

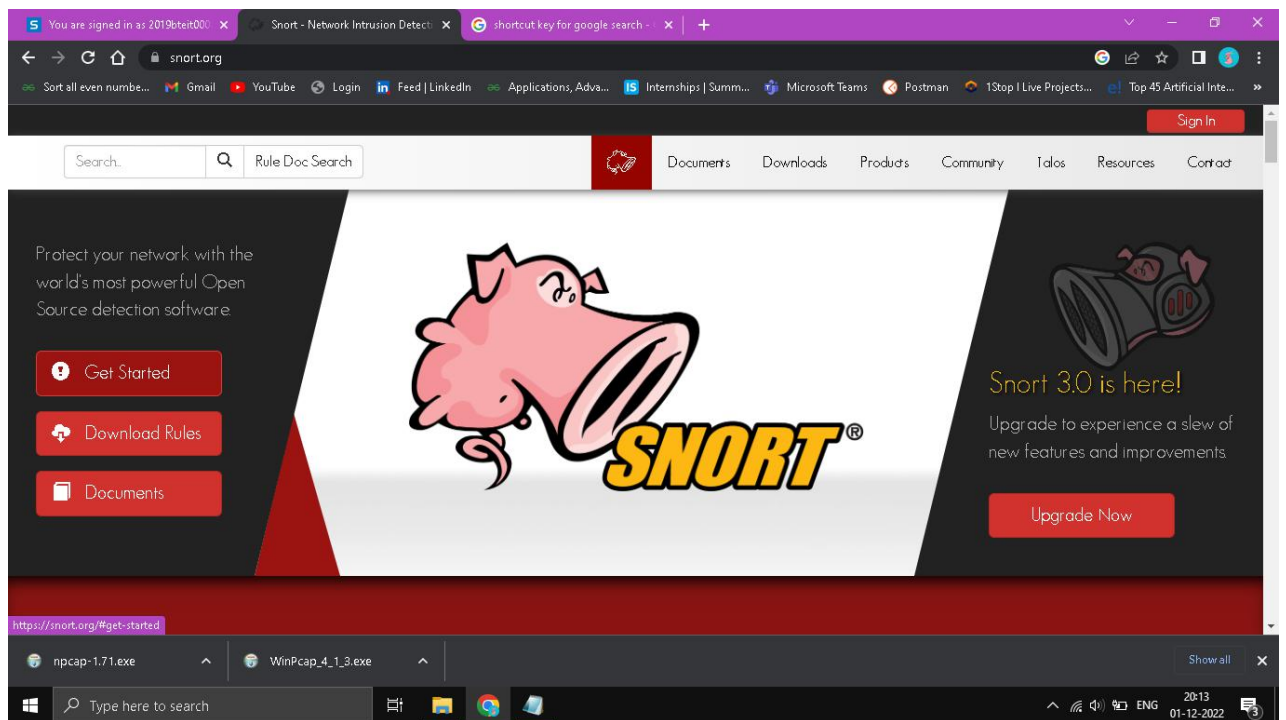
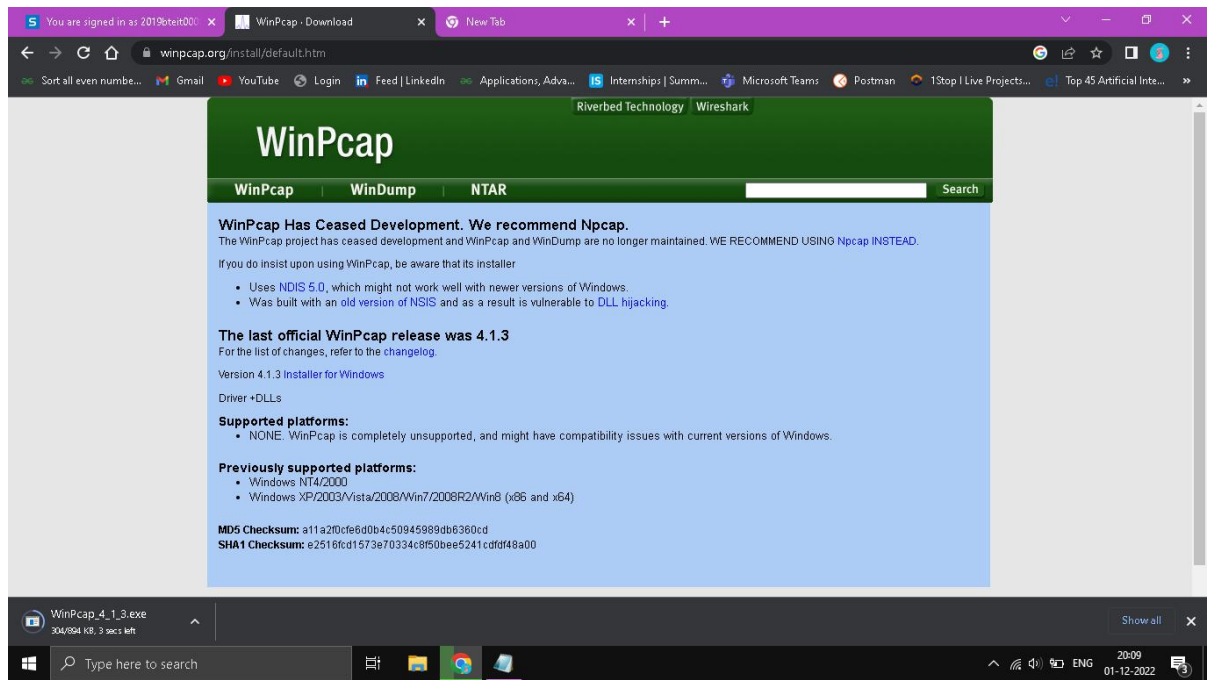
**Final Year B. Tech., Sem VII 2022-23**  
**Cryptography & Network Security Lab**  
**PRN: 2020BTECS00205**  
**Full Name: Monika .V. Chitrakathi**  
**Batch: B8**

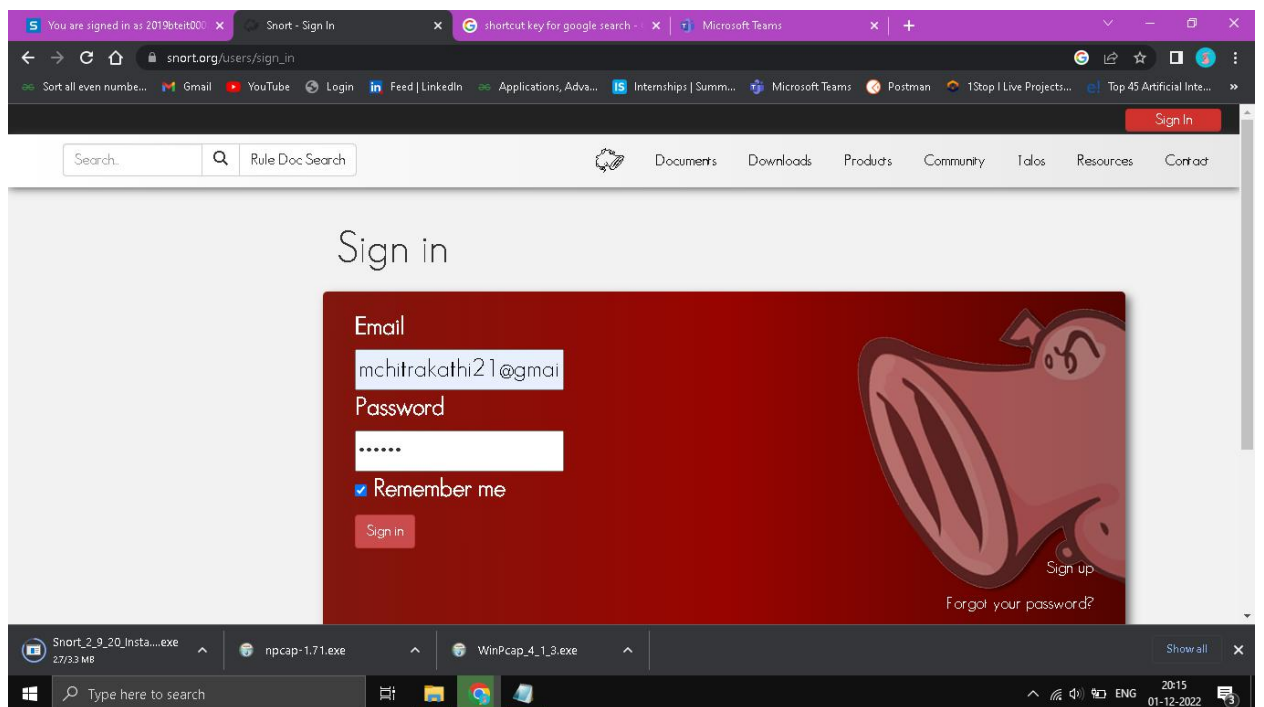
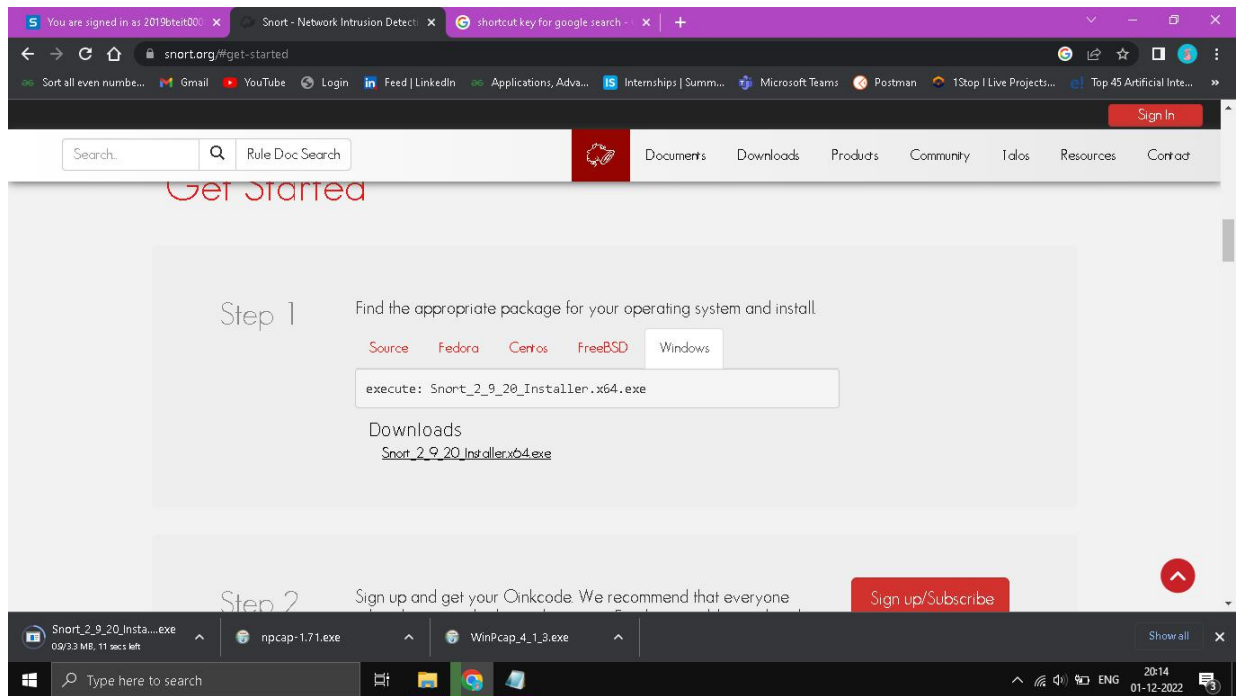
## Assignment - Snort Intrusion Detection System (IDS)

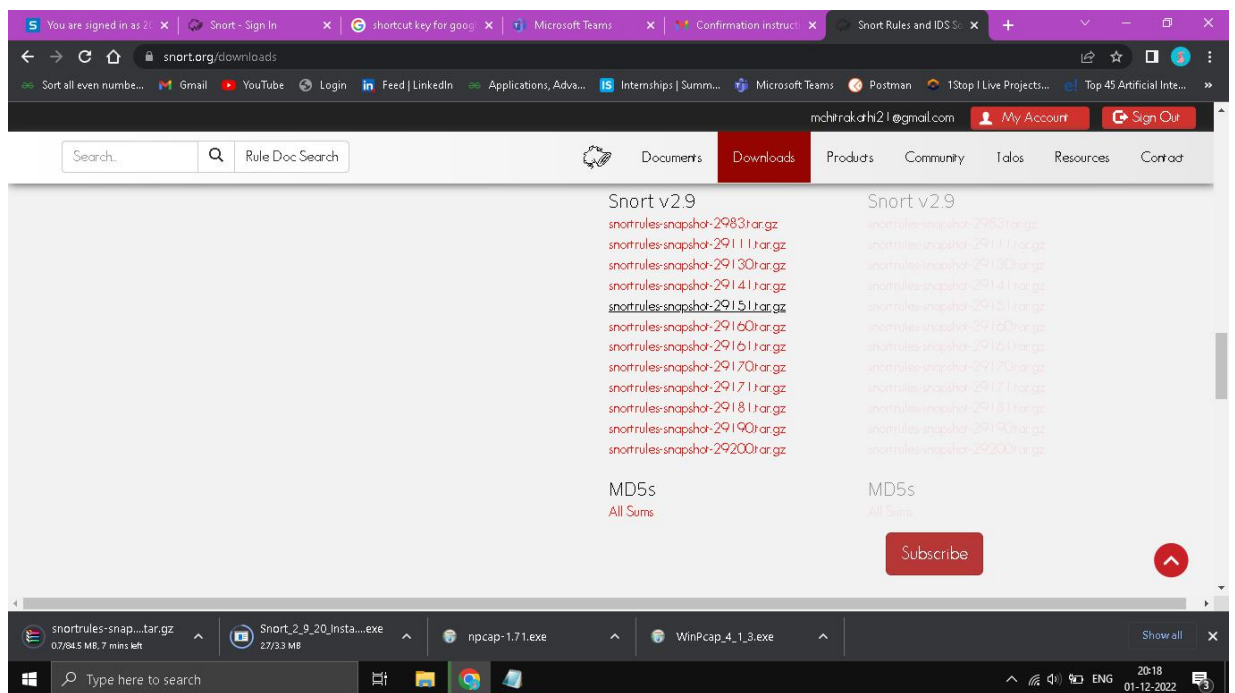
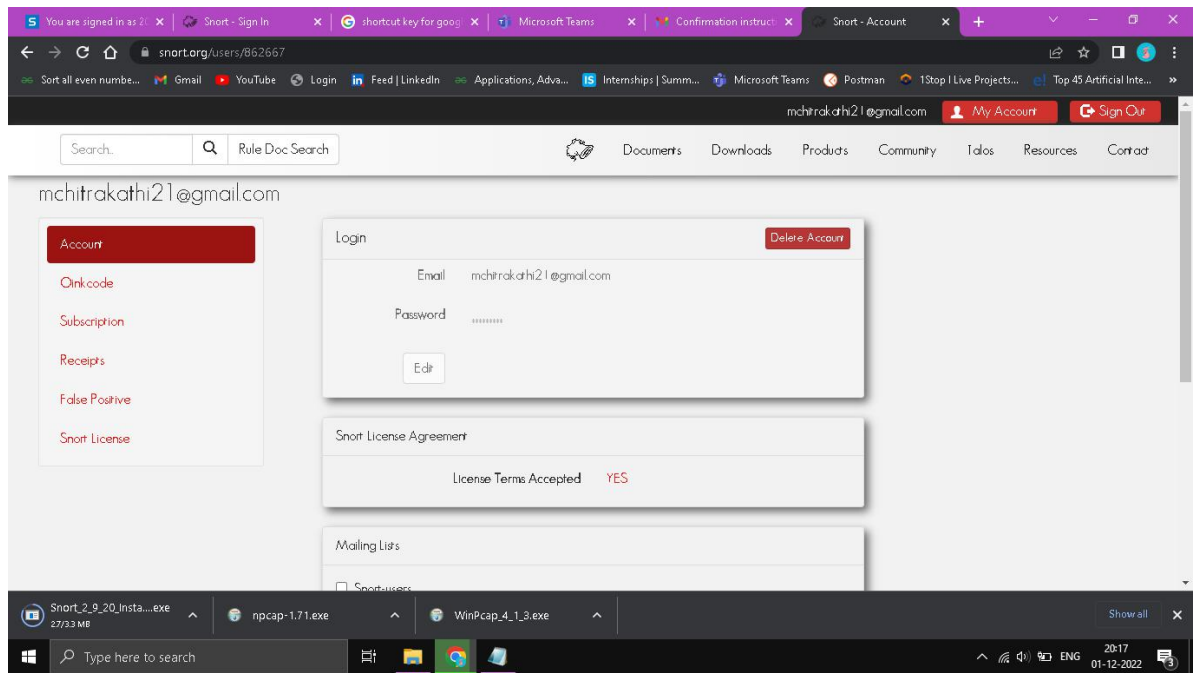
### Lab Assignment Description

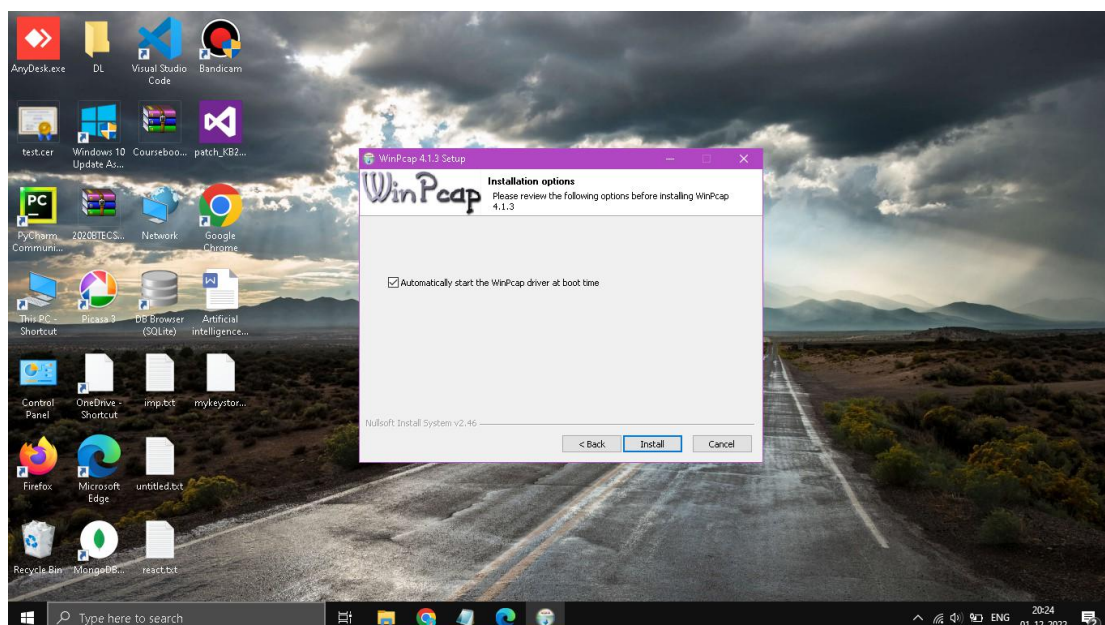
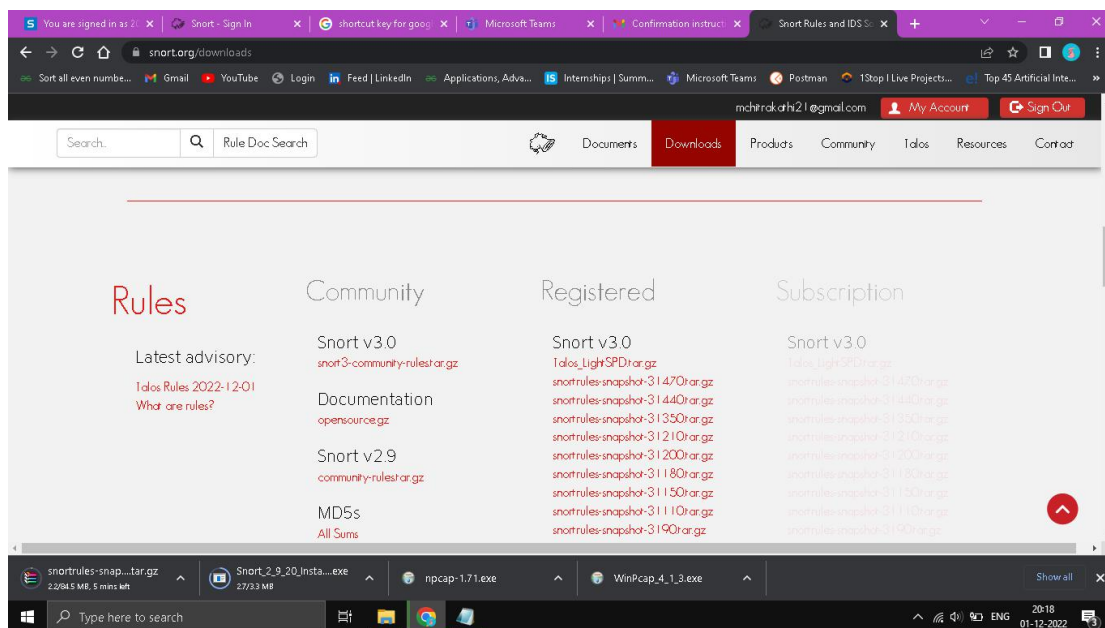
In this lab we will explore the Snort IDS. This is a signature based intrusion detection system used to detect network attacks. Snort can also be used as a simple packet logger, however we won't be doing that in this lab. Snort has multiple modes of operation, for the lab we will use snort as a packet sniffer, not inline.



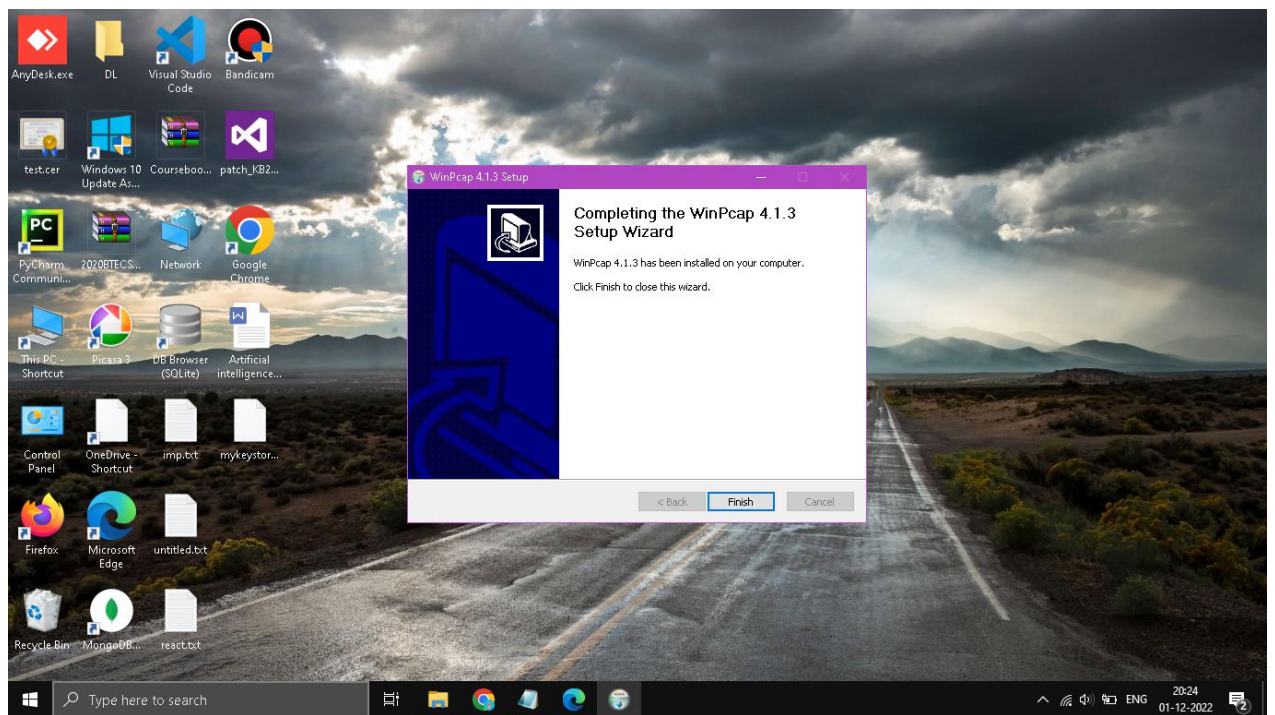
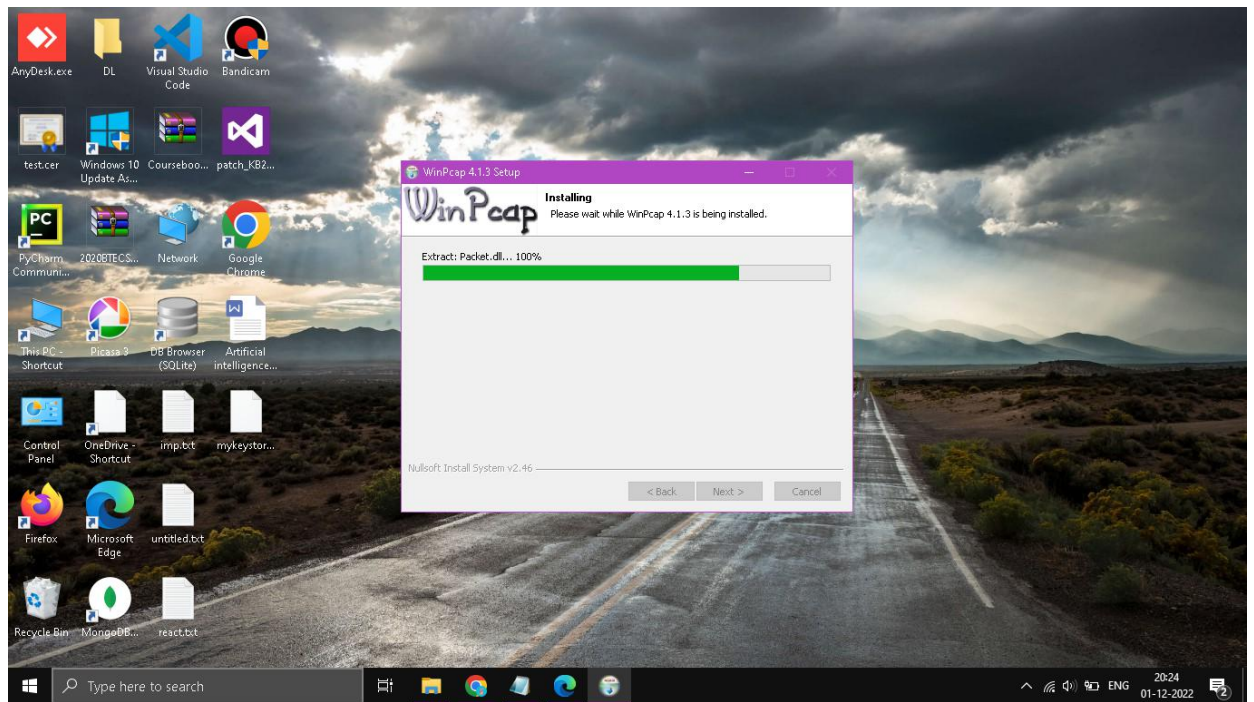


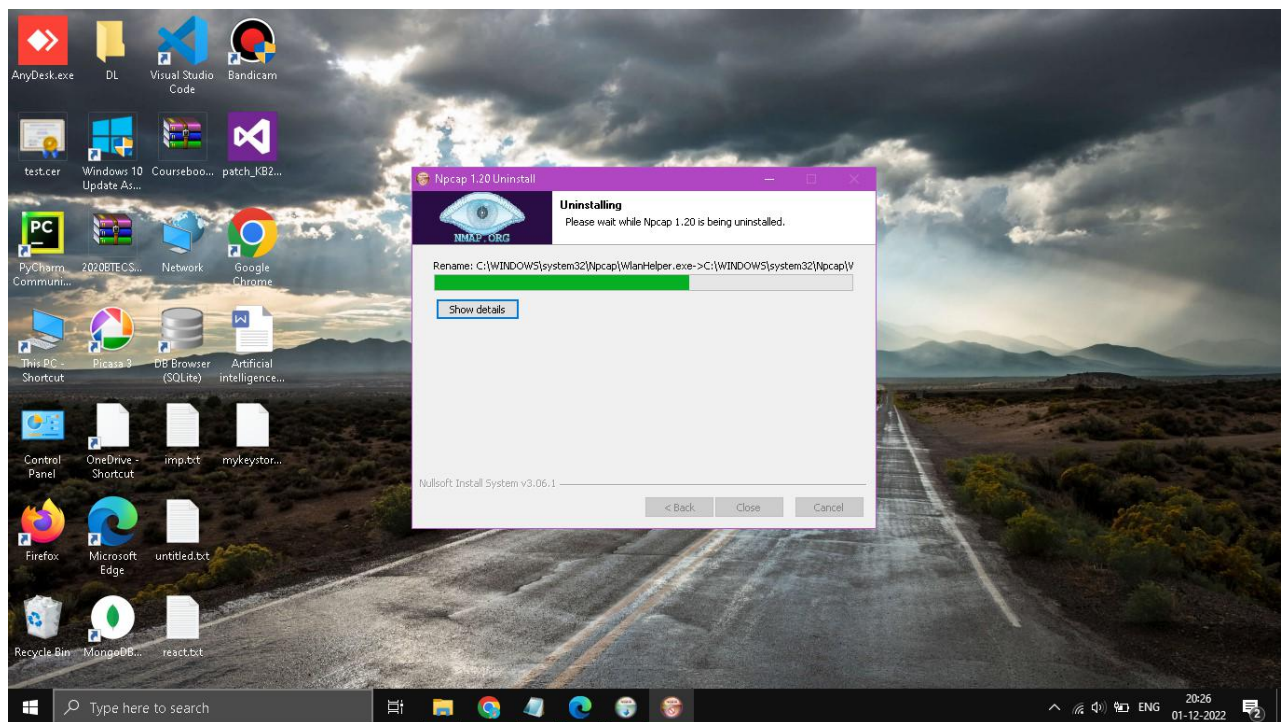
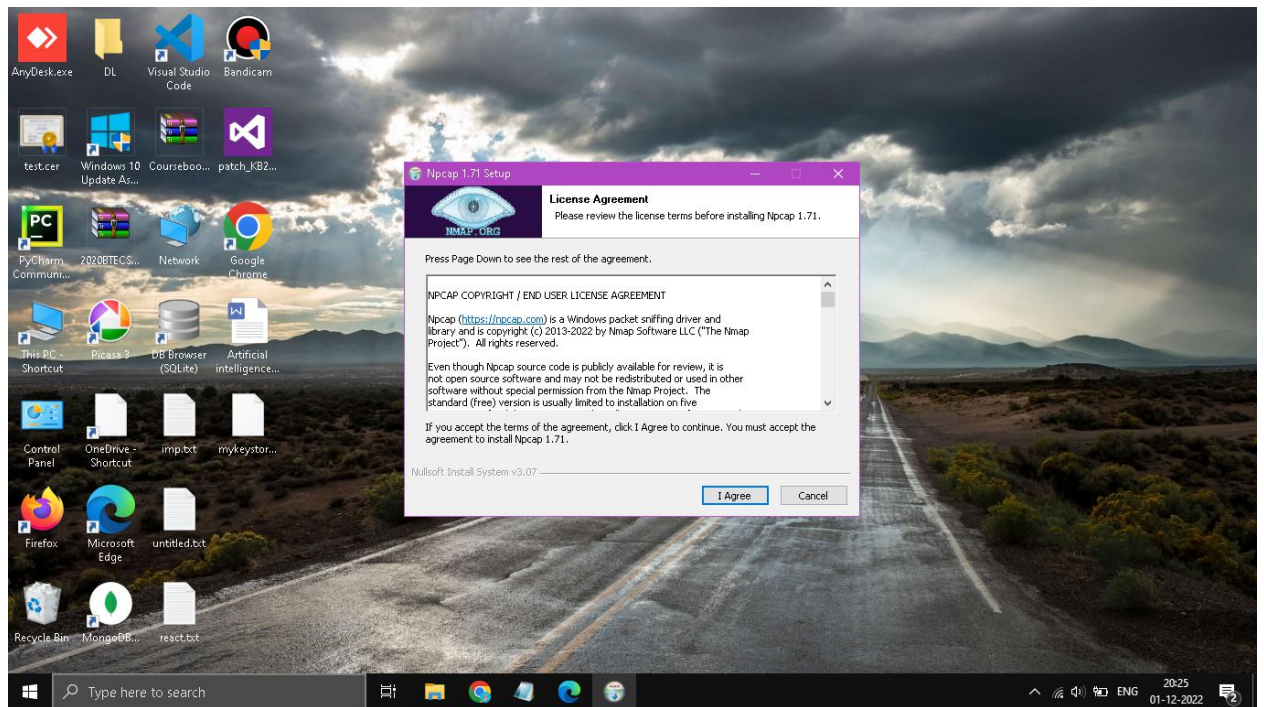




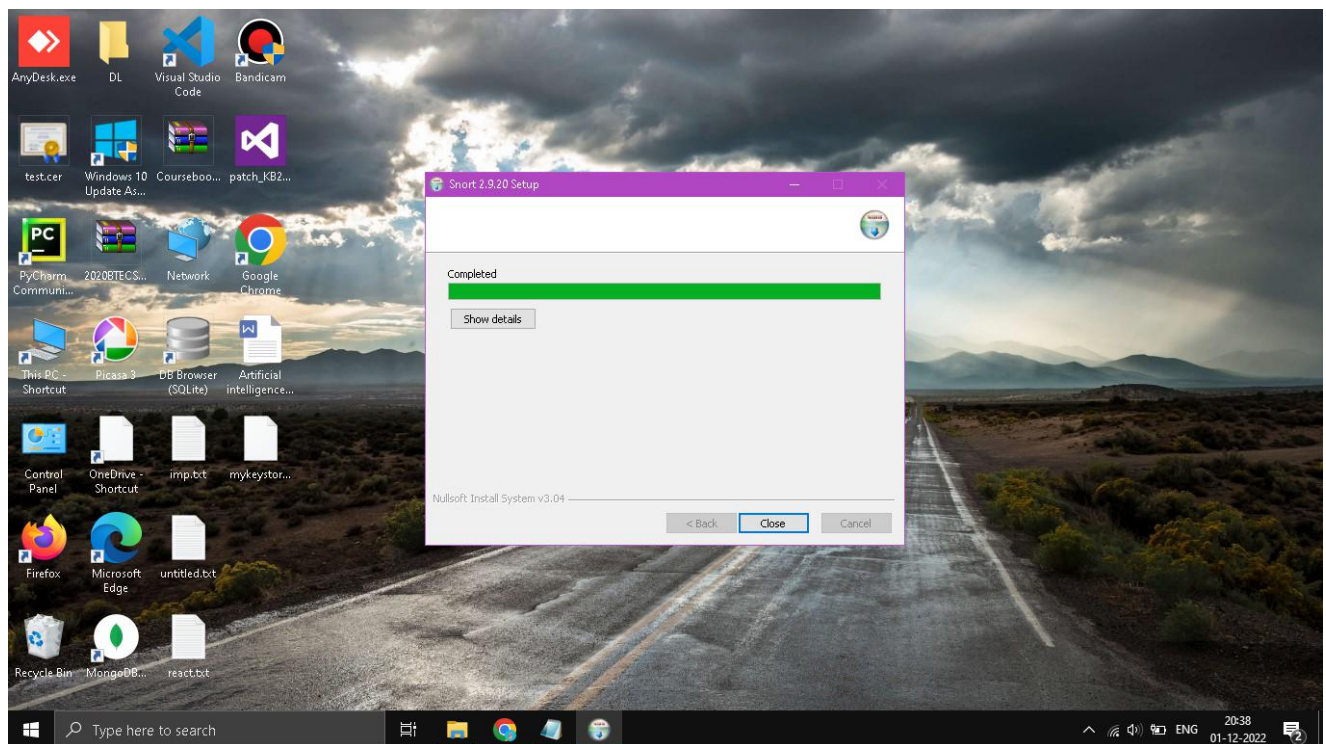
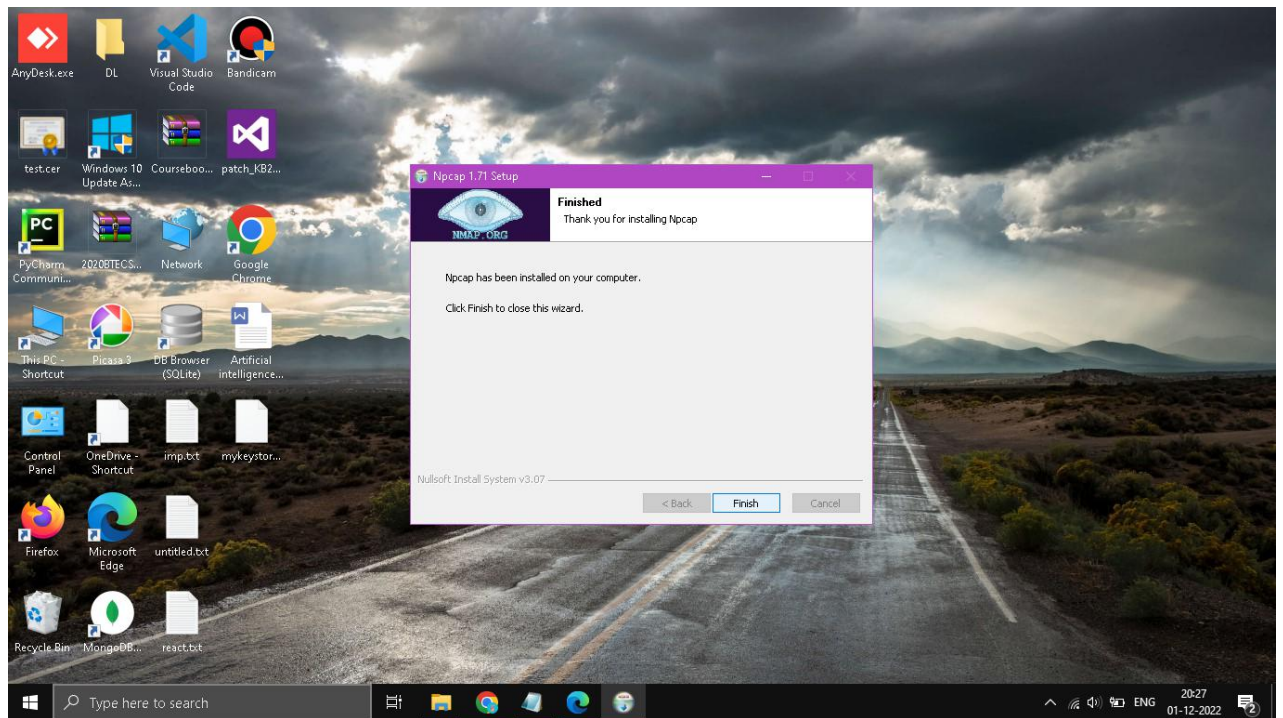




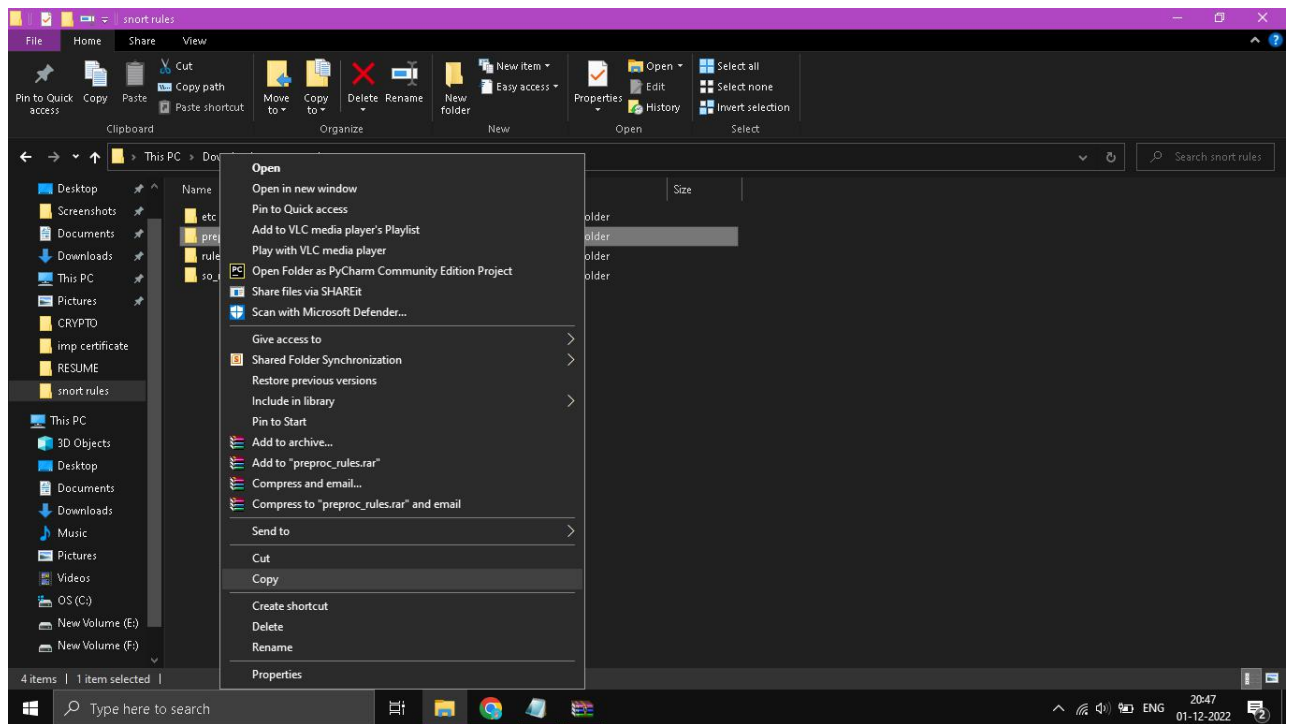
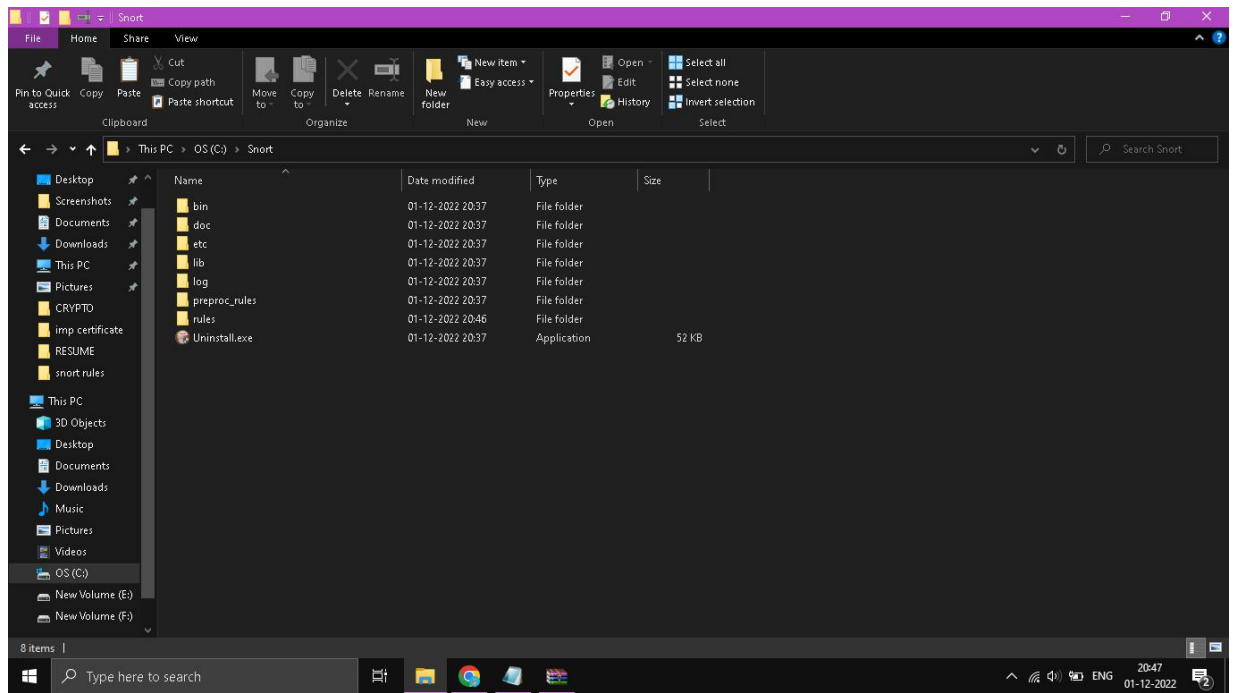












```
*C:\Snortlets\snort.conf - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
toolkeeper properties server properties snort.conf
229 # For more information see README.PerfProfiling
230 #####
231
232 #config profile_rules: print all, sort avg_ticks
233 #config profile_preprocs: print all, sort avg_ticks
234
235 #####
236 # Configure protocol aware flushing
237 # For more information see README.stream5
238 #####
239 config paf_max: 16000
240
241 #####
242 # Step #4: Configure dynamic loaded libraries.
243 # For more information, see Snort Manual, Configuring Snort - Dynamic Modules
244 #####
245
246 # path to dynamic preprocessor libraries
247 dynamicpreprocessor directory /usr/local/lib/snort_dynamicpreprocessor/
248
249 # path to base preprocessor engine
250 dynamicengine /usr/local/lib/snort_dynamicengine/libsf_engine.so
251
252 # path to dynamic rules libraries
253 #dynamicdetection directory /usr/local/lib/snort_dynamicrules
254
255 #####
256 # Step #5: Configure preprocessors
257 # For more information, see the Snort Manual, Configuring Snort - Preprocessors
258 #####
259
260 # GTP Control Channle Preprocessor. For more information, see README.GTP
261 # preprocessor gtp: ports ( 2123 3386 2152 )
262
Normal text file length: 26,851 lines: 690 Ln: 253 Col: 2 Pos: 8,861 Unix (LF) UTF-8 INS
New Volume (E:)
7 items | 1 item selected 26.1 KB |
Type here to search
21:59 01-12-2022
```

```
C:\Snortrules\blacklistrules - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
toolkeeper properties server properties snort.conf blacklist.rules
1 # Copyright 2001-2022 Sourcefire, Inc. All Rights Reserved.
2 #
3 # This file contains (i) proprietary rules that were created, tested and certified by
4 # Sourcefire, Inc. (the "VRT Certified Rules") that are distributed under the VRT
5 # Certified Rules License Agreement (v 2.0), and (ii) rules that were created by
6 # Sourcefire and other third parties (the "GPL Rules") that are distributed under the
7 # GNU General Public License (GPL), v2.
8 #
9 # The VRT Certified Rules are owned by Sourcefire, Inc. The GPL Rules were created
10 # by Sourcefire and other third parties. The GPL Rules created by Sourcefire are
11 # owned by Sourcefire, Inc., and the GPL Rules not created by Sourcefire are owned by
12 # their respective creators. Please see http://www.snort.org/snort/snort-team/ for a
13 # list of third party owners and their respective copyrights.
14 #
15 # In order to determine what rules are VRT Certified Rules or GPL Rules, please refer
16 # to the VRT Certified Rules License Agreement (v2.0).
17 #
18 #-----
19 # BLACKLIST RULES
20 #-----
21
22

Normal text file length: 1,040 lines: 22 Ln: 1 Col: 1 Pos: 1 Unix (LF) UTF-8 INS
Type here to search
22:07 01-12-2022
```





```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.2311]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd c:\Snort\bin\
'c:\Snort\bin\' is not recognized as an internal or external command,
operable program or batch file.

C:\WINDOWS\system32>cd c:\Snort\bin\

c:\Snort\bin>snort -V

      _
     _~
    _.._
   _..._

  *) Snort! <*)
  Version 2.9.28-WIN64 GRE (Build 82)
  By Martin Roesch & The Snort Team: http://www.snort.org/contact#team
  Copyright (C) 2014-2022 Cisco and/or its affiliates. All rights reserved.
  Copyright (C) 1998-2013 Sourcefire, Inc., et al.
  Using PCRE version: 8.10 2018-06-25
  Using ZLIB version: 1.2.11

c:\Snort\bin>snort -W

      _
     _~
    _.._
   _..._

  *) Snort! <*)
  Version 2.9.28-WIN64 GRE (Build 82)
  By Martin Roesch & The Snort Team: http://www.snort.org/contact#team
  Copyright (C) 2014-2022 Cisco and/or its affiliates. All rights reserved.
  Copyright (C) 1998-2013 Sourcefire, Inc., et al.
  Using PCRE version: 8.10 2018-06-25
  Using ZLIB version: 1.2.11

Index  Physical Address      IP Address      Device Name      Description
-----
1      00:00:00:00:00:00        disabled       \Device\NPF_{D605D59D-8A00-4FBC-9F24-E4AF5D351186}  WAN Miniport (Network Monitor)
2      00:00:00:00:00:00        disabled       \Device\NPF_{C2AE148C-5932-42C7-AA9D-C1400D72FAB8}  WAN Miniport (IPv6)
3      00:00:00:00:00:00        disabled       \Device\NPF_{A66919B3-A759-4EDB-A399-1FE54CD6F7BE}  WAN Miniport (IP)
4      80:52:16:32:7C:39        10.40.3.112    \Device\NPF_{15D48AE3-A664-480F-B7E3-8B3B714DBC5D}  Qualcomm QCA9377 802.11ac Wireless Adapter
5      C2:52:16:32:7C:39        169.254.136.70 \Device\NPF_{F5F4D53F-4963-4BC9-962C-EE9980277655}  Microsoft Wi-Fi Direct Virtual Adapter #5
6      82:52:16:32:7C:39        169.254.197.129 \Device\NPF_{20EC35D4-6081-44BE-B7B0-065241B043FC}  Microsoft Wi-Fi Direct Virtual Adapter
7      00:00:00:00:00:00        0000:0000:0000:0000:0000 \Device\NPF_{Loopback} Adapter for loopback traffic capture
8      58:8A:5A:14:42:58        169.254.136.54 \Device\NPF_{844651E2-E035-4E64-A332-D08753925FA6}  Realtek PCIe FE Family Controller

c:\Snort\bin>
```

```
Administrator: Command Prompt

PortVar 'FTP_PORTS' defined : [ 21 2100 3535 ]
PortVar 'SIP_PORTS' defined : [ 5060:5061 5600 ]
PortVar 'FILE_DATA_PORTS' defined : [ 80:81 110 143 311 383 591 593 901 1220 1414 1741 1830 2301 2381 2809 3037 3128 3702 4343 4848 5250 6988 7000:7001 7144:7145 7510
7777 7779 8000 8008 8014 8028 8080 8085 8088 8090 8118 8123 8180:8181 8243 8280 8300 8800 8888 8899 9000 9060 9080 9090:9091 9443 9999 11371 34443:34444 41080 50002 555
55 ]
PortVar 'GTP_PORTS' defined : [ 2123 2152 3380 ]

Detection:
  Search-Method = AC-Full-Q
  Split Any/Any group = enabled
  Search-Method-Optimizations = enabled
  Maximum pattern length = 20
  Tagged Packet limit: 256
  Loading dynamic engine c:\Snort\lib\snort_dynamicengine\sf_engine.dll... done
  Loading all dynamic preprocessor libs from C:\Snort\lib\snort_dynamicpreprocessor...
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_dce2.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_dnp3.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_dns.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_ftptelnet.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_gtp.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_imap.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_modbus.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_pop.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_reputation.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_sdf.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_sip.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_smtp.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_ssh.dll... done
  Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_ssl.dll... done
  Finished Loading all dynamic preprocessor libs from C:\Snort\lib\snort_dynamicpreprocessor
  Log directory = c:\Snort\log
  Frag3 global config:
    Max frags: 65536
    Fragment memory cap: 4194304 bytes
  Frag3 engine config:
    Bound Address: default
    Target-based policy: WINDOWS
    Fragment timeout: 180 seconds
    Fragment min_ttl: 1
    Fragment Anomalies: Alert
    Overlap Limit: 10
    Min fragment Length: 100
    Max Expected Streams: 768
  Stream global config:
    Track TCP sessions: ACTIVE
```

```
Administrator: Command Prompt

Scan local network: DISABLED (Default)
Reputation priority: whitelist(Default)
Nested IP: inner (Default)
White action: unblock (Default)
Shared memory is Not supported.

MaxRss at the end of dynamic preproc config:-1206177232

+++++
Initializing rule chains...
10614 Snort rules read
  10170 detection rules
   153 decoder rules
   291 preprocessor rules
10614 Option Chains linked into 313 Chain Headers
+++++

-----[Rule Port Counts]-----
      tcp    udp    icmp    ip
src  3736    23      0      0
dst  6873    76      0      0
any   703      4      3      0
nc   452      0      0      0
s+d    4      2      0      0
-----

-----[detection-filter-config]-----
| memory-cap : 1048576 bytes
-----[detection-filter-rules]-----
-----

-----[rate-filter-config]-----
| memory-cap : 1048576 bytes
-----[rate-filter-rules]-----
| none
-----

-----[event-filter-config]-----
| memory-cap : 1048576 bytes
-----[event-filter-global]-----
| none
-----[event-filter-local]-----
| none
-----[suppression]-----
| none
-----

Type here to search 22:42
01-12-2022
```

```
Administrator: Command Prompt

2 byte states : 49.32
4 byte states : 68.07

-----
[ Number of patterns truncated to 20 bytes: 578 ]

MaxRss at the end of detection rules:-1206177232
pcap DAQ configured to passive.
The DAQ version does not support reload.
Acquiring network traffic from "-i".

=== Initialization Complete ===

-*) Snort! (*-
Version 2.9.20-WIN64 GRE (Build 82)
By Martin Roesch & The Snort Team: http://www.snort.org/contact#team
Copyright (C) 2014-2022 Cisco and/or its affiliates. All rights reserved.
Copyright (C) 1998-2013 Sourcefire, Inc., et al.
Using PCRE version: 8.10 2010-06-25
Using ZLIB version: 1.2.11

Rules Engine: SF_SNORT_DETECTION_ENGINE Version 3.2 <Build 1>
Preprocessor Object: SF_SSLPP Version 1.1 <Build 4>
Preprocessor Object: SF_SSH Version 1.1 <Build 3>
Preprocessor Object: SF_SMTP Version 1.1 <Build 9>
Preprocessor Object: SF_SIP Version 1.1 <Build 1>
Preprocessor Object: SF_SDF Version 1.1 <Build 1>
Preprocessor Object: SF_REPUTATION Version 1.1 <Build 1>
Preprocessor Object: SF_POP Version 1.0 <Build 1>
Preprocessor Object: SF_MQDBUS Version 1.1 <Build 1>
Preprocessor Object: SF_IWAP Version 1.0 <Build 1>
Preprocessor Object: SF_GTP Version 1.1 <Build 1>
Preprocessor Object: SF_FTPTELNET Version 1.2 <Build 13>
Preprocessor Object: SF_DNS Version 1.1 <Build 4>
Preprocessor Object: SF_DNP3 Version 1.1 <Build 1>
Preprocessor Object: SF_DCERPC2 Version 1.0 <Build 3>

Total snort Fixed Memory Cost - MaxRss:58798752
Snort successfully validated the configuration!
Snort exiting

c:\Snort\bin>
```