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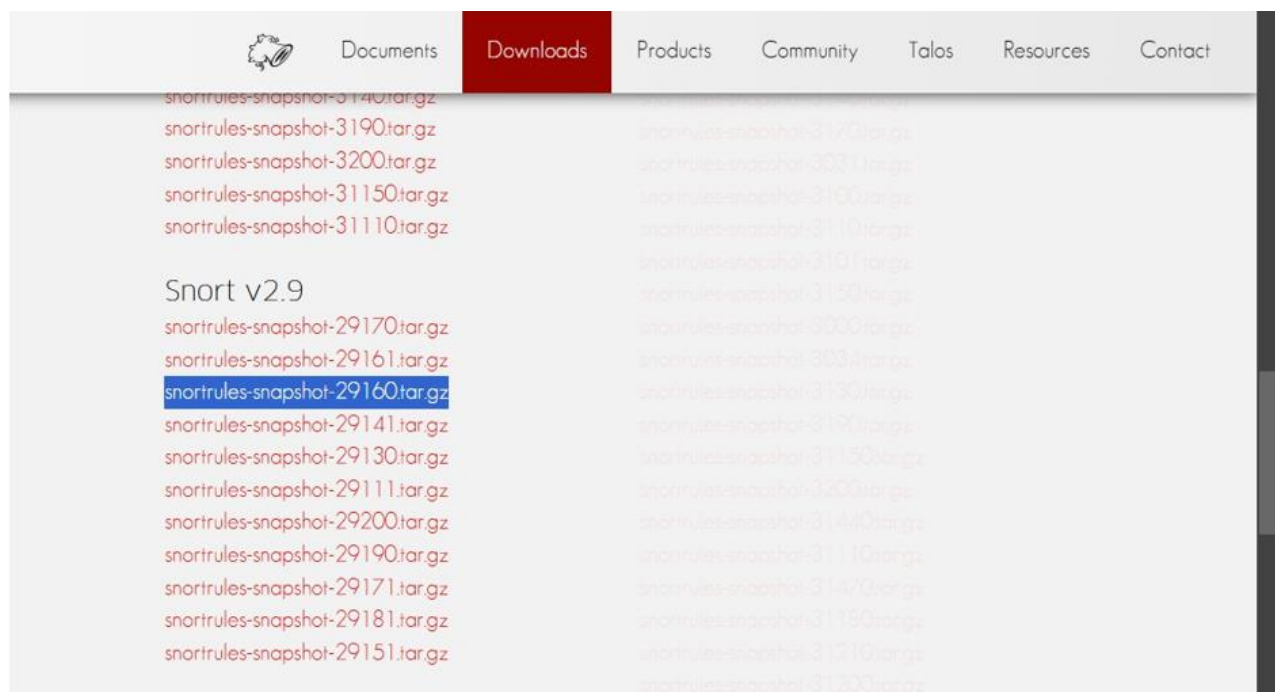
UID:2021300089

Batch: 2

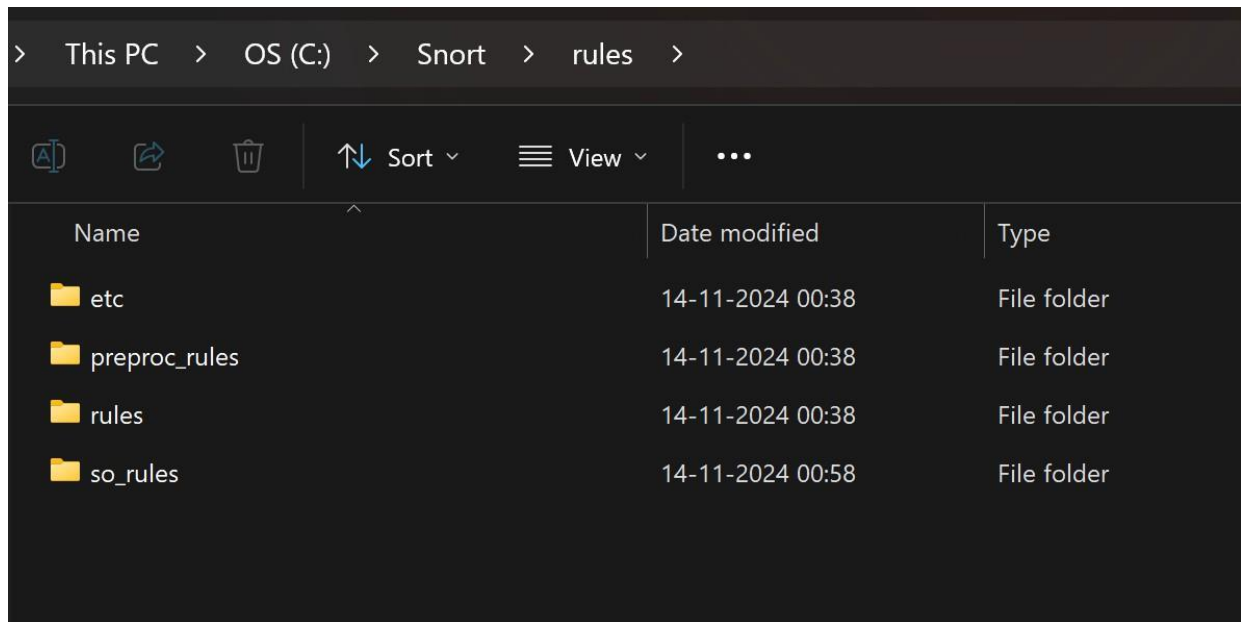
Step 1) Download Snort from snort.org and choose the destination folder (default: C:\Snort).

```
o" )~
    -> 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
```

Step 2) Download and Configure Rules (First you have to sign in to enable it)



Step 3) Extract this rule to C:\Snort\rules



#### Step 4) Editing the snort.conf file

```
# Step #1: Set the network variables. For more information, see README.variables
#####
ipvar HOME_NET 192.168.0.116
# Setup the network addresses you are protecting
ipvar HOME_NET any

# Set up the external network addresses. Leave as "any" in most situations
ipvar EXTERNAL_NET $HOME_NET
```

```
# Note for Windows users: You are advised to make this
# such as: c:\snort\rules
var RULE_PATH C:\Snort\rules
# var SO_RULE_PATH ../so_rules
var PREPROC_RULE_PATH C:\Snort\preproc_rules
```

```
# This is completely inconsistent with h
# Set the absolute path appropriately
var WHITE_LIST_PATH C:\Snort\rules
var BLACK_LIST_PATH C:\Snort\rules
```

```
# Configure default log directory for snort to log to. For more informat
#
config logdir:C:\Snort\log
```

```
# path to dynamic preprocessor libraries
dynamicpreprocessor directory C:\Snort\lib\snort_dynamicpreprocessor

# path to base preprocessor engine
dynamicengine C:\Snort\lib\snort_dynamicengine\sf_engine.dll

# path to dynamic rules libraries
dynamicdetection directory /usr/local/lib/snort_dynamicrules
```

```
utf_8 no \
u_encode yes \
webroot no
```

```
# Inline packet normalization. For more information, see README.normalize
# Does nothing in IDS mode
# preprocessor normalize_ip4
# preprocessor normalize_tcp: ips ecn stream
# preprocessor normalize_icmp4
# preprocessor normalize_ip6
# preprocessor normalize_icmp6
```

```
# Back-Orifice detection.
# preprocessor bo
```

```
# Portscan detection. For more information, see README.sfportscan
preprocessor sfportscan: proto { all } memcap { 10000000 } sense_level { low }
```

```
# site specific rules
```

```
include $RULE_PATH\local.rules
```

```
include $RULE_PATH\app-detect.rules
```

```
include $RULE_PATH\attack-responses.rules
```

```
include $RULE_PATH\backdoor.rules
```

```
include $RULE_PATH\bad-traffic.rules
```

```
include $RULE_PATH\blacklist.rules
```

```
include $RULE_PATH\botnet-cnc.rules
```

```
include $RULE_PATH\browser-chrome.rules
```

```
include $RULE_PATH\browser-firefox.rules
```

```
include $RULE_PATH\browser-ie.rules
```

```
include $RULE_PATH\browser-other.rules
```

```
include $RULE_PATH\browser-plugins.rules
```

```
include $RULE_PATH\browser-webkit.rules
```

```
include $RULE_PATH\chat.rules
```

```
include $RULE_PATH\content-replace.rules
```

```
include $RULE_PATH\ddos.rules
```

```
include $RULE_PATH\dns.rules
```

```
include $RULE_PATH\dos.rules
```

```
include $RULE_PATH\experimental.rules
```

```
include $RULE_PATH\exploit-kit.rules
```

```
include $RULE_PATH\exploit.rules
```

```
include $RULE_PATH\file-executable.rules
```

```
include $RULE_PATH\file-flash.rules
```

```
include $RULE_PATH\file-identify.rules
```

```
include $RULE_PATH\file-image.rules
```

```
include $RULE_PATH\file-multimedia.rules
```

```
include $RULE_PATH\file-office.rules
```

replacing the forward slash “/” with backslash “\”

```
# decoder and preprocessor event rules
# include $PREPROC_RULE_PATH\preprocessor.rules
# include $PREPROC_RULE_PATH\decoder.rules
# include $PREPROC_RULE_PATH\sensitive-data.rules
```

## Put Decoders and Preprocessors Rules in Comments

```
--> 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

Index  Physical Address      IP Address      Device Name      Description
-----
1      00:00:00:00:00:00      disabled      \Device\NPF_{091CE879-6833-48F5-A589-80E5DD71C55F}      WAN Miniport (Network Monitor)
2      00:00:00:00:00:00      disabled      \Device\NPF_{9201DD38-310A-49BF-A740-1310A4610E55}      WAN Miniport (IPv6)
3      00:00:00:00:00:00      disabled      \Device\NPF_{E21E6876-A335-4C74-BF28-535A55D3DC38}      WAN Miniport (IP)
4      A0:59:50:3A:9E:63      192.168.0.116  \Device\NPF_{62518E8F-10DA-4BA6-BD86-9C0A883B2638}      Intel(R) Wi-Fi 6E AX211 160MHz
5      A2:59:50:3A:9E:63      169.254.250.189 \Device\NPF_{EE4E9351-8ABE-4065-9E29-F63CAFF860C}      Microsoft Wi-Fi Direct Virtual Adapter #2
6      A0:59:50:3A:9E:64      169.254.61.115 \Device\NPF_{468FF8AE-E10D-4028-AAB4-78ED0DEAA57E}      Microsoft Wi-Fi Direct Virtual Adapter
7      0A:00:27:00:00:04      192.168.59.1   \Device\NPF_{1490E05C-FC57-4C94-884D-59DA89EE4977}      VirtualBox Host-Only Ethernet Adapter #2
8      0A:00:27:00:00:0F      192.168.56.1   \Device\NPF_{A4930F34-2456-40DD-AA76-87BF53535FE8}      VirtualBox Host-Only Ethernet Adapter
9      00:00:00:00:00:00      0000:0000:0000:0000:0000:0000 \Device\NPF_{Loopback}      Adapter for loopback traffic capture
```

## Check the Interface

```
C:\Snort\bin>snort -i 4 -c C:\Snort\etc\snort.conf
Running in IDS mode

--- Initializing Snort ---
Initializing Output Plugins!
Initializing Preprocessors!
Initializing Plug-ins!
Parsing Rules File "C:\Snort\etc\snort.conf"
C:\Snort\etc\snort.conf(45) Var 'HOME_NET' redefined.
PortVar 'HTTP_PORTS' defined: [ 80:81 311 383 591 593 901 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 55555 ]
PortVar 'SHELLCODE_PORTS' defined: [ 0:79 81:65535 ]
PortVar 'ORACLE_PORTS' defined: [ 1024:65535 ]
PortVar 'SSH_PORTS' defined: [ 22 ]
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 8
014 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 55555 ]
PortVar 'GTP_PORTS' defined: [ 2123 2152 3386 ]
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_sntp.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
```

Execute the Snort tool in the command prompt by typing “snort -i 2 -c

C:\Snort\etc\snort.conf

## WRITE RULES TO DETECT SCANNING ATTACKS



> snort inline      Aa ab .\*

> snort inline      Aa ab .\*

## Adding Rules in local.rules

```

00:00:00:00:00:00:snort -i 4 -e C:\Snort\etc\snort.conf -A console -ack Adapter for loopback traffic capture
to C:\Windows\System32
Running in IDS mode

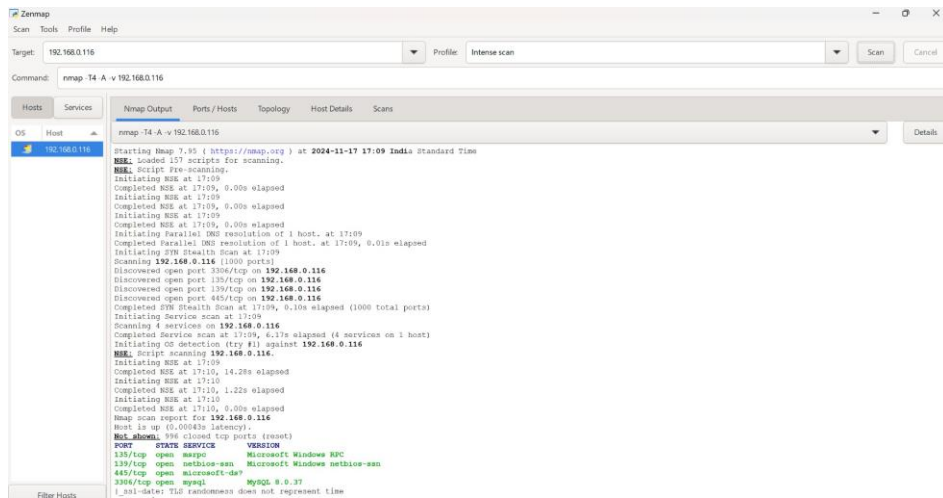
...== Initializing Snort ==-
Initializing Output Plugins!
Initializing Preprocessors!
Initializing Rule Sets!
Parsing Rules File "C:\Snort\etc\snort.conf"
C:\Snort\etc\snort.conf:45 Var HOME_NET undefined.
Porter: "HTTP_PORTS": defined: [ 80:81 311 303 593 901 1220 1444 1741 1830 2381 2809 3037 3128 3702 4343 4848 5256 6088 7000:7001 7144:7145 7510 7777 7777 7777 8008 8014 8028 8080 8085 8088 8090 8118 8123 8160:8161 8243 8280 8300 8808 8888 8890 9000 9060 9080 9090:9091 9443 9999 11371 13441:13444 41800 50802 55555 ]
Porter: "SMTP_PORTS": defined: [ 0:0 8161:61553 ]
Porter: "ORACLE_PORTS": defined: [ 1024:61555 ]
Porter: "SMTP_PORTS": defined: [ 22 ]
Porter: "FTP_PORTS": defined: [ 21 2100 3535 ]
Porter: "SIP_PORTS": defined: [ 5060:5661 5660 ]
Porter: "FILE_DATA_PORTS": defined: [ 80:81 118 143 311 383 591 931 961 1220 1444 1741 1830 2381 2809 3037 3128 3702 4343 4848 5256 6088 7000:7001 7144:7145 7510 7777 7777 7777 8008 8014 8028 8080 8085 8088 8090 8118 8123 8160:8161 8243 8280 8300 8808 8888 8890 9000 9060 9080 9090:9091 9443 9999 11371 13441:13444 41800 50802 55555 ]
Porter: "GTP_PORTS": defined: [ 2123 2152 3386 ]
Detection
Search-Method = AC-Full-Q
Split Any/Any group = enabled
Search-Method Optimizations = enabled
Maximum pattern length = 20
Tagged Packet Limit: 250
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_dced.dll... done
Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_dmap.dll... done
Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_dms.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_ldap.dll... done
Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_mshmon.dll... done
Loading dynamic preprocessor library C:\Snort\lib\snort_dynamicpreprocessor\sf_pop3.dll... done

```

## Running Snort in IDS mode

```
Starting Nmap 7.95 ( https://nmap.org ) at 2024-11-17 17:15 India Standard Time
Initiating Parallel DNS resolution of 1 host. at 17:15
Completed Parallel DNS resolution of 1 host. at 17:15, 0.01s elapsed
Initiating SYN Stealth Scan at 17:15
Scanning 192.168.0.116 [65535 ports]
Discovered open port 135/tcp on 192.168.0.116
Discovered open port 3306/tcp on 192.168.0.116
Discovered open port 445/tcp on 192.168.0.116
Discovered open port 139/tcp on 192.168.0.116
Discovered open port 5040/tcp on 192.168.0.116
Discovered open port 49664/tcp on 192.168.0.116
Discovered open port 49671/tcp on 192.168.0.116
Discovered open port 49665/tcp on 192.168.0.116
Discovered open port 5433/tcp on 192.168.0.116
Discovered open port 49672/tcp on 192.168.0.116
Discovered open port 49686/tcp on 192.168.0.116
Discovered open port 2869/tcp on 192.168.0.116
Discovered open port 33060/tcp on 192.168.0.116
Discovered open port 49670/tcp on 192.168.0.116
Completed SYN Stealth Scan at 17:15, 3.91s elapsed (65535 total ports)
```

## Network Scanning Attack with Nmap Tool



## Network Scanning Attack with Zenmap Tool

```
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:38538 -> 192.168.0.166:14362
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:42866 -> 192.168.0.166:47384
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:44446 -> 192.168.0.166:1523
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:36136 -> 192.168.0.166:59707
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:51044 -> 192.168.0.166:46528
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:49032 -> 192.168.0.166:31832
11/15-14:58:32.760081 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:36458 -> 192.168.0.166:65113
11/15-14:58:32.760121 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:60654 -> 192.168.0.166:34317
11/15-14:58:32.760121 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:60430 -> 192.168.0.166:3823
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:55062 -> 192.168.0.166:11132
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:55612 -> 192.168.0.166:2831
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:59830 -> 192.168.0.166:4383
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:50714 -> 192.168.0.166:15857
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:38082 -> 192.168.0.166:15378
11/15-14:58:32.760144 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:46020 -> 192.168.0.166:40395
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:48256 -> 192.168.0.166:38691
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:47998 -> 192.168.0.166:21479
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:33186 -> 192.168.0.166:58318
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:60288 -> 192.168.0.166:13973
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:52920 -> 192.168.0.166:24026
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:47562 -> 192.168.0.166:25308
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:34368 -> 192.168.0.166:50632
11/15-14:58:32.760204 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:33996 -> 192.168.0.166:34974
11/15-14:58:32.760249 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:49526 -> 192.168.0.166:38691
11/15-14:58:32.760250 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:36602 -> 192.168.0.166:15393
11/15-14:58:32.760250 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:54596 -> 192.168.0.166:42409
11/15-14:58:32.760250 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:49034 -> 192.168.0.166:20076
11/15-14:58:32.760272 [**] [1:10000005:0] SYN attack [**] [Priority: 0] {TCP} 192.168.0.106:37390 -> 192.168.0.166:30777
```

## Detection of Network Scanning Attack with Snort IDS