INSTALLATION OF SCAPY

```
C:\Users\Seshukumar>pip install scapy
Collecting scapy
  Downloading scapy-2.6.1-py3-none-any.whl (2.4 MB)
     ──────────────────────────────────────── 2.4/2.4 MB 2.1 MB/s eta 0:00:00
Installing collected packages: scapy
Successfully installed scapy-2.6.1

[notice] A new release of pip is available: 23.0.1 -> 25.1.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\Seshukumar>scapy
INFO: Can't import PyX. Won't be able to use psdump() or pdfdump().
INFO: Can't import python-cryptography v1.7+. Disabled PKI & TLS crypto-related features.
INFO: Can't import python-cryptography v1.7+. Disabled WEP decryption/encryption. (Dot11)
INFO: Can't import python-cryptography v1.7+. Disabled IPsec encryption/authentication.
WARNING: No alternative Python interpreters found ! Using standard Python shell instead.
INFO: Using the default Python shell: History,Colors are disabled.

                     aSPY//YASa
               apyyyyyCY//////////YCa
              sY//////YSpcs  scpCY//Pp            |
    ayp ayyyyyyySCP//Pp           syY//C          | Welcome to Scapy
   AYAsAYYYYYYYY///Ps              cY//S          | Version 2.6.1
           pCCCCY//p          cSSps y//Y          |
           SPPPP///a          pP///AC//Y          | https://github.com/secdev/scapy
              A//A            cyP////C            |
              p///Ac            sC///a            | Have fun!
             P////YCpc           A//A            |
       scccccp///pSP///p          p//Y            | We are in France, we say Skappee.
      sY/////////y  caa           S//P            | OK? Merci.
       cayCyayP//Ya              pY/Ya            |          -- Sebastien Chabal
        sY/PsY////YCc            aC//Yp
         sc  sccaCY//PCypaapyCP//YSs
               spCPY//////YPSps
                   ccaacs
```

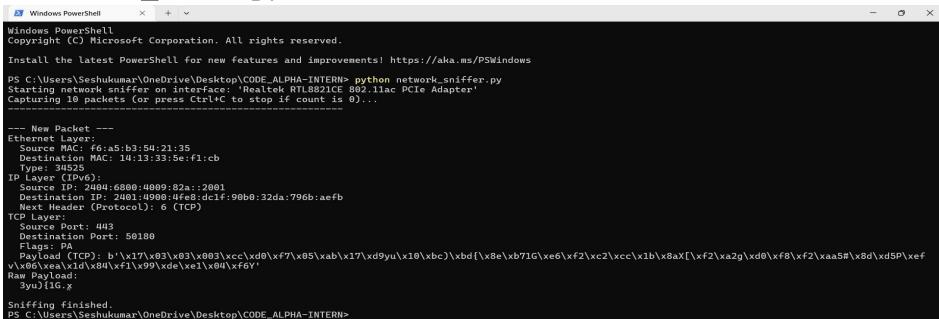# CREATE AND EXECUTION OF PACKAGE

```
                             ccaacs

>> from scapy.all import *
>> conf.ifaces # This will show a dictionary of available interfaces
ource    Index   Name                                      MAC                  IPv4              IPv6
ibpcap   1       Software Loopback Interface 1             00:00:00:00:00:00    127.0.0.1         ::1
ibpcap   10      WAN Miniport (IPv6)
ibpcap   11      Microsoft Wi-Fi Direct Virtual Adapter    16:13:33:5e:f1:cb    169.254.58.37     fe80::f0ca:6c8:8406:59e5
ibpcap   13      Bluetooth Device (Personal Area Network)  AzureWaveTec:5e:f1:ca 169.254.117.224  fe80::ab92:64a9:471b:7063
ibpcap   14      ExpressVPN Wintun Driver                                       169.254.155.32    fe80::8725:2dd:cf5e:35f7
ibpcap   17      Microsoft Wi-Fi Direct Virtual Adapter #2 96:13:33:5e:f1:cb    169.254.3.12      fe80::367e:8854:2a00:9156
ibpcap   18      ExpressVPN TAP Adapter                    00:ff:da:8a:ce:ec    169.254.207.38    fe80::633f:4f6e:b885:25d9
ibpcap   3       WAN Miniport (IP)
ibpcap   4       Realtek RTL8821CE 802.11ac PCIe Adapter   AzureWaveTec:5e:f1:cb 192.168.207.116  2401:4900:4fe8:dc1f:90b0:32da:796b:aefb
                                                                                                  fe80::2c8f:6aba:a1ba:9141
                                                                                                  2401:4900:4fe8:dc1f:119b:fcd8:5eaa:c98f
ibpcap   7       WAN Miniport (Network Monitor)
>> pkts = sniff(iface="Realtek RTL8821CE 802.11ac PCIe Adapter", count=10)
>> pkts.summary()
ther / IPv6 / UDP 2401:4900:4fe8:dc1f:90b0:32da:796b:aefb:58290 > 2404:6800:4007:836::200e:https / Raw
ther / IPv6 / UDP 2401:4900:4fe8:dc1f:90b0:32da:796b:aefb:58290 > 2404:6800:4007:836::200e:https / Raw
ther / IPv6 / UDP 2401:4900:4fe8:dc1f:90b0:32da:796b:aefb:58290 > 2404:6800:4007:836::200e:https / Raw
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ther / IPv6 / UDP 2404:6800:4007:836::200e:https > 2401:4900:4fe8:dc1f:90b0:32da:796b:aefb:58290 / Raw
>>
```

OUTPUT IMAGES OF PYTHON SCAPY FILES

network_sniffer.py

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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

PS C:\Users\Seshukumar\OneDrive\Desktop\CODE_ALPHA-INTERN> python network_sniffer.py
Starting network sniffer on interface: 'Realtek RTL8821CE 802.11ac PCIe Adapter'
Capturing 10 packets (or press Ctrl+C to stop if count is 0)...
----------------------------------------------------------------

--- New Packet ---
Ethernet Layer:
  Source MAC: f6:a5:b3:54:21:35
  Destination MAC: 14:13:33:5e:f1:cb
  Type: 34525
IP Layer (IPv6):
  Source IP: 2404:6800:4009:82a::2001
  Destination IP: 2401:4900:4fe8:dc1f:90b0:32da:796b:aefb
  Next Header (Protocol): 6 (TCP)
TCP Layer:
  Source Port: 443
  Destination Port: 50180
  Flags: PA
  Payload (TCP): b'\x17\x03\x03\x003\xcc\xd0\xf7\x05\xab\x17\xd9yu\x10\xbc)\xbd{\x8e\xb71G\xe6\xf2\xc2\xcc\x1b\x8aX[\xf2\xa2g\xd0\xf8\xf2\xaa5#\x8d\xd5P\xef
v\x06\xea\x1d\x84\xf1\x99\xde\xe1\x04\xf6Y'
Raw Payload:
  3yu){1G.x

Sniffing finished.
PS C:\Users\Seshukumar\OneDrive\Desktop\CODE_ALPHA-INTERN>
```

scapy_ping.py

```
Sniffing finished.
PS C:\Users\Seshukumar\OneDrive\Desktop\CODE_ALPHA-INTERN> python scapy_ping.py
Attempting to ping 8.8.8.8...
--------------------------------------

Crafted Packet Summary:

--- Response Received ---
  Received ICMP Echo Reply from: 8.8.8.8
  Round Trip Time (RTT) is not directly calculated by sr1,
  but the successful reply indicates connectivity.
PS C:\Users\Seshukumar\OneDrive\Desktop\CODE_ALPHA-INTERN>
```