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basic_network_sniffer.py X
D: > Internships Files > Codealpha_basic_network_sniffing Task1 > basic_network_sniffer.py
1 import socket
2 import struct
3 import os
4 import ctypes
5 print("Admin rights:", ctypes.windll.shell32.IsUserAnAdmin())
6 # SCAPY TEST BLOCK Run once at start to verify Scapy works
7 try:
8     from scapy.all import sniff
9
10
11 def test_scapy(packet):
12     print("Scapy is working! Example Packet:", packet.summary())
13     raise KeyboardInterrupt # Stop sniffing after one packet
14
15 print(" Verifying Scapy installation...")
16 sniff(count=1, prn=test_scapy, store=False)
17 except ImportError:
18     print("Scapy is not installed. Please run: pip install scapy")
19     exit()
20 except Exception as e:
21     print("Scapy test complete.\n")
22
23 # Raw socket-based sniffer (Windows-compatible)
24
25 # Convert 4-byte IP to human-readable format
26 def ipv4(addr):
27     return '.'.join(map(str, addr))
28
29 # Parse the IP header
30 def parse_ip_header(data):
```

```
Administrator: Windows PowerShell

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> & "C:/Program Files/Python313/python.exe" "d:/Internships Files/CyberSecurity Internship 1 - Copy/basic_network_sniffer.py"
>> & "C:/Program Files/Python313/python.exe" "d:/Internships Files/CyberSecurity Internship 1 - Copy/basic_network_sniffer.py"
>>
Admin rights: 1
Verifying Scapy installation...
Scapy is working! Example Packet: Ether / IP / TCP 192.168.100.4:51797 > 4.213.25.242:https PA / Raw

Raw Socket Sniffer Running on 192.168.56.1 (Windows) – Press Ctrl+C to stop

IPv4 Packet: 192.168.56.1 → 192.168.56.255, Protocol: 17, TTL: 128
UDP: 192.168.56.1:137 → 192.168.56.255:137, Length=50

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UDP: 192.168.56.1:137 → 192.168.56.255:137, Length=50

IPv4 Packet: 192.168.56.1 → 224.0.0.251, Protocol: 17, TTL: 1
UDP: 192.168.56.1:5353 → 224.0.0.251:5353, Length=190
```

Select Administrator: Windows PowerShell

Windows PowerShell

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PS C:\Windows\system32> & "C:/Program Files/Python313/python.exe" "d:/Internships Files/CyberSecurity Internship 1 - Copy/basic_network_sniffer.py"

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>>

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Verifying Scapy installation...

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