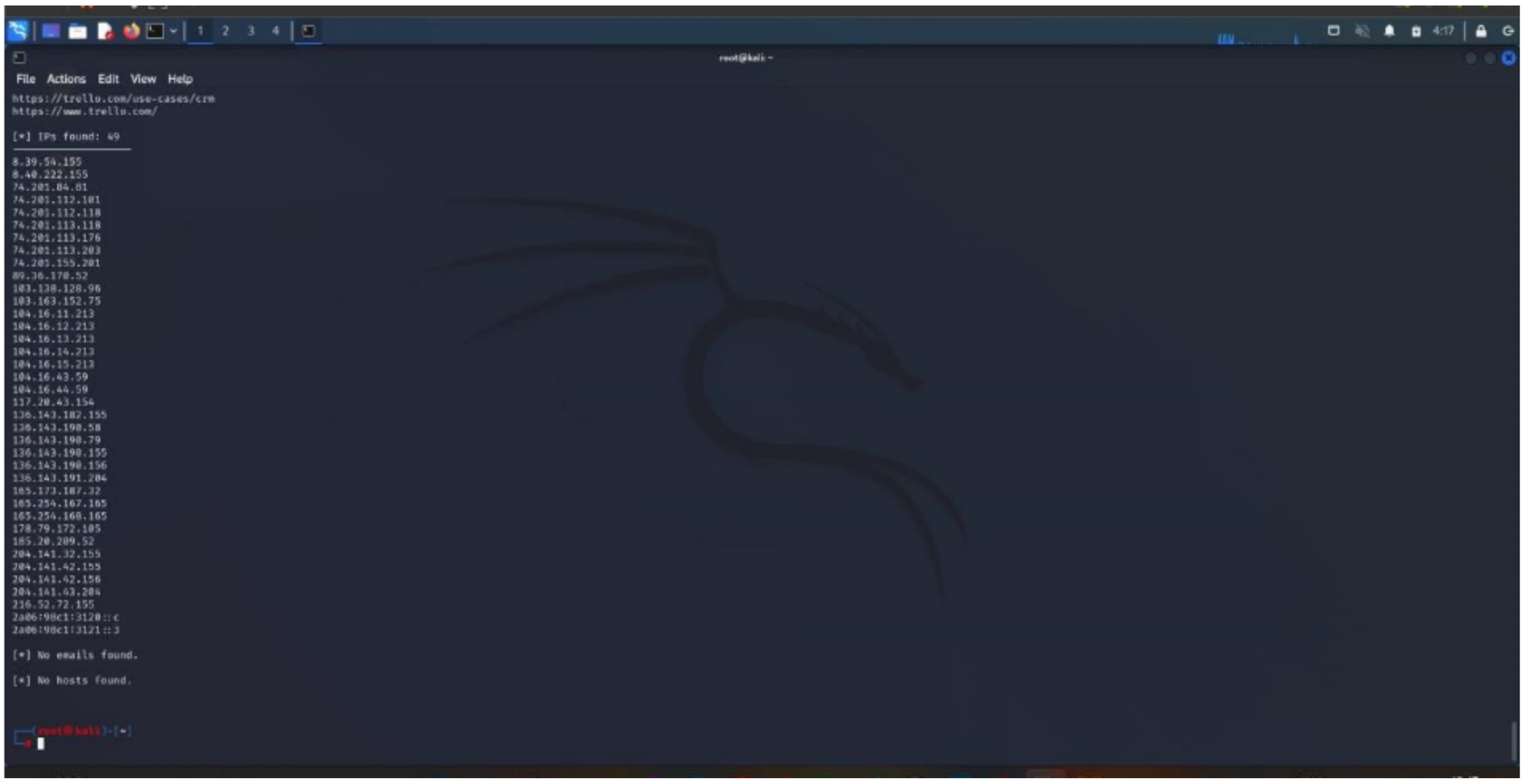

File Actions Edit View Help
Searching 300 results.
[*] Searching Linkedin.
An exception has occurred: 0, message='Attempt to decode JSON with unexpected mimetype: text/html', url=URL('https://api.n45ht.or.id/v1/subdomain-enumeration?domain=www.zoho.com')
Searching results.
[*] Searching Certspotter.
[*] Searching Threatminer.
[*] Searching Otx.
[*] Searching Anubis.
An exception has occurred: Cannot connect to host www.baidu.com:443 ssl:<ssl.SSLContext object at 0x7f7884f4f1c0> [Connection reset by peer]
[*] Searching Baidu.
An exception has occurred: 0, message='Attempt to decode JSON with unexpected mimetype: text/html; charset=utf-8', url=URL('https://www.threatcrowd.org/searchApi/v2/domain/report/?domain=www.zoho.com')
string indices must be integers
[*] Searching Threatcrowd.
[*] Searching CRTsh.
[*] Searching Hackertarget.
Google is blocking your ip and the workaround, returning
[*] Searching Sublist3r.
Searching 0 results.
[*] Searching Trello.
[*] Searching Duckduckgo.
Google is blocking your ip and the workaround, returning
Searching 0 results.
An exception has occurred: Cannot connect to host dns.bufferover.run:443 ssl:<ssl.SSLContext object at 0x7f7884d0f040> [Name or service not known]
Google is blocking your ip and the workaround, returning
Searching 100 results.
Google is blocking your ip and the workaround, returning
Searching 200 results.
Google is blocking your ip and the workaround, returning
Searching 300 results.
[*] Searching Google.
[*] ASNS found: 7
AS13335
AS139006
AS141757
AS24247
AS2639
AS41913
AS63949
[*] Interesting Urls found: 25
https://www.zoho.com/
https://www.zoho.com/assist/
https://www.zoho.com/books/
https://www.zoho.com/campaigns/?zsrc=fromproduct
https://www.zoho.com/campaigns/explainer/campaign-view.html
https://www.zoho.com/campaigns/explainer/zcsend.html
https://www.zoho.com/cliq/?serviceurl=%2Fchats%3F2431772755001310000&zsrc=fromproduct
https://www.zoho.com/cliq/?serviceurl=%2Findex.do&zsrc=fromproduct
https://www.zoho.com/contactus.html


File Actions Edit View Help
AS63949
[*] Interesting Urls Found: 25
https://www.zoho.com/
https://www.zoho.com/assist/
https://www.zoho.com/books/
https://www.zoho.com/campaigns/?zsrc=fromproduct
https://www.zoho.com/campaigns/explainer/campaign-view.html
https://www.zoho.com/campaigns/explainer/zcsend.html
https://www.zoho.com/cliq/?serviceurl=%2Fchats%2F2243177275500151008&zsrc=fromproduct
https://www.zoho.com/cliq/?serviceurl=%2Findex.do&zsrc=fromproduct
https://www.zoho.com/contactus.html
https://www.zoho.com/creator/
https://www.zoho.com/crm/
https://www.zoho.com/crm/crmplus/
https://www.zoho.com/de/crm/
https://www.zoho.com/emailsender/
https://www.zoho.com/forms/
https://www.zoho.com/invoice/?utm_source=20&utm_medium=pdf
https://www.zoho.com/mail/
https://www.zoho.com/marketingautomation/
https://www.zoho.com/ml/
https://www.zoho.com/ml/salesiq/
https://www.zoho.com/peopleplus/?src=zoho-home&amp%3Biref=ohome
https://www.zoho.com/r/det/
https://www.zoho.com/report-abuse/
https://www.zoho.com/salesiq/
https://www.zoho.com/survey/
[*] No Twitter users found.
[*] LinkedIn Users found: 292
Aamil Mohammed - Regional Account Manager
Abbas Abu - Zoho One Developer
Abhilash Reddy Godishala
Adarsh Pandey - Member of Technical Staff
Adithyan Ravichandar - Lead System Engineer
Ajay George - Partner Support Engineer - Zoho
Ajay Singh - Developer - ZOHO CRM
Akash Krishnan - Member Technical Staff
Akilan Marimuthu
Akshaya Chandrasekar - Zoho Corporation
Ali Shabdar - Regional Director MEA
Alok Kumar Bharti - Software Engineer
Aman Gupta - Zoho Developer
Amarnath KR - Zoho Developer
Ambi Moorthy - Product Manager and Co-Founder
Anandaraman Krishnan - Product Manager


File Actions Edit View Help
Ajay Singh - Developer - ZOHO CRM
Akash Krishnan - Member Technical Staff
Akilan Marimuthu
Akshaya Chandrasekar - Zoho Corporation
Ali Shabdar - Regional Director MEA
Alok Kumar Bharti - Software Engineer
Aman Gupta - Zoho Developer
Amarnath KR - Zoho Developer
Ambi Moorthy - Product Manager and Co-Founder
Anandaraman Krishnan - Product Manager
Anantha Subramanian - Engineer Trainee
Ananthu Nair - Presales Engineer - Zoho Corporation
Andrea Mahoney - VP - Certified Computer Solutions
Andrew Bourne
Andrew Joseph - Zoho Corporation
Andrews B A - Senior Member Of Technical Staff
Anubhav Pandey - Zoho Consultant
Anumita Gupta - Technical Writer
Aravind Natarajan - Zoho Corporation
Arun Balachandran - Senior Product Marketing Manager
Arun Kesavan - Product Designer
Aruna Muralidharan - Product Marketer
Arvind Krishnamoorthy
Ashok Chakravarthi Nagarajan
Ashok Kumar
Ashwin P Sharma - Lead - Zoho CRM SME
Avaninth B - Software Developer - Zoho
Azarudeen M
Badri Narayan - Senior Technical Support Engineer
Bala Ganesh
Bala Krishnan - Product Marketer
Bala Sundar - Member Technical Staff
Bala Venkatramani
Balaji Jayaraman - Product Manager
Barath Kumar Ramesh - Member Leadership Staff
Bashirul Haque Faisal - Zoho Consultant
Bernadin Samuel - Zoho Developer
Bharath Kumar
Bharathi Ambarhagan - Member Technical Staff
Calvin Jasher - Quality Analyst- Zoho CRM Support
Carla Garcia
Chakaravarthi Radhakrishnan - Zoho Corporation
Chandru Jayapalan - Zoho Corporation
Charles Lazaro
Chetan K. - Zoho CRM Consultant - Regal Infonet
Chitrapandian Nachiappan - Senior Product Director
Clarence Rozario - Director of Product Management
Cynthia A - Product Management
D Jayaraj - Visual Designer
DEVENDRA KUSHWAH - Zoho Developer
David Elkins - Head of Content Review
Deepak Rv - Enterprise Support Engineer - Zoho


File Actions Edit View Help
Vijayaragavan venugopal
Vinodraj Thiyagarajan
Vinothkumar R - Product Manager - Zoho Corporation
Vipasha Sinha - Senior Product Marketer
Vishnukumar Moorthy - Member Technical staff
Vivekanandan M
Yogendrababu venkatapathy - Co-Founder
Yogesh Manoharan - Regional Director
ZOHO CRM Developer - A2Z SAAS Private Limited
Zoho Accounts - Developer
Zoho Developer
Zoho Expert Services - GENOWIRE
balaji N - Developer - Zoho Corporation
ohmprakash s - Ios Developer
rangarajan ramesh - Account Manager - Zoho
sathiyam sathiyamsarva - zoho - Zoho Corporation
shaik Afreen taj - Senior Technical Support Engineer
vasudevannew T - Lead
working as a Senior executive at IndiGo Airlines
[*] LinkedIn Links found: 0
Aamil Mohammed - Regional Account Manager
Abbas Abu - Zoho One Developer
Abhilash Reddy Godishala
Adarsh Pandey - Member of Technical Staff
Adithyan Ravichandar - Lead System Engineer
Ajay George - Partner Support Engineer - Zoho
Ajay Singh - Developer - ZOHO CRM
Akash Krishnan - Member Technical Staff
Akilan Marimuthu
Akshaya Chandrasekar - Zoho Corporation
Ali Shabdar - Regional Director MEA
Alok Kumar Bharti - Software Engineer
Aman Gupta - Zoho Developer
Amarnath KR - Zoho Developer
Ambi Moorthy - Product Manager and Co-Founder
Anandaraman Krishnan - Product Manager
Anantha Subramaniam - Engineer Trainee
Ananthu Nair - Presales Engineer - Zoho Corporation
Andrea Mahoney - VP - Certified Computer Solutions
Andrew Bourne
Andrew Joseph - Zoho Corporation
Andrews B A - Senior Member Of Technical Staff
Anubhav Pandey - Zoho Consultant
Anumita Gupta - Technical Writer
Aravind Natarajan - Zoho Corporation
Arun Balachandran - Senior Product Marketing Manager
Arun Kesavan - Product Designer
Aruna Muralidharan - Product Marketer
Arvind Krishnamoorthy
Ashok Chakravarthi Nagarajan


File Actions Edit View Help
Vinothkumar R - Product Manager - Zoho Corporation
Vipasha Sinha - Senior Product Marketer
Vishnukumar Moorthy - Member Technical staff
Vivekanandan M
Yogendrababu venkatapathy - Co-Founder
Yogesh Manoharan - Regional Director
ZOHO CRM Developer - A2Z SAAS Private Limited
Zoho Accounts - Developer
Zoho Developer
Zoho Expert Services - GENOWIRE
balaji N - Developer - Zoho Corporation
ohmprakash s - Ios Developer
rangarajan ramesh - Account Manager - Zoho
sathiyam sathiyamsarva - zoho - Zoho Corporation
shaik Afreen taj - Senior Technical Support Engineer
vasudevannew T - Lead
working as a Senior executive at IndiGo Airlines
[*] Trello URLs found: 33
http://www.trello.com/contact
https://trello.com/
https://trello.com/integrations
https://trello.com/integrations/sales-support
https://trello.com/power-ups
https://trello.com/power-ups/595e989fa8f137d2af458fd4
https://trello.com/power-ups/5b4c1aa1922a254295b00a35/zoho-crm
https://trello.com/power-ups/5b55db5704cc75f290f1d473/automateio
https://trello.com/power-ups/5ba22bdcd58ada0595eadc98.
https://trello.com/power-ups/5ba22bdcd58ada0595eadc98/zoho-desk
https://trello.com/power-ups/category/it-project-management
https://trello.com/power-ups/category/marketing-social-media
https://trello.com/power-ups/category/sales-support
https://trello.com/pricing
https://trello.com/teams/support
https://trello.com/templates
https://trello.com/templates/design
https://trello.com/templates/design/design-system-checklist-yzn5vfon
https://trello.com/templates/design/freelance-branding-project-z5m66hsj
https://trello.com/templates/design/research-iteration-8t9qgmnz
https://trello.com/templates/product-management
https://trello.com/templates/product-management/5-etapas-de-gerenciamento-de-produtos-7s8avmuv
https://trello.com/templates/product-management/5-listes-pour-la-gestion-de-produits-0lufgyd7
https://trello.com/templates/product-management/backlog-de-funcionalidades-sncwwjtg
https://trello.com/templates/product-management/construindo-um-mvp-shym7pir
https://trello.com/templates/product-management/fabrication-process-dakvjp35
https://trello.com/templates/product-management/product-roadmap-template-frbajs8h
https://trello.com/templates/product-management/roadmap-de-produto-67ljiblr
https://trello.com/templates/product-management/roadmap-produit-jpdxl2mn
https://trello.com/templates/product-management/shipping-planner-mc3vzive
https://trello.com/tour
https://trello.com/use-cases/crm



Step 4: run this command "**theHarvester -d www.zoho.com -l 300 -b all -f test**" **and** hit enter to export the result as html file and xml file

Step 5: now close the terminal and navigate the home folder and search for test file .

OUTPUT:

1)

Result:

The above-mentioned experiment is done using theHarvester in kali Linux server. The information is gathered using theHarvester.

Exercise No 6 - Open Source Intelligence Gathering Using OSRFramework

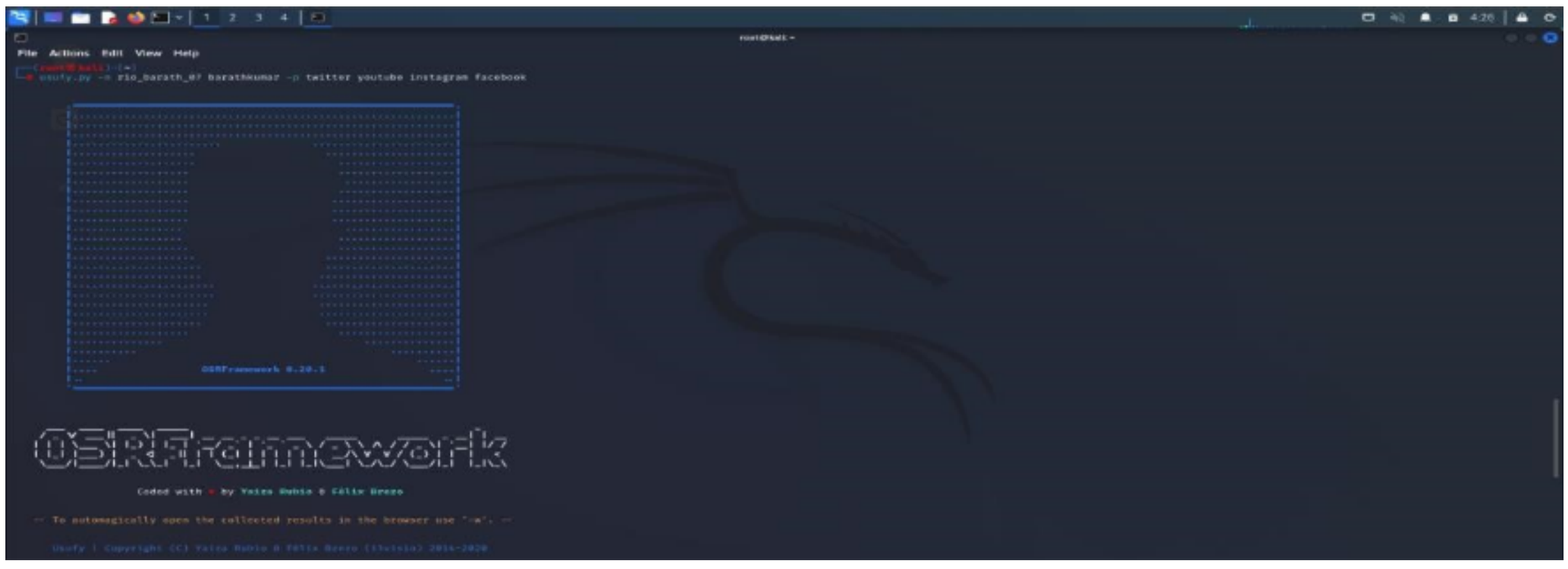
Aim: To Checks for the Existence of a Profile for given user details in different platforms **Procedure:**

Step 1: Log into kali linux machine

Step 2: Launch a command line terminal by clicking on terminal icon from taskbar Step 3: Usufy.py checks for the existence of a profile for given user details in different platforms

Command:

Usufy.py -n <Target username or profile name> -p twitter facebook youtube



If any error occurs Try this command: **Sudo apt-getupdate**

The usufy.py will search the user details in the mentioned platform and will provide you with the existence of the user

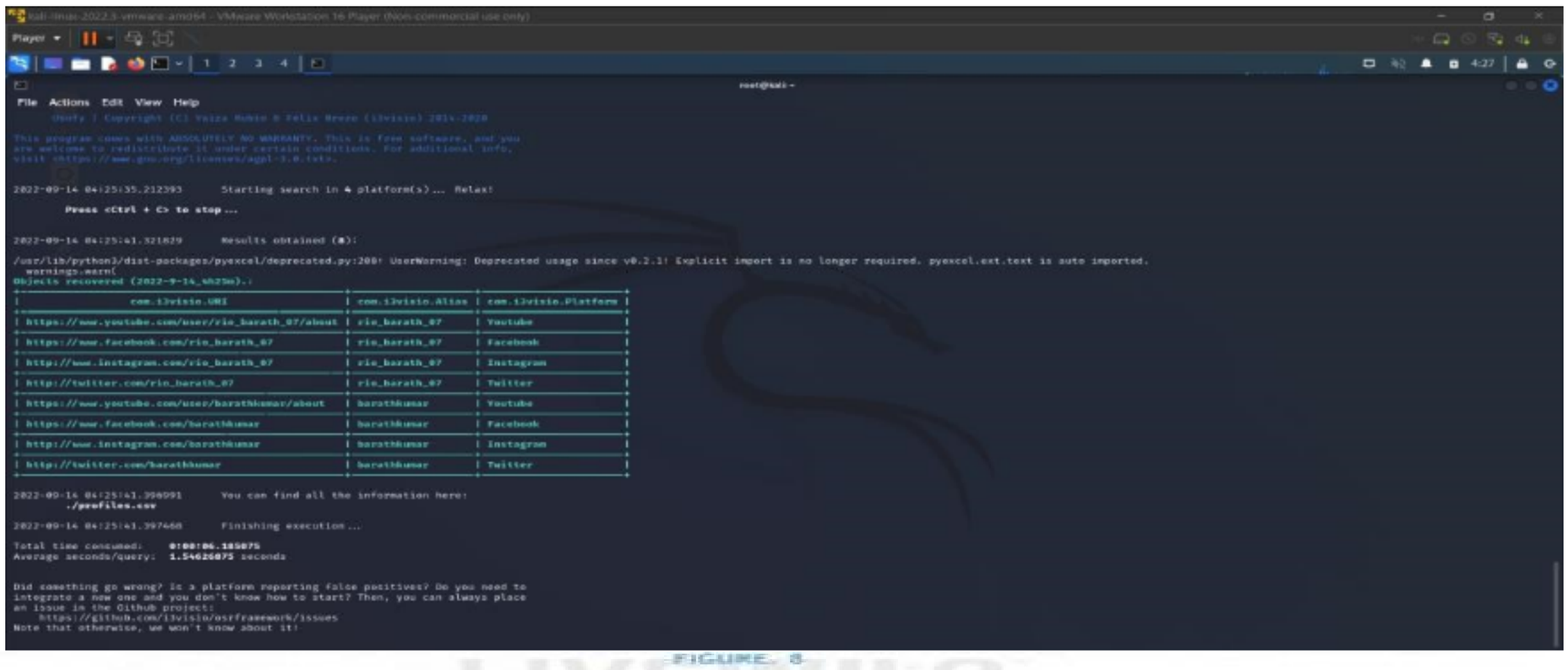


FIGURE. 8

Step 5: Searchfy.py checks with the existing users of a page/handlers for given details in the all social networking platforms.

Type searchfy.py -q <Page Name or Handler Name> and press Enter.

FIGURE. 9

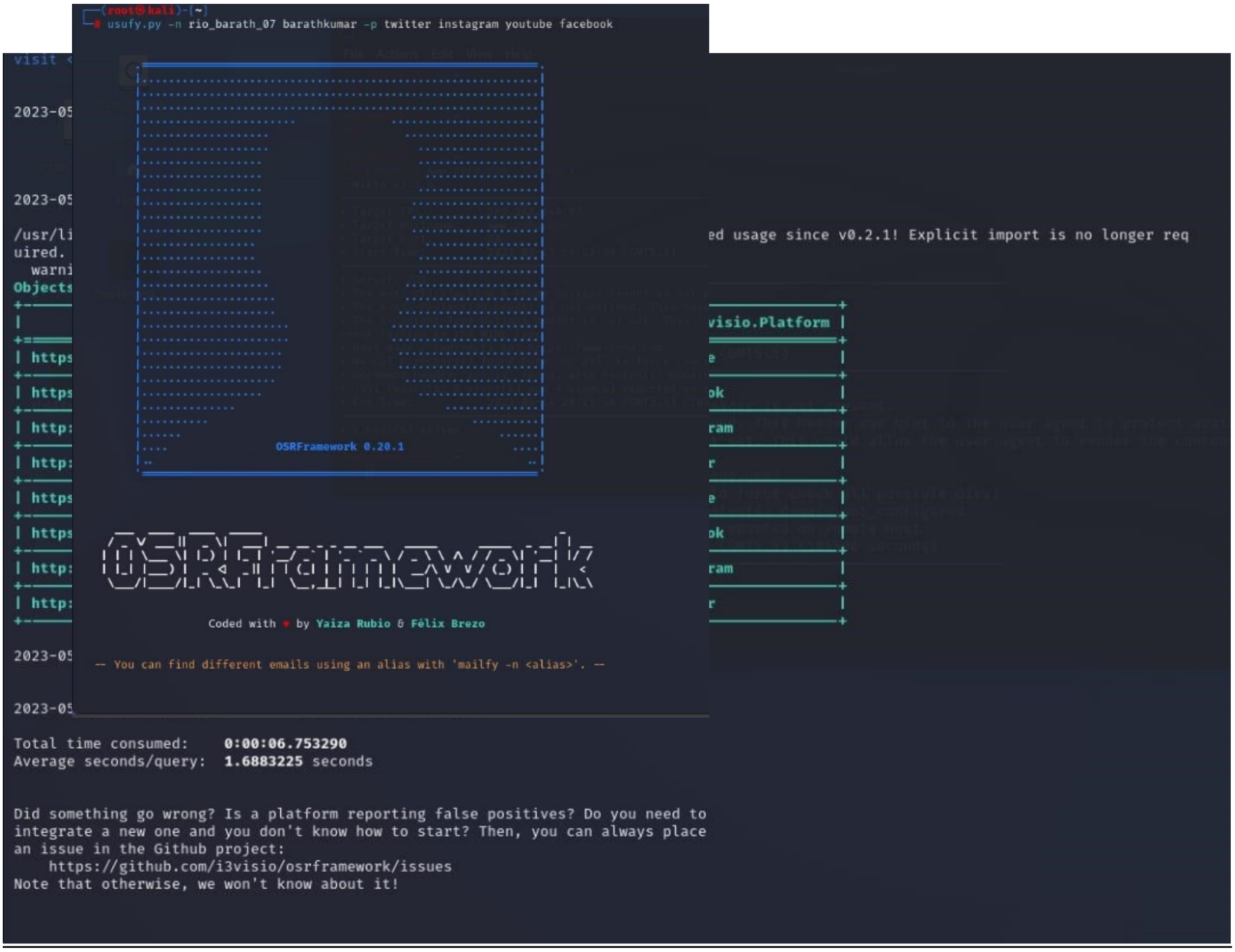
Step 6: It will put out all the details who are subscribed to target social networking pages that are provided.

FIGURE. 10

Collect and note the information disclosed about the target.

Output:

1)



Result:

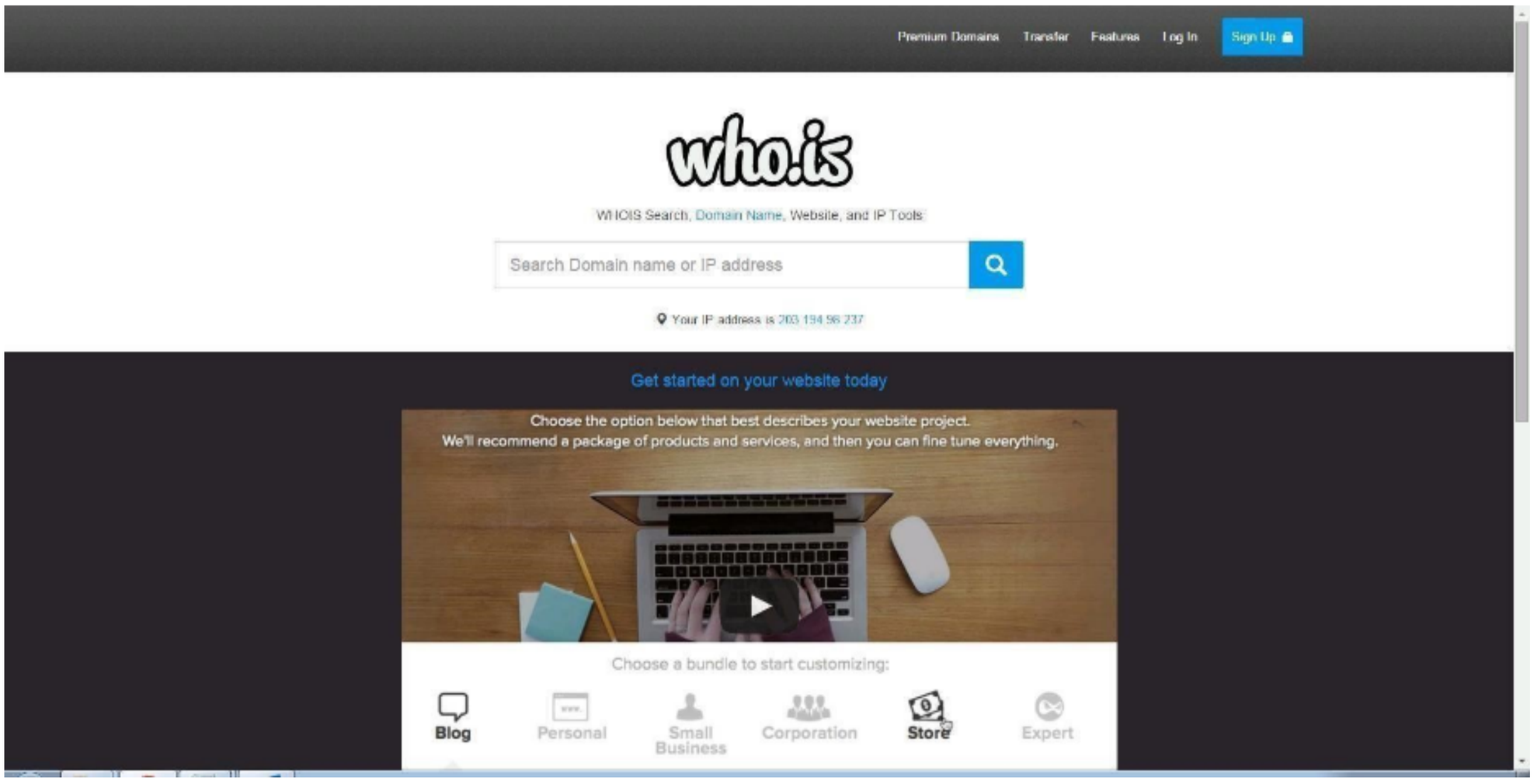
2)

The current experiment is about Open-Source Intelligence Gathering is done using OSR Framework. This experiment is done to check for the Existence of a Profile for given user details in different platforms. This experiment is executed in root terminal using kali linux operating system.

Exercise NO 7: Use Google and Whois for Reconnaisasance.

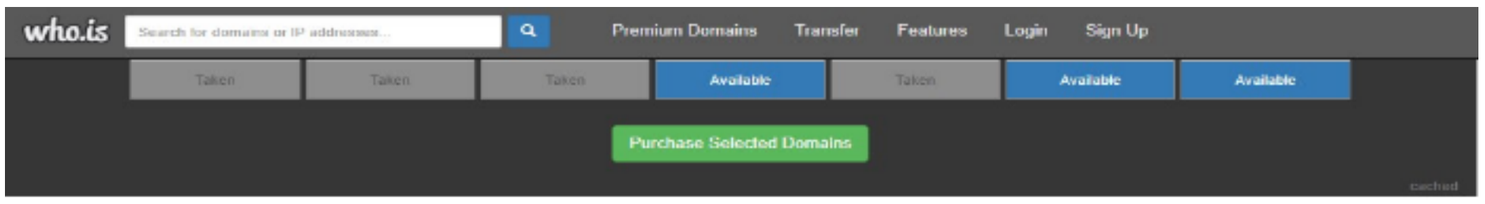
Aim: To find out the Whois, DNS Records and Diagonstics for particular website by using Whois search. **Procedure:**

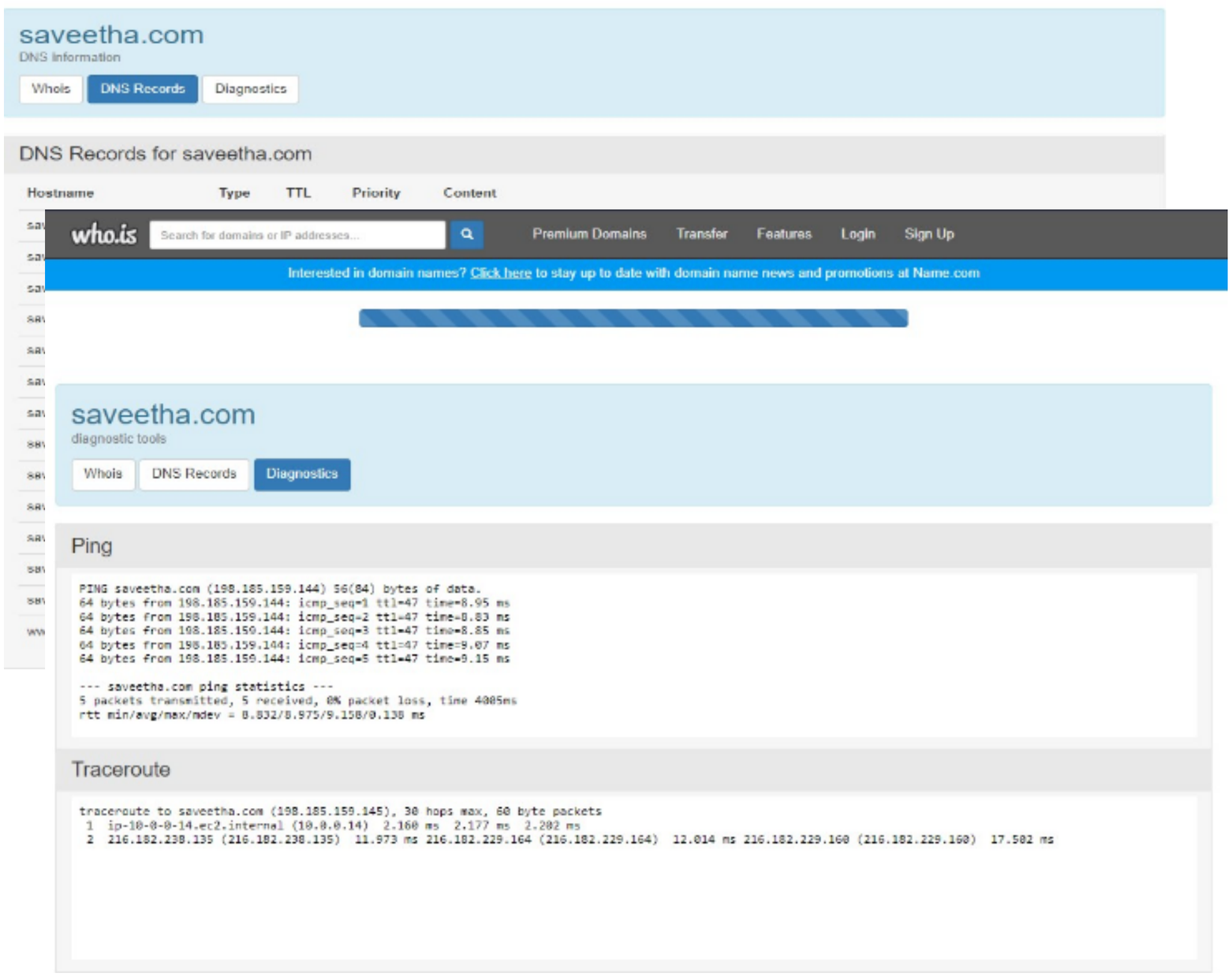
Step1: Open the WHO.is website

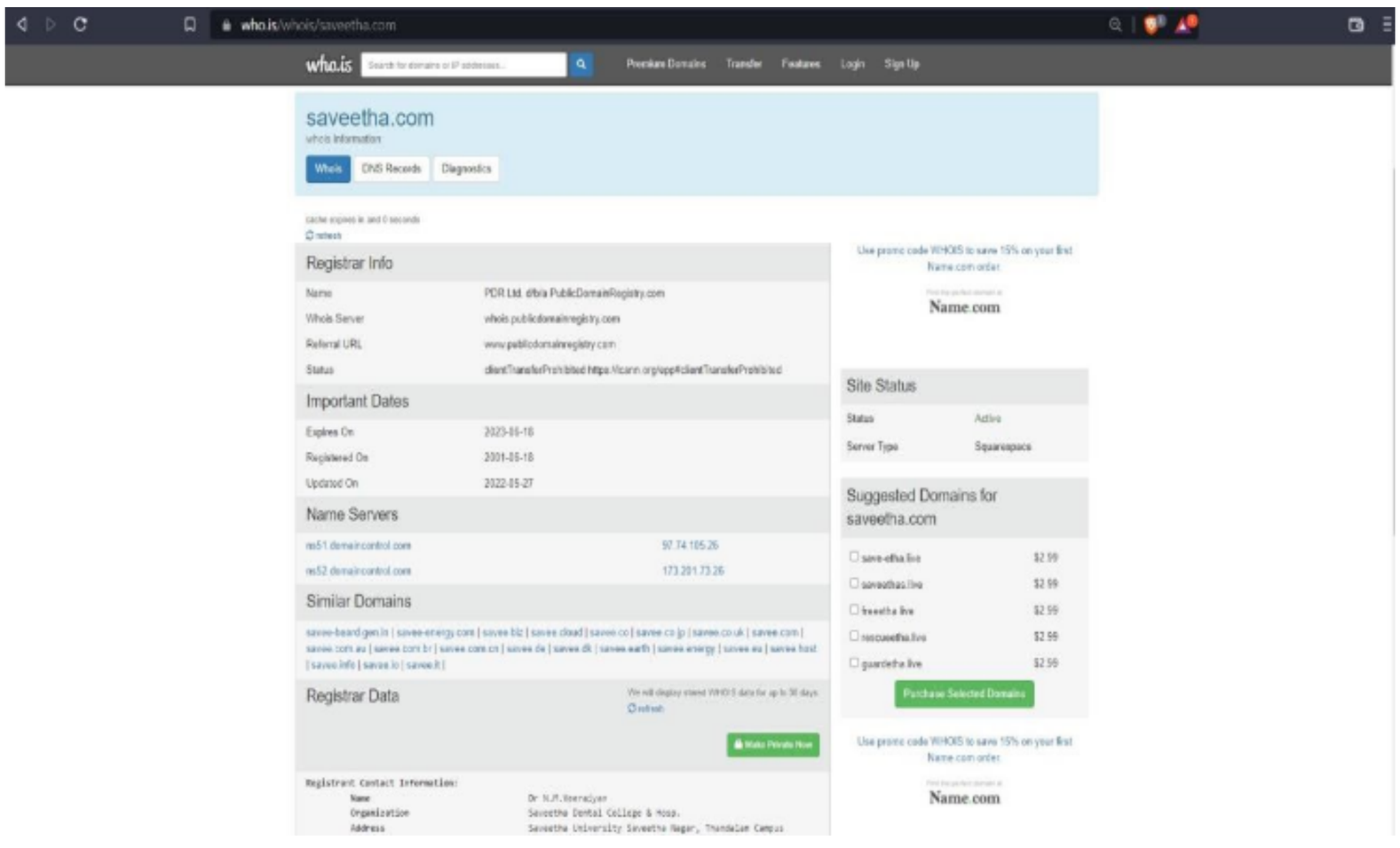


Step 2: Enter the website name in search bar and hit the " Enter button" . Step 3:

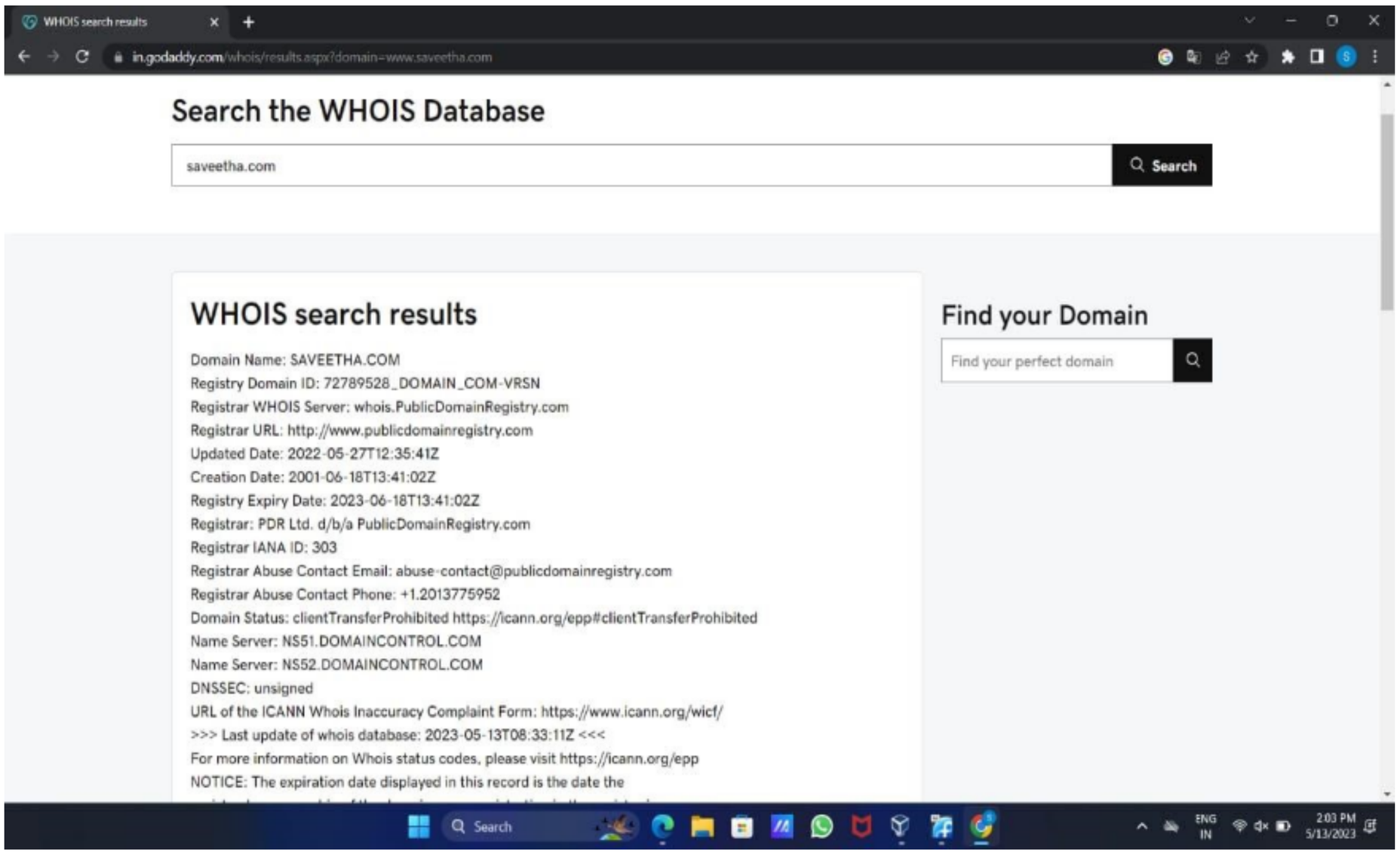
Show you information about www.saveetha.com


who.is
Search for domains or IP addresses...
Premium Domains
Transfer
Features
Login
Sign Up
Taken
Taken
Taken
Available
Taken
Available
Available
Purchase Selected Domains
cached


saveetha.com
DNS information
Whois
DNS Records
Diagnostics
DNS Records for saveetha.com
Hostname
Type
TTL
Priority
Content
who.is
Search for domains or IP addresses...
Premium Domains
Transfer
Features
Login
Sign Up
Interested in domain names? Click here to stay up to date with domain name news and promotions at Name.com
saveetha.com
diagnostic tools
Whois
DNS Records
Diagnostics
Ping
PING saveetha.com (198.185.159.144) 56(84) bytes of data.
64 bytes from 198.185.159.144: icmp_seq=1 ttl=47 time=8.95 ms
64 bytes from 198.185.159.144: icmp_seq=2 ttl=47 time=8.83 ms
64 bytes from 198.185.159.144: icmp_seq=3 ttl=47 time=8.85 ms
64 bytes from 198.185.159.144: icmp_seq=4 ttl=47 time=9.07 ms
64 bytes from 198.185.159.144: icmp_seq=5 ttl=47 time=9.15 ms
--- saveetha.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 8.832/8.975/9.150/0.130 ms
Traceroute
traceroute to saveetha.com (198.185.159.145), 30 hops max, 60 byte packets
1 ip-10-0-0-14.ec2.internal (10.0.0.14) 2.160 ms 2.177 ms 2.202 ms
2 216.182.238.135 (216.182.238.135) 11.973 ms 216.182.229.164 (216.182.229.164) 12.014 ms 216.182.229.160 (216.182.229.160) 17.502 ms


who.is/whois/saveetha.com
who.is
Premium Domains
Transfer
Features
Login
Sign Up
saveetha.com
whois information
Whois
DNS Records
Diagnostics
Registrar Info
Name
PDR Ltd. d/b/a PublicDomainRegistry.com
Whois Server
whois.publicdomainregistry.com
Referral URL
www.publicdomainregistry.com
Status
clientTransferProhibited https://icann.org/epp#clientTransferProhibited
Important Dates
Expires On
2023-05-18
Registered On
2001-05-18
Updated On
2022-05-27
Name Servers
ns51.domaincontrol.com
97.74.105.26
ns52.domaincontrol.com
173.201.73.26
Similar Domains
Registrar Data
Make Private Now
Registrant Contact Information:
Name
Dr N.M.Veeraiyan
Organization
Saveetha Dental College & Hosp.
Address
Saveetha University Saveetha Nagar, Thandalam Campus
Use promo code WHOIS to save 15% on your first Name.com order
Name.com
Site Status
Status
Active
Server Type
Squarespace
Suggested Domains for saveetha.com
save-ethe.live
$2.99
saveethas.live
$2.99
veetha.live
$2.99
rescueetha.live
$2.99
guardetha.live
$2.99
Purchase Selected Domains
Use promo code WHOIS to save 15% on your first Name.com order
Name.com

OUTPUT:



Result:

WHOIS is tool to check for the domain names, domain address and IP addresses. This experiment was done using the google and WHOIS.com website. We got the results such as domain name, domain ID, website creation date, name server and so on.

Exercise No 8: TraceRoute, ping, ifconfig, ipconfig, netstat

Aim: Using TraceRoute, ping, ifconfig(LINUX), ipconfig(WINDOWS), and netstat Command.

Procedure:

Step 1: open windows command prompt and Type tracert command and type tracert www.saveetha.com -> " Enter"

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.

C:\Users\barat>tracert saveetha.com

Tracing route to saveetha.com [118.139.175.1]
over a maximum of 30 hops:

  1    11 ms     4 ms     4 ms  172.18.64.1
  2     9 ms     2 ms     9 ms  172.22.3.1
  3     9 ms    17 ms     8 ms  172.22.7.2
  4    12 ms     9 ms    10 ms  ptpl-as56272-rev-241.121.235.180-chn.pulse.in [180.235.121.241]
  5    14 ms    13 ms     9 ms  static-141.121.99.14-tataidc.co.in [14.99.121.141]
  6     8 ms     9 ms    12 ms  14.141.20.165.static-vsnl.net.in [14.141.20.165]
  7    12 ms    10 ms     *     172.31.167.45
  8    10 ms    11 ms     8 ms  ix-ae-4-2.tcore1.cxr-chennai.as6453.net [180.87.36.9]
  9    43 ms     *        *     if-be-34-2.ecore2.esin4-singapore.as6453.net [180.87.36.41]
 10    42 ms    45 ms    50 ms  if-be-10-2.ecore2.svq-singapore.as6453.net [180.87.107.0]
 11     *        *        *     Request timed out.
 12     *        *        *     Request timed out.
 13     *        *        *     Request timed out.
 14     *        *        *     Request timed out.
 15     *        *        *     Request timed out.
 16     *        *        *     Request timed out.
 17     *        *        *     Request timed out.
 18     *        *        *     Request timed out.
 19     *        *        *     Request timed out.
 20     *        *        *     Request timed out.
 21     *        *        *     Request timed out.
 22     *        *        *     Request timed out.
 23     *        *        *     Request timed out.
 24     *        *        *     Request timed out.
 25     *        *        *     Request timed out.
 26     *        *        *     Request timed out.
 27     *        *        *     Request timed out.
 28     *        *        *     Request timed out.
 29     *        *        *     Request timed out.
 30     *        *        *     Request timed out.

Trace complete.
```

Step 2: Type ping command and type IP Address press " Enter"

```
C:\Windows\system32\cmd.exe
C:\Users\barat>ping 172.18.64.1

Pinging 172.18.64.1 with 32 bytes of data:
Reply from 172.18.64.1: bytes=32 time=7ms TTL=255
Reply from 172.18.64.1: bytes=32 time=28ms TTL=255
Reply from 172.18.64.1: bytes=32 time=34ms TTL=255
Reply from 172.18.64.1: bytes=32 time=75ms TTL=255

Ping statistics for 172.18.64.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 7ms, Maximum = 75ms, Average = 36ms
```

Step 3: Type ifconfig command

```
susel:~ # ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0C:29:17:1B:27
          inet addr:192.168.208.133  Bcast:192.168.208.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fe17:1b27/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:195 errors:0 dropped:0 overruns:0 frame:0
          TX packets:189 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:21313 (20.8 Kb)  TX bytes:16778 (16.3 Kb)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:18 errors:0 dropped:0 overruns:0 frame:0
          TX packets:18 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1060 (1.0 Kb)  TX bytes:1060 (1.0 Kb)
```

Step 4: Type netstat command

```
C:\Users\singh>netstat

Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    127.0.0.1:1564         DESKTOP-923RK3N:1565   ESTABLISHED
  TCP    127.0.0.1:1565         DESKTOP-923RK3N:1564   ESTABLISHED
  TCP    127.0.0.1:25104        DESKTOP-923RK3N:25105  ESTABLISHED
  TCP    127.0.0.1:25105        DESKTOP-923RK3N:25104  ESTABLISHED
  TCP    127.0.0.1:25107        DESKTOP-923RK3N:25108  ESTABLISHED
  TCP    127.0.0.1:25108        DESKTOP-923RK3N:25107  ESTABLISHED
  TCP    127.0.0.1:25112        DESKTOP-923RK3N:25113  ESTABLISHED
  TCP    127.0.0.1:25113        DESKTOP-923RK3N:25112  ESTABLISHED
  TCP    127.0.0.1:25114        DESKTOP-923RK3N:25115  ESTABLISHED
  TCP    127.0.0.1:25115        DESKTOP-923RK3N:25114  ESTABLISHED
  TCP    192.168.0.57:24938     52.230.84.217:https    ESTABLISHED
  TCP    192.168.0.57:24978     162.254.196.84:27021   ESTABLISHED
  TCP    192.168.0.57:25052     a23-56-165-111:https   ESTABLISHED
  TCP    192.168.0.57:25072     test:https             TIME_WAIT
  TCP    192.168.0.57:25078     a23-56-165-111:https   ESTABLISHED
  TCP    192.168.0.57:25080     a23-56-165-111:https   ESTABLISHED
  TCP    192.168.0.57:25083     40.67.188.75:https     ESTABLISHED
  TCP    192.168.0.57:25099     13.107.21.200:https    ESTABLISHED
  TCP    192.168.0.57:25100     ns329092:http          SYN_SENT
  TCP    192.168.0.57:25101     155:https              ESTABLISHED
  TCP    192.168.0.57:25103     103.56.230.154:http    ESTABLISHED
  TCP    192.168.0.57:25106     ns329092:http          SYN_SENT
  TCP    192.168.0.57:25109     ats1:https             ESTABLISHED
```

Output:

1)

```
Tracing route to savaetha.com [198.185.159.145]
over a maximum of 30 hops:

  1     1 ms     1 ms     1 ms  192.168.xx.1
  2     *        514 ms   620 ms  192.168.29.10
  3     *        *        *       Request timed out.
  4     *        1012 ms  293 ms  192.168.31.24
  5   1xxx ms    xxx ms   xxx ms  192.168.x1.17
  6     *        *        *       Request timed out.
  7     *        *        *       Request timed out.
  8     *        *        *       Request timed out.
  9   1xxx ms    *        *       192 79 7xx 77x
 10    xxx ms    xxx ms   *       ae6-6-1xx-xx.deploy.static.akamaitechnologies.com [xx.6.1xx.xx]
 11    *         *        *       Request timed out.
 12    *         *      1xxx ms   1xx.1xx.1xx.1xx

Trace complete.
```

2)

```
Pinging 192.168.53.42 with 32 bytes of data:
Request timed out.
Reply from 192.168.53.42: bytes=32 time=1ms TTL=64
Reply from 192.168.53.42: bytes=32 time=55ms TTL=64
Reply from 192.168.53.42: bytes=32 time=36ms TTL=64

Ping statistics for 192.168.53.42:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 36ms, Maximum = 1500ms, Average = 630ms
```

3)

```
Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    127.0.0.1:49674        LAPTOP-040OI8EB:49676  ESTABLISHED
  TCP    127.0.0.1:49676        LAPTOP-040OI8EB:49674  ESTABLISHED
  TCP    192.168.53.109:49409   20.198.119.84:https    ESTABLISHED
  TCP    192.168.53.109:58125   20.198.119.84:https    ESTABLISHED
  TCP    192.168.53.109:59567   a23-215-215-241:https  CLOSE_WAIT
  TCP    192.168.53.109:59568   a23-215-215-241:https  CLOSE_WAIT
  TCP    192.168.53.109:59569   a23-215-215-241:https  CLOSE_WAIT
  TCP    192.168.53.109:59570   a23-215-215-241:https  CLOSE_WAIT
  TCP    192.168.53.109:59572   a-0001:https           ESTABLISHED
  TCP    192.168.53.109:59576   a-0001:https           ESTABLISHED
  TCP    [2401:4900:6297:efe5:9872:41f9:7f06:fa55]:59595  [2001:1900:2381:4::1fe]:http  ESTABLISHED
  TCP    [2401:4900:6297:efe5:9872:41f9:7f06:fa55]:59598  [2001:1900:2381:d01::1fe]:http  ESTABLISHED
```

Result:

I have carried out the above experiment using Microsoft windows command prompt. I have used the commands TraceRoute, ping, ifconfig, ipconfig, netstat in this experiment. I have got the results for each command like ping, IP addresses, LAN connections.

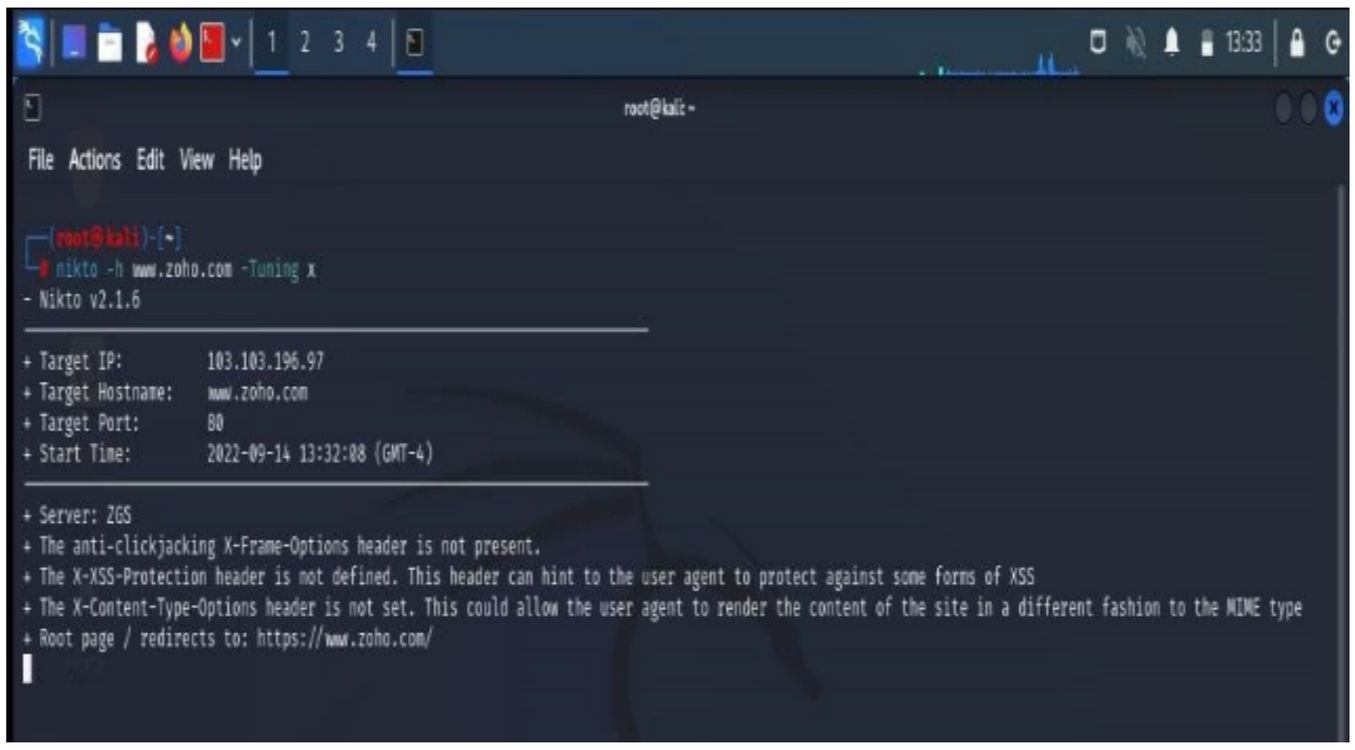
Exercise No 9:VULNERABILITY ANALYSIS - CGI Scanning with Nikto

Aim:To perform vulnerability Analysis using CGI Scanning with Nikto

Procedure:

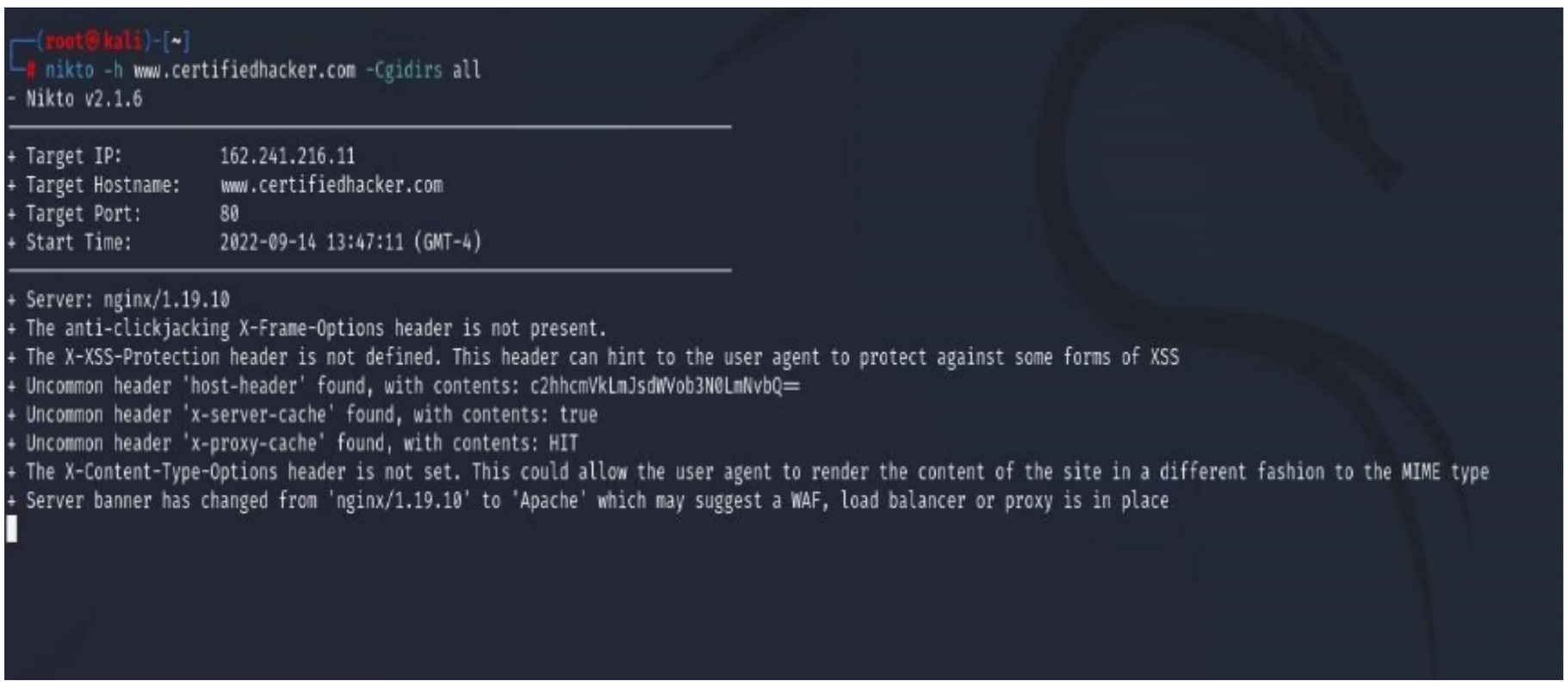
Step 1: open a terminal window and type nikto - H and press enter Step 2:

Type nikto - h <website> Tuning x and press enter



Step 3: Nikto starts web server scanning with all tuning options enabled.

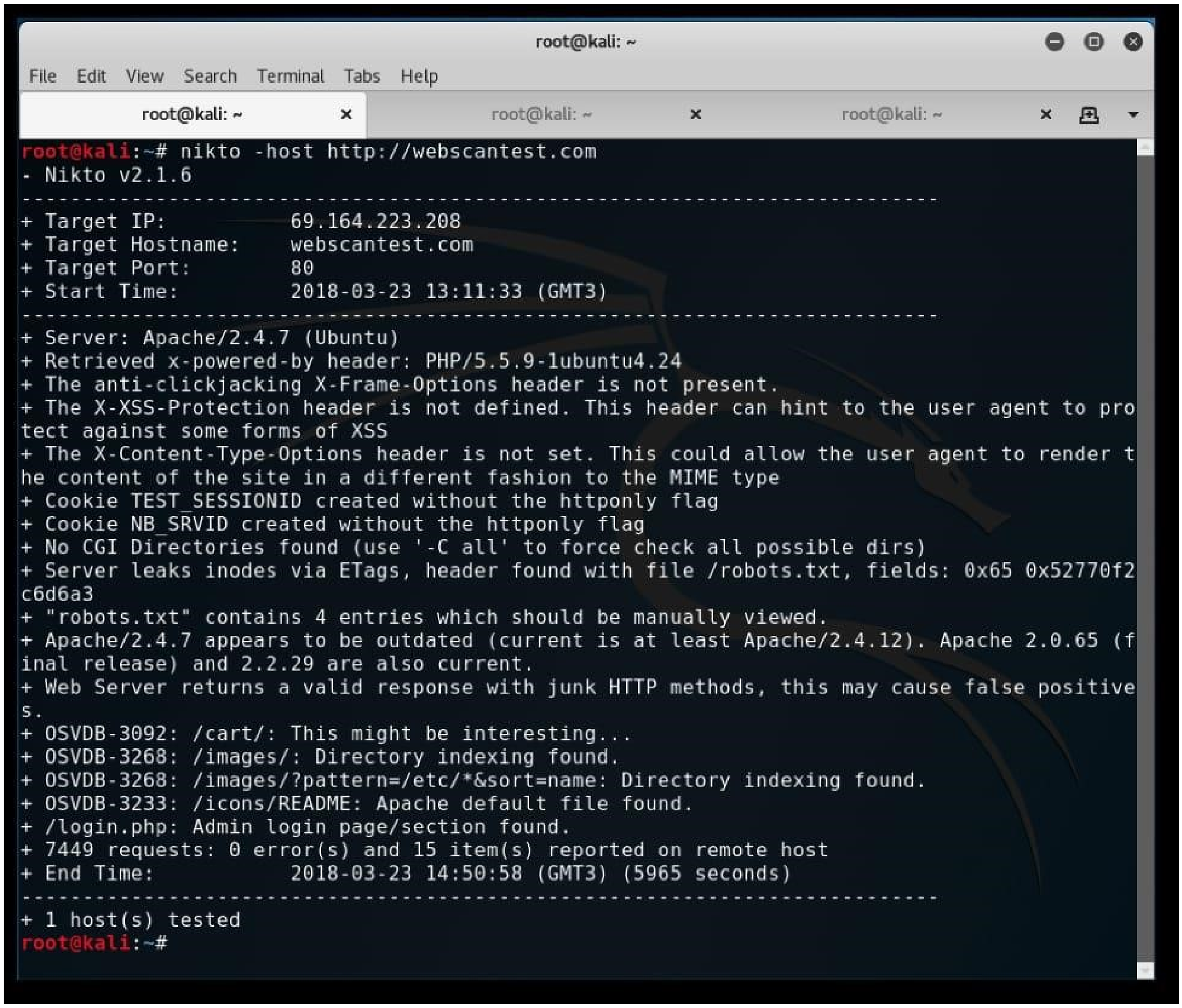
Step4:In the terminal window type " nikto - h <website>-Cgidirs all" and hit enter



Step 5. Nikto will scan the webserver as it looks vulnerable CGI directories. It scans the webserver and list out the directories

Output:

1)



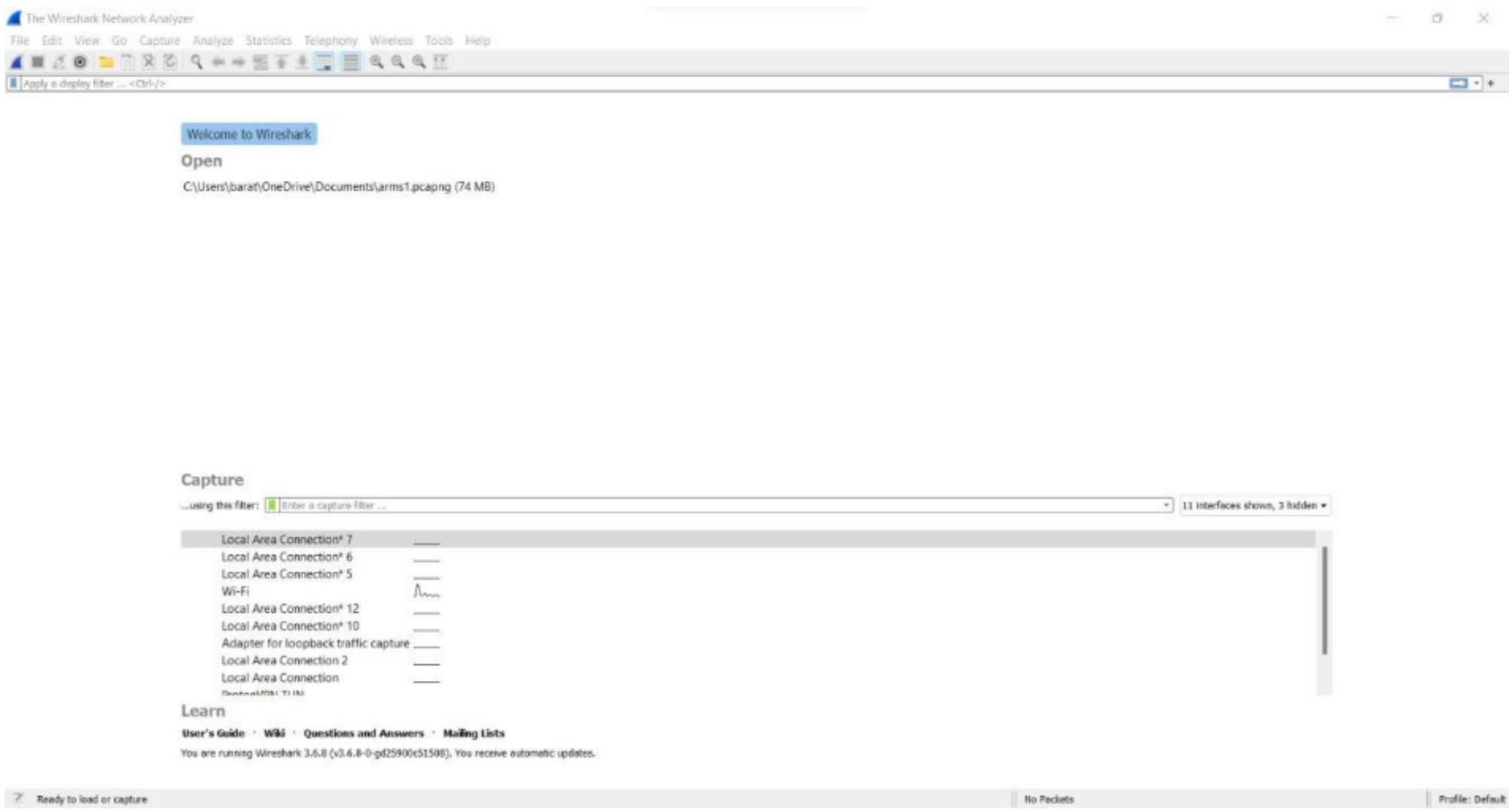
Result:

The above experiment is about VULNERABILITY ANALYSIS - CGI Scanning with Nikto. We can retrieve information like server name, headers and etc. This is done in root terminal using kali linux OS.

Exercise No 10: WireShark sniffer

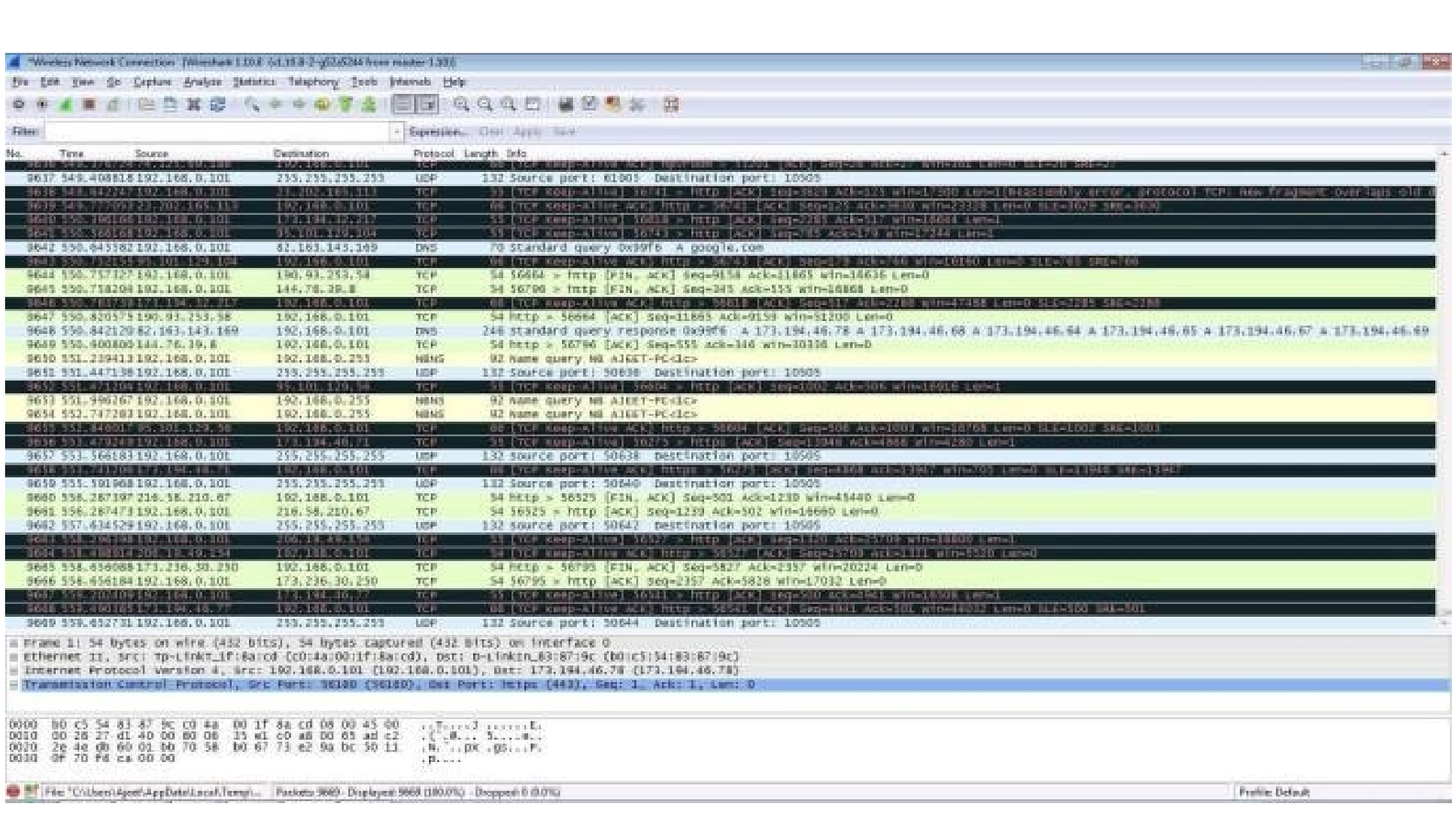
Aim: Use WireShark sniffer to capture network traffic and analyze. **Procedure:**

Step 1: Install and open WireShark .



Step 2: Go to Capture tab and select Interface option. Here Wifi connection is chosen

Step 3: The source, Destination and protocols of the packets in the Wifi network are displayed



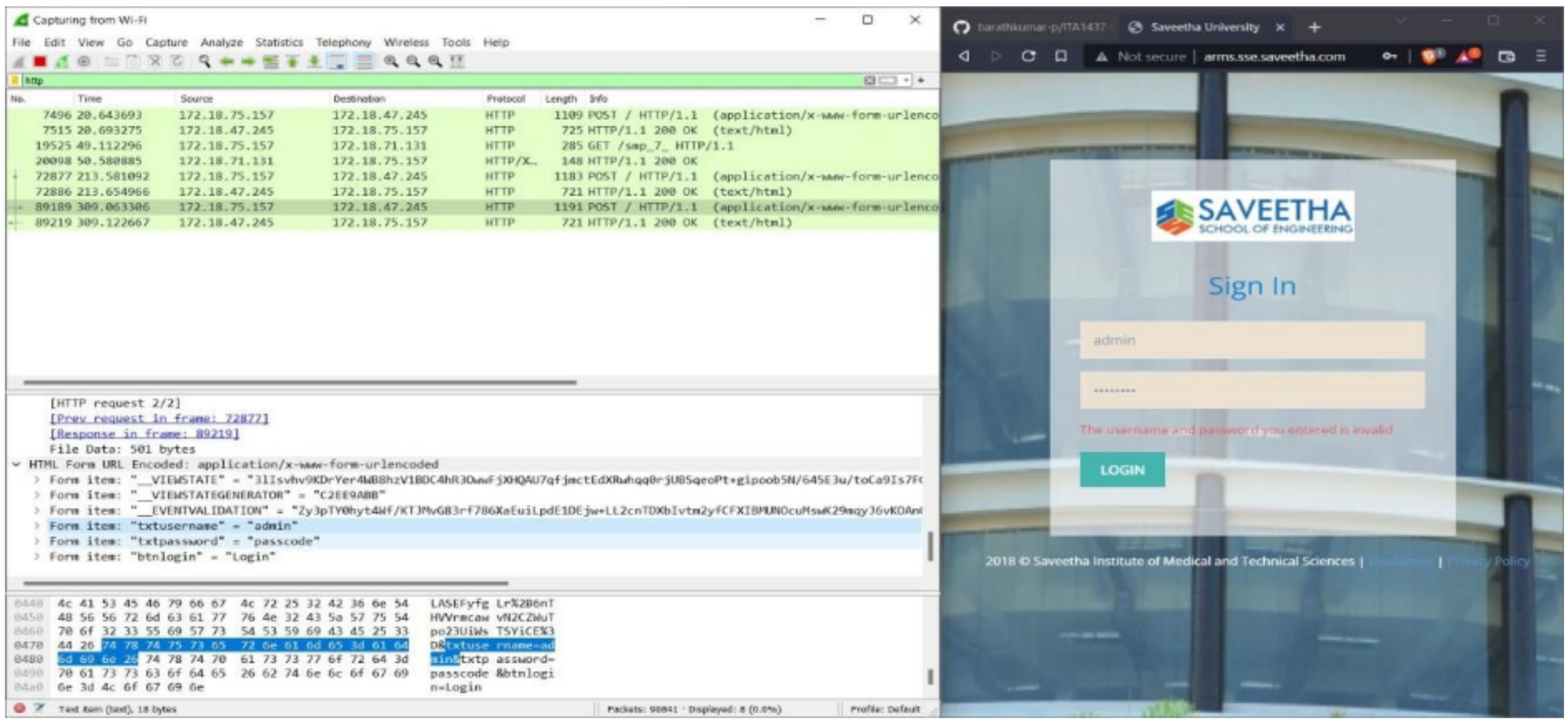
Step 4: Open a website in a new window and enter the user id and password. Register if needed.

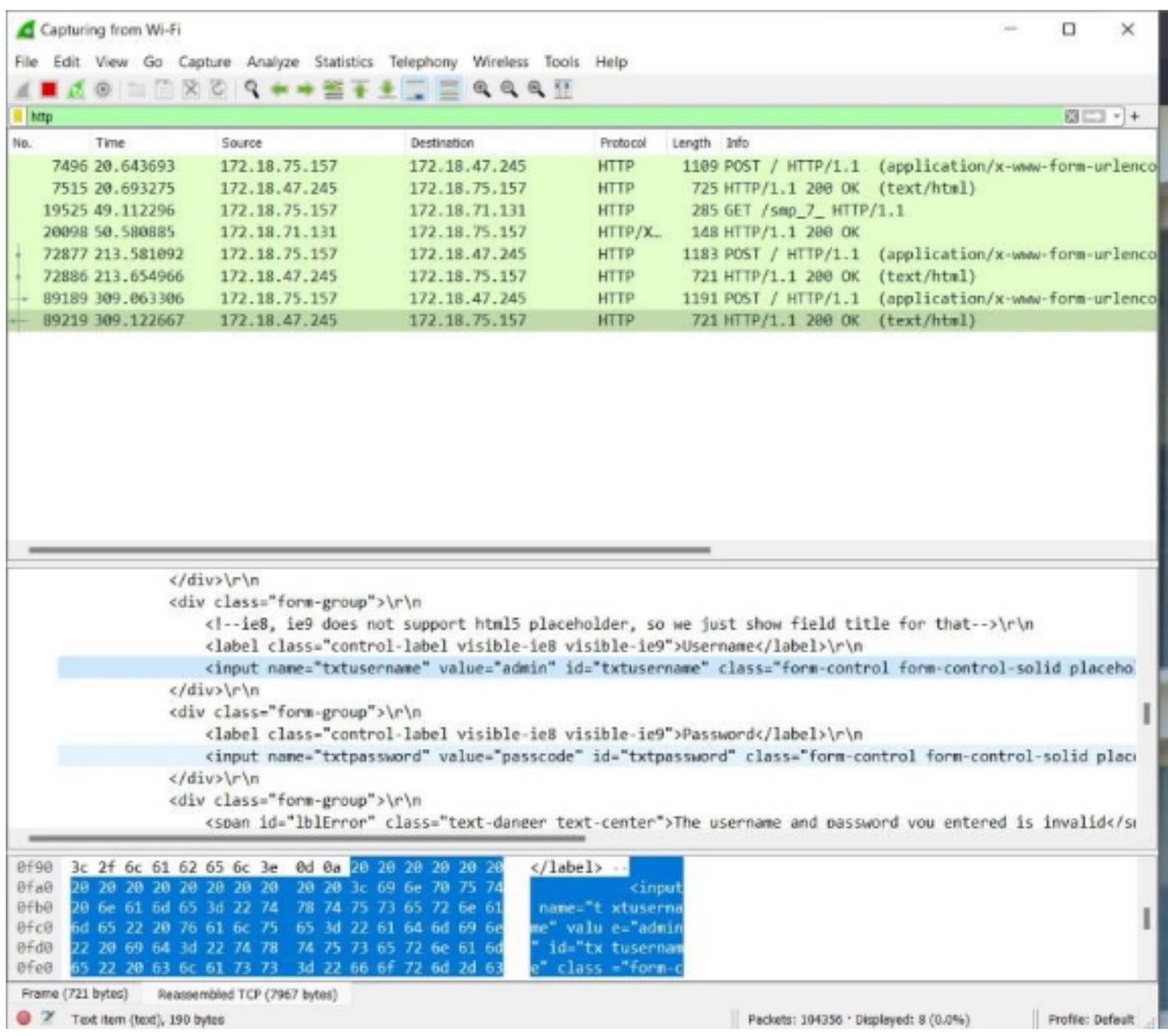
Step 5:Enter the credentials and then sign in

Step 6: The wireshark tool will keep recording the packets.

Step 7: Select filter as http to make the search easier and click on apply. Step 9:

Now stop the tool to stop recording



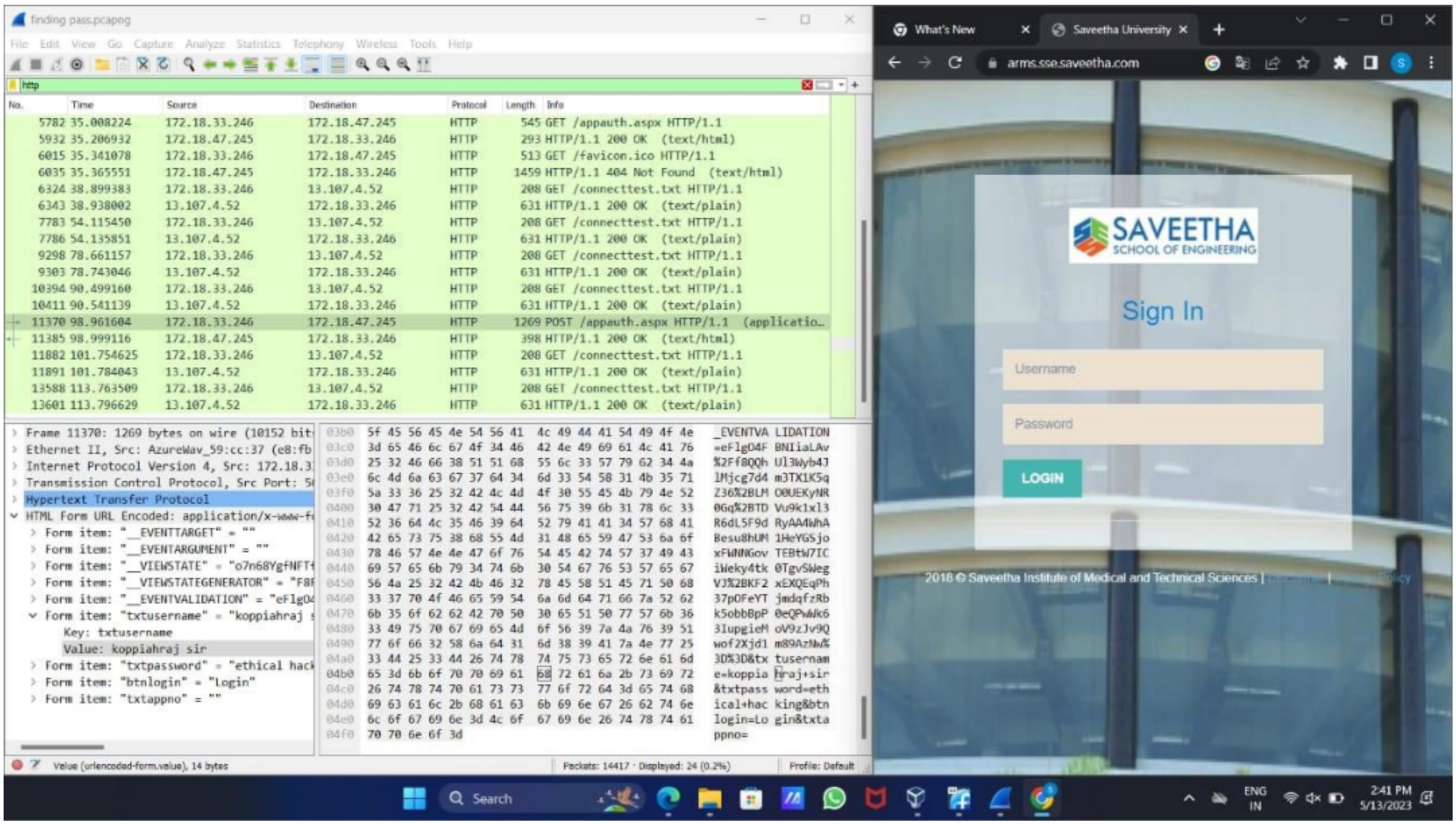


Step 10: Find the post methods for username and passwords

Step 11: U will see the email- id and password that you used to log in.

Output:

1)



Result:

The current experiment is about wireshark sniffer. Using WireShark sniffer, we can capture network traffic and can be able analyze it. This experiment executed using google chrome.