

SCHOOL OF INFORMATION TECHNOLOGY AND
ENGINEERING
DIGITAL ASSIGNMENT 1
WINTER SEMESTER 2022-23

Course : Information Security Management Lab

Marks :10

Course Code : CSE3502

Slot : L25+26

Name : Chavan Mukul Manish

Reg no: 20BIT0238

System IP

```
Command Prompt
Microsoft Windows [Version 10.0.22621.963]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91818>ipconfig

Windows IP Configuration

Wireless LAN adapter Local Area Connection* 3:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Wireless LAN adapter Local Area Connection* 4:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Ethernet adapter VMware Network Adapter VMnet1:

    Connection-specific DNS Suffix  . :
    Link-local IPv6 Address . . . . . : fe80::2196:3e6a:34ac:3f0b%2
    IPv4 Address. . . . . : 192.168.247.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

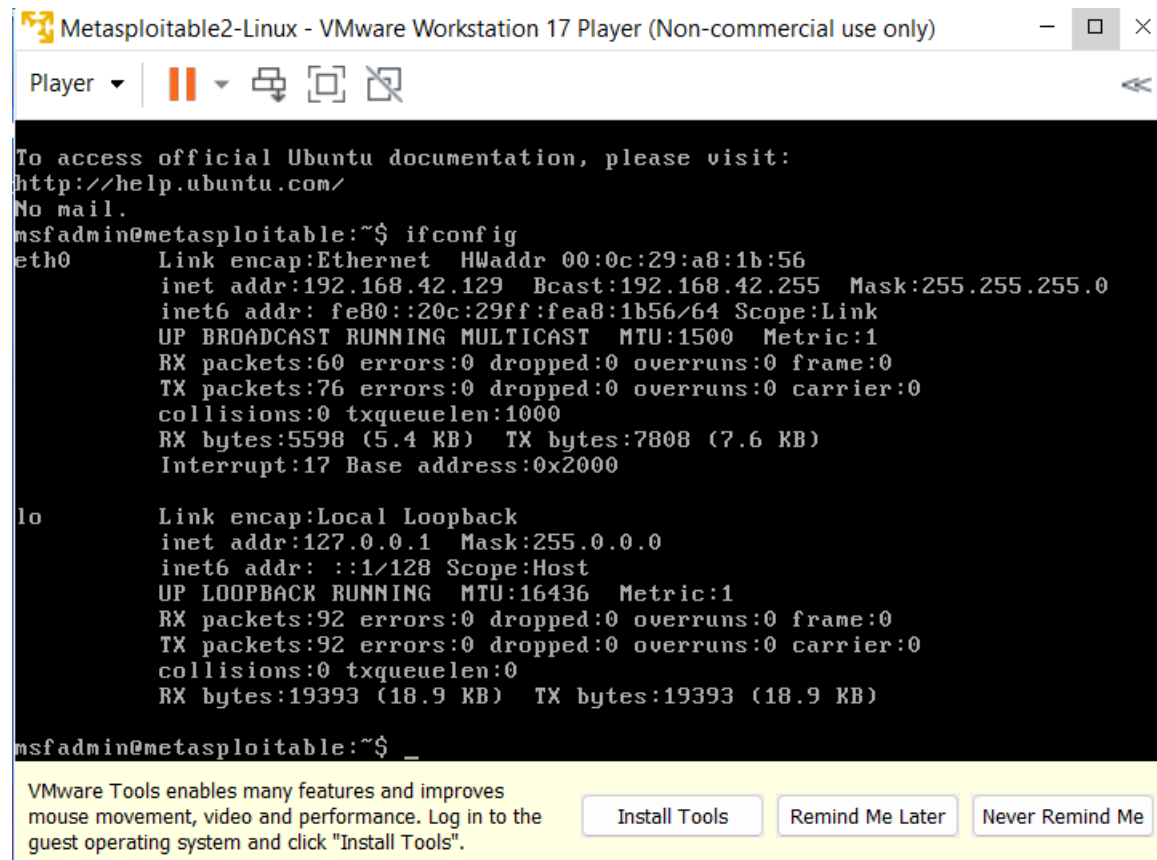
Ethernet adapter VMware Network Adapter VMnet8:

    Connection-specific DNS Suffix  . :
    Link-local IPv6 Address . . . . . : fe80::212f:91d6:e822:163a%14
    IPv4 Address. . . . . : 192.168.42.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix  . :
    IPv6 Address. . . . . : 2409:4072:182:16c6:836e:2b8d:a4bd:d5ea
    Temporary IPv6 Address. . . . . : 2409:4072:182:16c6:a4c1:72f0:fb53:8745
    Link-local IPv6 Address . . . . . : fe80::258b:8df5:6267:cc14%5
```

Metasploitable IP (192.168.42.129)



```
Metasploitable2-Linux - VMware Workstation 17 Player (Non-commercial use only)
Player ▾ | [Pause] [Full Screen] [Close]
To access official Ubuntu documentation, please visit:
http://help.ubuntu.com/
No mail.
msfadmin@metasploitable:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:a8:1b:56
          inet addr:192.168.42.129  Bcast:192.168.42.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fea8:1b56/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:60 errors:0 dropped:0 overruns:0 frame:0
          TX packets:76 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:5598 (5.4 KB)  TX bytes:7808 (7.6 KB)
          Interrupt:17 Base address:0x2000

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:92 errors:0 dropped:0 overruns:0 frame:0
          TX packets:92 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:19393 (18.9 KB)  TX bytes:19393 (18.9 KB)

msfadmin@metasploitable:~$ _
```

VMware Tools enables many features and improves mouse movement, video and performance. Log in to the guest operating system and click "Install Tools".

[Install Tools](#) [Remind Me Later](#) [Never Remind Me](#)

Kali linux IP (192.168.42.130)

```
20BIT0213_kali-linux-2022.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)
Player
1 2 3 4
kali@kali ~
File Actions Edit View Help
(kali@kali)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.42.130 netmask 255.255.255.0 broadcast 192.168.42.255
    inet6 fe80::a00a:5650:4c93:89e8 prefixlen 64 scopeid 0<link>
    ether 00:0c:29:05:41:50 txqueuelen 1000 (Ethernet)
    RX packets 26897 bytes 21716940 (20.7 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 21947 bytes 5306803 (5.0 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 24 bytes 1240 (1.2 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 24 bytes 1240 (1.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(kali@kali)-[~]
$
```

26°C Partly sunny

Q Search

ENG IN

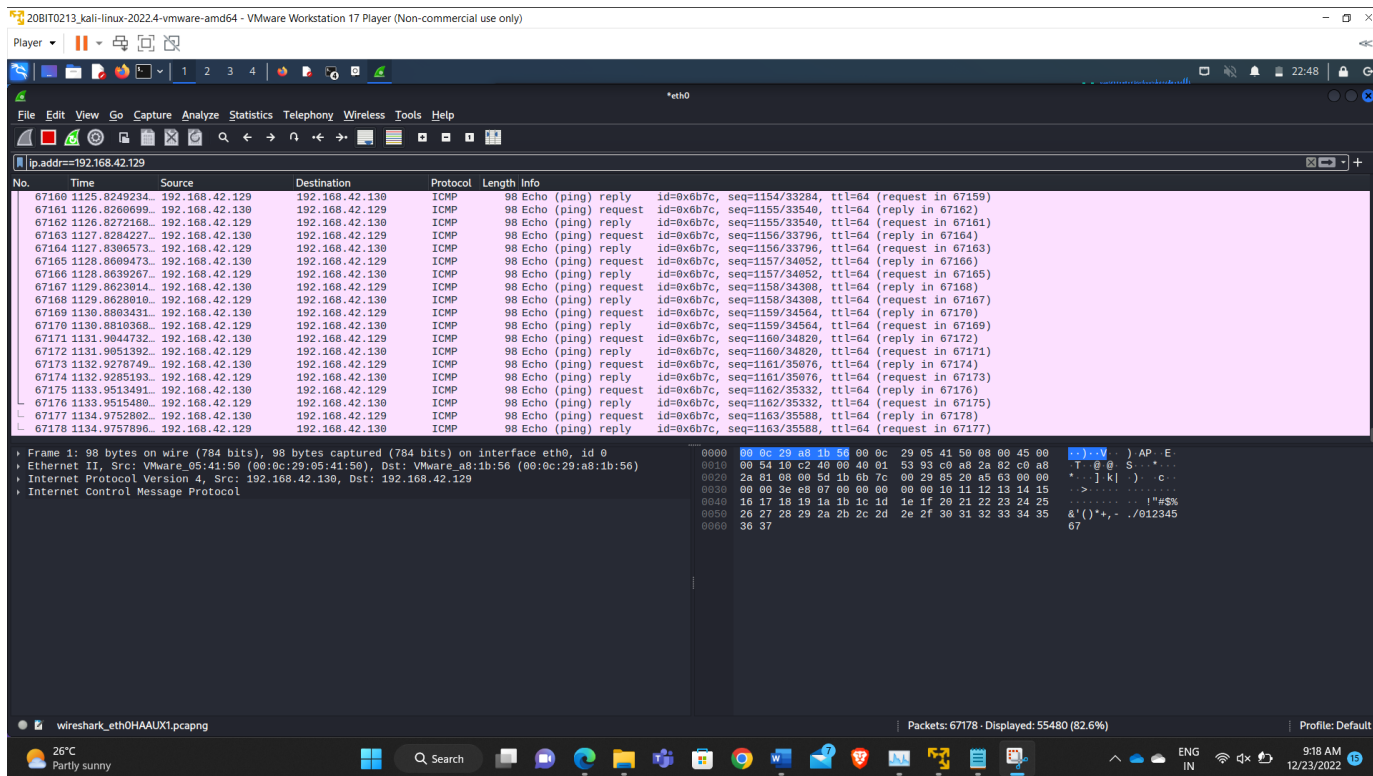
1. Perform a Ping of Metasploitable IP on Kali Linux command and observe the packets in Wireshark. Give 2 snapshots one for pinging to metasploitable IP and another for wireshark capturing request and response packets to metasploitable IP (2 marks)

20BIT0213_kali-linux-2022.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)

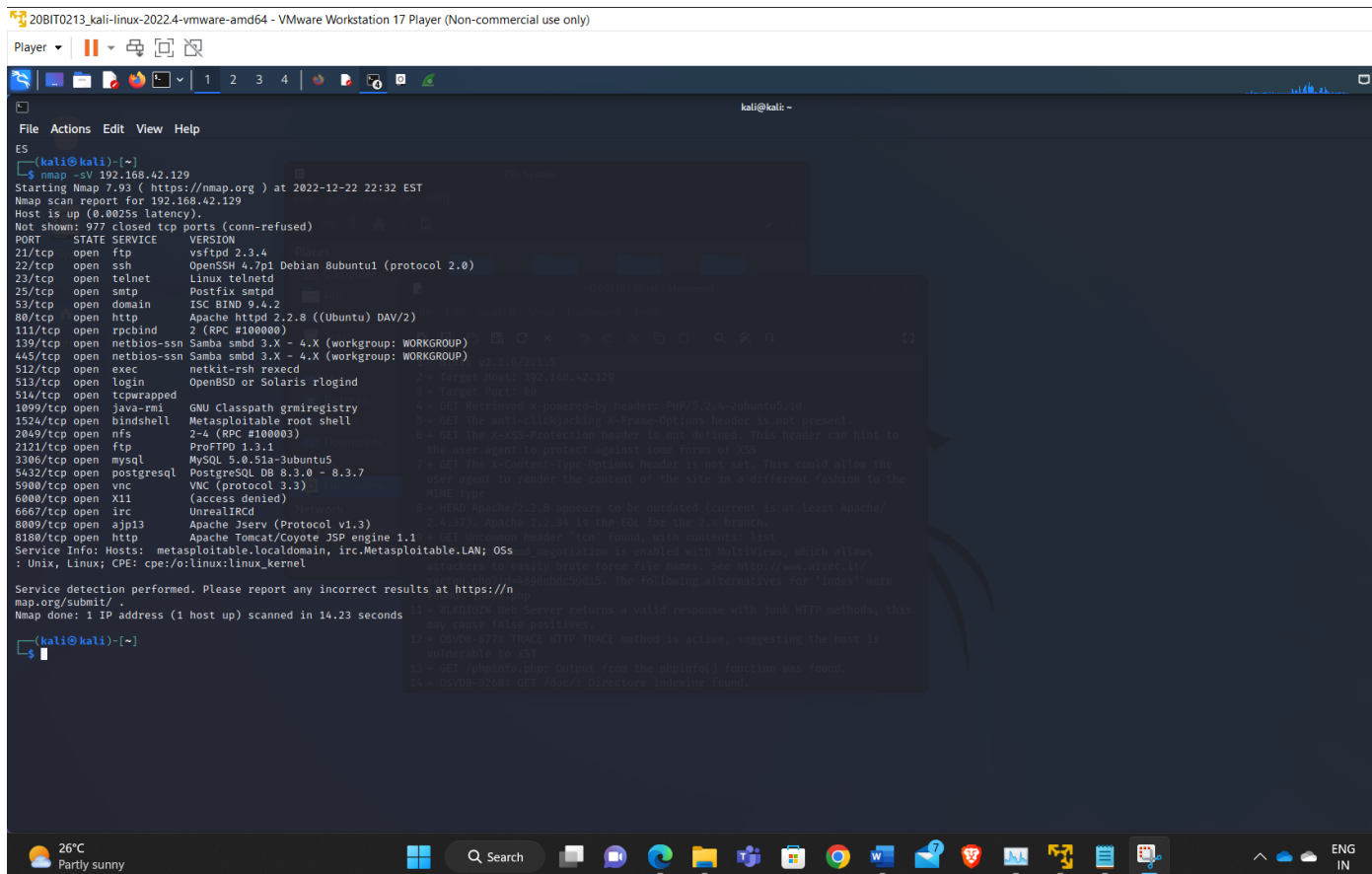
Player

1 2 3 4

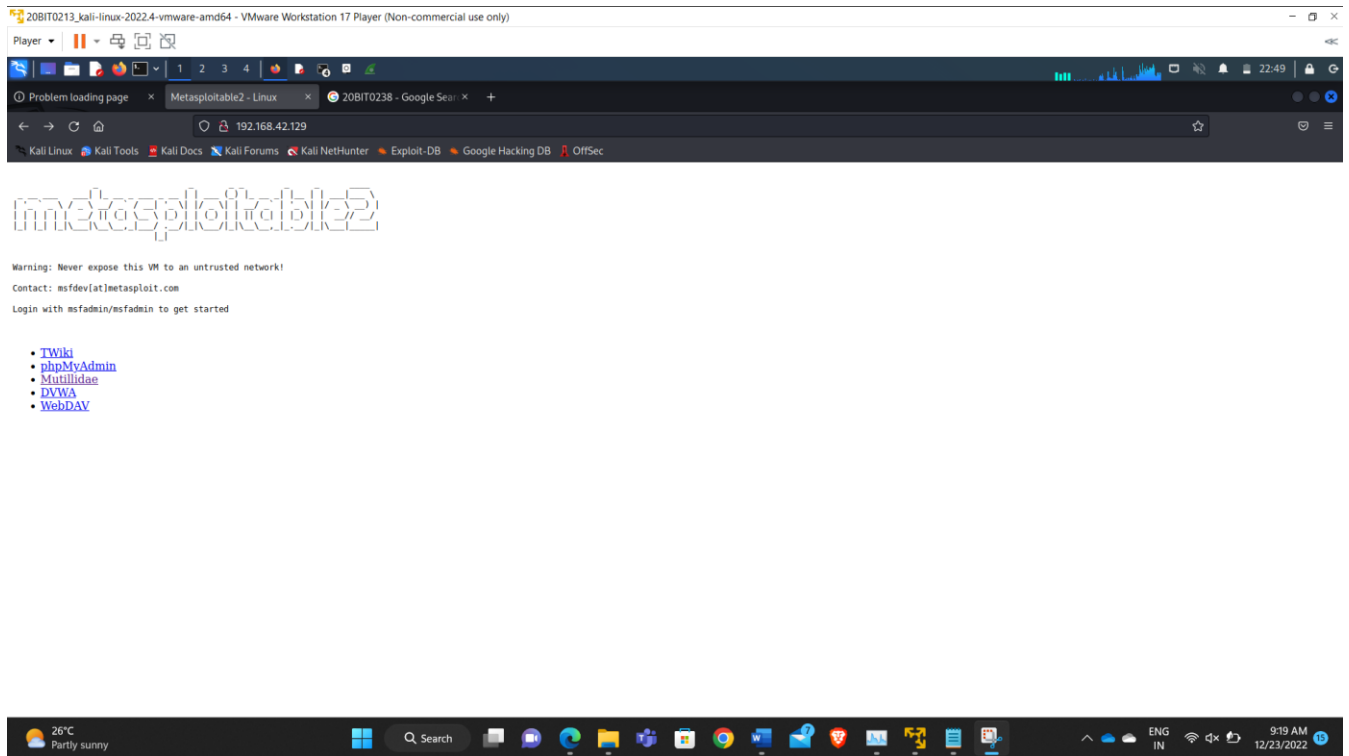
```
(kali@kali)-[~]
$ ping 192.168.42.129
PING 192.168.42.129 (192.168.42.129) 56(84) bytes of data.
64 bytes from 192.168.42.129: icmp_seq=1 ttl=64 time=1.10 ms
64 bytes from 192.168.42.129: icmp_seq=2 ttl=64 time=1.09 ms
64 bytes from 192.168.42.129: icmp_seq=3 ttl=64 time=0.710 ms
64 bytes from 192.168.42.129: icmp_seq=4 ttl=64 time=0.898 ms
64 bytes from 192.168.42.129: icmp_seq=5 ttl=64 time=0.378 ms
64 bytes from 192.168.42.129: icmp_seq=6 ttl=64 time=0.503 ms
64 bytes from 192.168.42.129: icmp_seq=7 ttl=64 time=0.880 ms
64 bytes from 192.168.42.129: icmp_seq=8 ttl=64 time=0.786 ms
64 bytes from 192.168.42.129: icmp_seq=9 ttl=64 time=0.968 ms
64 bytes from 192.168.42.129: icmp_seq=10 ttl=64 time=0.619 ms
64 bytes from 192.168.42.129: icmp_seq=11 ttl=64 time=0.696 ms
64 bytes from 192.168.42.129: icmp_seq=12 ttl=64 time=0.454 ms
64 bytes from 192.168.42.129: icmp_seq=13 ttl=64 time=0.605 ms
64 bytes from 192.168.42.129: icmp_seq=14 ttl=64 time=0.508 ms
64 bytes from 192.168.42.129: icmp_seq=15 ttl=64 time=1.21 ms
64 bytes from 192.168.42.129: icmp_seq=16 ttl=64 time=0.674 ms
64 bytes from 192.168.42.129: icmp_seq=17 ttl=64 time=0.234 ms
64 bytes from 192.168.42.129: icmp_seq=18 ttl=64 time=0.372 ms
64 bytes from 192.168.42.129: icmp_seq=19 ttl=64 time=0.602 ms
64 bytes from 192.168.42.129: icmp_seq=20 ttl=64 time=0.473 ms
64 bytes from 192.168.42.129: icmp_seq=21 ttl=64 time=0.641 ms
64 bytes from 192.168.42.129: icmp_seq=22 ttl=64 time=0.870 ms
64 bytes from 192.168.42.129: icmp_seq=23 ttl=64 time=0.464 ms
64 bytes from 192.168.42.129: icmp_seq=24 ttl=64 time=0.733 ms
64 bytes from 192.168.42.129: icmp_seq=25 ttl=64 time=0.413 ms
64 bytes from 192.168.42.129: icmp_seq=26 ttl=64 time=0.765 ms
64 bytes from 192.168.42.129: icmp_seq=27 ttl=64 time=0.828 ms
64 bytes from 192.168.42.129: icmp_seq=28 ttl=64 time=0.782 ms
64 bytes from 192.168.42.129: icmp_seq=29 ttl=64 time=0.853 ms
64 bytes from 192.168.42.129: icmp_seq=30 ttl=64 time=12.2 ms
64 bytes from 192.168.42.129: icmp_seq=31 ttl=64 time=0.556 ms
64 bytes from 192.168.42.129: icmp_seq=32 ttl=64 time=0.767 ms
64 bytes from 192.168.42.129: icmp_seq=33 ttl=64 time=0.631 ms
64 bytes from 192.168.42.129: icmp_seq=34 ttl=64 time=0.424 ms
64 bytes from 192.168.42.129: icmp_seq=35 ttl=64 time=0.753 ms
64 bytes from 192.168.42.129: icmp_seq=36 ttl=64 time=0.623 ms
64 bytes from 192.168.42.129: icmp_seq=37 ttl=64 time=0.356 ms
64 bytes from 192.168.42.129: icmp_seq=38 ttl=64 time=0.493 ms
64 bytes from 192.168.42.129: icmp_seq=39 ttl=64 time=0.435 ms
64 bytes from 192.168.42.129: icmp_seq=40 ttl=64 time=0.583 ms
64 bytes from 192.168.42.129: icmp_seq=41 ttl=64 time=2.00 ms
64 bytes from 192.168.42.129: icmp_seq=42 ttl=64 time=1.73 ms
64 bytes from 192.168.42.129: icmp_seq=43 ttl=64 time=0.820 ms
64 bytes from 192.168.42.129: icmp_seq=44 ttl=64 time=0.752 ms
64 bytes from 192.168.42.129: icmp_seq=45 ttl=64 time=0.767 ms
64 bytes from 192.168.42.129: icmp_seq=46 ttl=64 time=0.660 ms
64 bytes from 192.168.42.129: icmp_seq=47 ttl=64 time=1.99 ms
64 bytes from 192.168.42.129: icmp_seq=48 ttl=64 time=1.10 ms
64 bytes from 192.168.42.129: icmp_seq=49 ttl=64 time=0.972 ms
```



2. Perform a NMAP scan of determining the version of the services running in metasploitable IP. Give snapshot of the same. (2 Marks)



3. Run metasploitable IP in firefox browser of Kali. Give Snapshot (2 Marks)



4. Perform a Nikto Scan of metasploitable IP. Give snapshot and save the results in a text file. Save the text file in google drive link and share the link in the document.

20BIT0213_kali-linux-2022.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)

```
Player ▾ | 1 2 3 4 | [Icons] | [Fullscreen] | [Close] | [Help] | [VMware Workstation 17 Player (Non-commercial use only)]

kali@kali: ~
File Actions Edit View Help

(kali@kali) ~
$ nikto -h 192.168.42.129 -o 20BIT0238.txt
- Nikto v2.1.6

+ Target IP: 192.168.42.129
+ Target Hostname: 192.168.42.129
+ Target Port: 80
+ Start Time: 2022-12-22 22:34:20 (GMT-5)

+ Server: Apache/2.2.8 (Ubuntu) DAV/2
+ Retrieved x-powered-by header: PHP/5.2.4-2ubuntu5.10
+ The anti-clickjacking X-Frame-Options header is not present.
+ The X-XSS-Protection header is not defined. This header can hint to the user agent to protect against some forms of XSS
+ The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type
+ Apache/2.2.8 appears to be outdated (current is at least Apache/2.4.37). Apache 2.2.34 is the EOL for the 2.x branch.
+ Uncommon header 'tcn' found, with contents: list
+ Apache mod_negotiation is enabled with MultiViews, which allows attackers to easily brute force file names. See http://www.wisec.it/sectou.php?id=4698ebdc59d15. The following alternatives for 'index' were found: index.php
+ Web Server returns a valid response with junk HTTP methods, this may cause false positives.
+ OSVDB-877: HTTP TRACE method is active, suggesting the host is vulnerable to XST
+ /phpinfo.php: Output from the phpinfo() function was found.
+ OSVDB-3268: /doc/: Directory indexing found.
+ OSVDB-48: /doc/: The /doc/ directory is browsable. This may be /usr/doc.
+ OSVDB-12184: /?PHPBB5F2A0-3C92-11d3-A3A9-4C7B08C10000: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
+ OSVDB-12184: /?PHE9568F36-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
+ OSVDB-12184: /?PHE9568F34-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
+ OSVDB-12184: /?PHE9568F35-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
+ OSVDB-3092: /phpMyAdmin/changelog.php: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
+ Server may leak inodes via ETags, header found with file /phpMyAdmin/ChangeLog, inode: 92462, size: 40540, mtime: Tue Dec 9 12:24:00 2008
+ OSVDB-3092: /phpMyAdmin/ChangeLog: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
+ OSVDB-3268: /test/: Directory indexing found.
+ OSVDB-3092: /test/: This might be interesting...
+ OSVDB-3233: /phpinfo.php: PHP is installed, and a test script which runs phpinfo() was found. This gives a lot of system information.
```

```
20BIT0213_kali-linux-2022.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)

Player ▾ | 1 2 3 4 | [Icons] | [Fullscreen] | [Close] | [Help] | [VMware Workstation 17 Player (Non-commercial use only)]

~/20BIT0238.txt - Mousepad
File Edit Search View Document Help

1| Nikto v2.1.6/2.1.5
2| Target Host: 192.168.42.129
3| Target Port: 80
4| GET Retrieved x-powered-by header: PHP/5.2.4-2ubuntu5.10
5| GET The anti-clickjacking X-Frame-Options header is not present.
6| GET The X-XSS-Protection header is not defined. This header can hint to the user agent to protect against some forms of XSS
7| GET The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type
8| HEAD Apache/2.2.8 appears to be outdated (current is at least Apache/2.4.37). Apache 2.2.34 is the EOL for the 2.x branch.
9| GET Uncommon header 'tcn' found, with contents: list
10| GET Apache mod_negotiation is enabled with MultiViews, which allows attackers to easily brute force file names. See http://www.wisec.it/sectou.php?id=4698ebdc59d15. The following alternatives for 'index' were found: index.php
11| MLK01GZN Web Server returns a valid response with junk HTTP methods, this may cause false positives.
12| OSVDB-877: TRACE HTTP TRACE method is active, suggesting the host is vulnerable to XST
13| GET /phpinfo.php: Output from the phpinfo() function was found.
14| OSVDB-3268: GET /doc/: Directory indexing found.
15| OSVDB-48: GET /doc/: The /doc/ directory is browsable. This may be /usr/doc.
16| OSVDB-12184: GET /?PHPBB5F2A0-3C92-11d3-A3A9-4C7B08C10000: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
17| OSVDB-12184: GET /?PHE9568F36-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
18| OSVDB-12184: GET /?PHE9568F34-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
19| OSVDB-12184: GET /?PHE9568F35-D428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.
20| OSVDB-3092: GET /phpMyAdmin/changelog.php: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
21| GET Server may leak inodes via ETags, header found with file /phpMyAdmin/ChangeLog, inode: 92462, size: 40540, mtime: Tue Dec 9 12:24:00 2008
22| OSVDB-3092: GET /phpMyAdmin/ChangeLog: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
23| OSVDB-3268: GET /test/: Directory indexing found.
24| OSVDB-3092: GET /test/: This might be interesting...
25| OSVDB-3233: GET /phpinfo.php: PHP is installed, and a test script which runs phpinfo() was found. This gives a lot of system information.
26| OSVDB-3268: GET /icons/: Directory indexing found.
27| OSVDB-3233: GET /icons/README: Apache default file found.
28| GET /phpMyAdmin/: phpMyAdmin directory found.
29| OSVDB-3092: GET /phpMyAdmin/Documentation.html: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
30| OSVDB-3092: GET /phpMyAdmin/README: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
31
```

Google Drive link : https://drive.google.com/file/d/18-dM8z5-rl-NzQxwxhLIEaGowl_7Nr1/view?usp=sharing