ATTACKDEFENSE LABS COURSES

PENTESTER ACADEMYTOOL BOX PENTESTING

JUNT WORLD-CLASS TRAINERS TRAINING HACKER

PATY RED TEAM LABS ATTACKDEFENSE LABS

TRAINING COURSES ACCESS POINT PENTESTER

TEAM LABS PENTESTY TO THE OLD OF DOLD-CLASS TRAINERS I WORLD-CLASS TRAINING COURSES PAY THE OLD OF DOLD-CLASS TRAINING

THACKDEFENSE LABS TRAINING COURSES PATY ACCESS

PENTESTED LABS TRAINING COURSES PENTESTER ACADEM

COURSES TO LABS TRAINING COURSES PENTESTER ACADEM

COURSES TO LABS TRAINING TO LASS TRAINING HACKER

TOOL BOX

TOOL BOX WORLD-CI

TRAINING

TRAINING

TRAINING

TRAINING

TRAINING

TRAINING

TRAINING

PENTESTER ACADEMY TOOL BOX

TRAINING

| Name | Directory Enumeration with Dirb |
|------|---|
| URL | https://attackdefense.com/challengedetails?cid=1881 |
| Туре | Webapp Pentesting Basics |

Important Note: This document illustrates all the important steps required to complete this lab. This is by no means a comprehensive step-by-step solution for this exercise. This is only provided as a reference to various commands needed to complete this exercise and for your further research on this topic. Also, note that the IP addresses and domain names might be different in your lab.

Objective: Perform directory enumeration with Dirb

Solution:

Step 1: Start a terminal and check the IP address of the host.

Command: ip addr

```
root@attackdefense:~# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
24861: eth0@if24862: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:0a:01:01:05 brd ff:ff:ff:ff:ff link-netnsid 0
    inet 10.1.1.5/24 brd 10.1.1.255 scope global eth0
        valid_lft forever preferred_lft forever
24864: eth1@if24865: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
    link/ether 02:42:c0:9c:cf:02 brd ff:ff:ff:ff:ff link-netnsid 0
    inet 192.156.207.2/24 brd 192.156.207.255 scope global eth1
        valid_lft forever preferred_lft forever
root@attackdefense:~#
```

Step 2: Run Nmap scan on the target IP to find open ports.

Note: The target IP will be 192.156.207.3

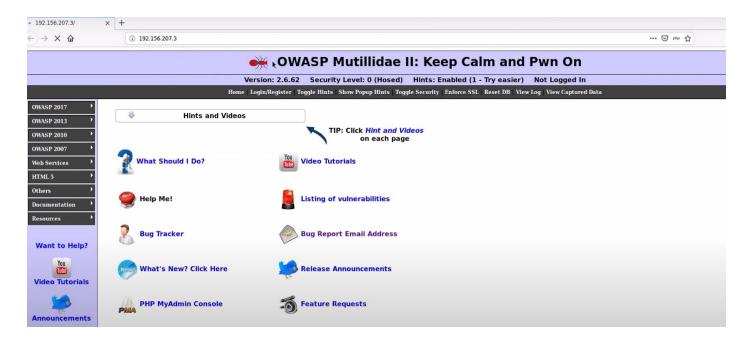
Command: nmap 192.156.207.3

```
root@attackdefense:~# nmap 192.156.207.3
Starting Nmap 7.70 ( https://nmap.org ) at 2020-05-19 18:57 IST
Nmap scan report for target-1 (192.156.207.3)
Host is up (0.000013s latency).
Not shown: 998 closed ports
PORT STATE SERVICE
80/tcp open http
3306/tcp open mysql
MAC Address: 02:42:C0:9C:CF:03 (Unknown)

Nmap done: 1 IP address (1 host up) scanned in 0.21 seconds
root@attackdefense:~#
```

Port 80 and Port 3306 are open

Step 3: Start firefox and navigate to the target IP.



An instance of Mutillidae is running at port 80 of the target.

Step 4: Start a terminal and run the dirb command to get the available options in the dirb tool.

Command: dirb

Step 5: Run the dirb scan while passing the URL and other required arguments.

Command: dirb http://192.156.207.3

```
Troot@attackdefense:~# dirb http://192.156.207.3

DIRB v2.22

By The Dark Raver

START_TIME: Tue May 19 18:58:01 2020

URL_BASE: http://192.156.207.3/

WORDLIST_FILES: /usr/share/dirb/wordlists/common.txt

GENERATED WORDS: 4612

+ http://192.156.207.3/.git/HEAD (CODE:200|SIZE:23)

=>> DIRECTORY: http://192.156.207.3/ajax/
+ http://192.156.207.3/cgi-bin/ (CODE:403|SIZE:288)

=>> DIRECTORY: http://192.156.207.3/classes/
```

```
097. 051
```

```
+ http://192.156.207.3/phpmyadmin/libraries (CODE:403|SIZE:300)
  http://192.156.207.3/phpmyadmin/LICENSE (CODE:200|SIZE:18011)
==> DIRECTORY: http://192.156.207.3/phpmyadmin/locale/
+ http://192.156.207.3/phpmyadmin/phpinfo.php (CODE:200|SIZE:0)
+ http://192.156.207.3/phpmyadmin/README (CODE:200|SIZE:2101)
+ http://192.156.207.3/phpmyadmin/robots.txt (CODE:200|SIZE:26)
==> DIRECTORY: http://192.156.207.3/phpmyadmin/setup/
==> DIRECTORY: http://192.156.207.3/phpmyadmin/themes/
---- Entering directory: http://192.156.207.3/styles/ ---- (!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/test/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
     (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/webservices/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/phpmyadmin/config/ ---- (!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/phpmyadmin/examples/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
```

Note: By default, the dirb will scan the directories recursively and returns the result whose response code is not 404.

The dirb tool will also show the directories with 403 status code.



Step 6: Run the dirb scan in non-recursive mode.

Command: dirb http://192.156.207.3 -r

Note: The -r flag is used to stop dirb from running recursively.

```
root@attackdefense:~# dirb http://192.156.207.3 -r
DIRB v2.22
By The Dark Raver
START_TIME: Tue May 19 18:59:00 2020
URL_BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/dirb/wordlists/common.txt
OPTION: Not Recursive
GENERATED WORDS: 4612
 ---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/.git/HEAD (CODE:200|SIZE:23)
==> DIRECTORY: http://192.156.207.3/ajax/
+ http://192.156.207.3/cgi-bin/ (CODE:403|SIZE:288)
==> DIRECTORY: http://192.156.207.3/classes/
==> DIRECTORY: http://192.156.207.3/config/
==> DIRECTORY: http://192.156.207.3/data/
==> DIRECTORY: http://192.156.207.3/documentation/
 ==> DIRECTORY: http://192.156.207.3/images/
==> DIRECTORY: http://192.156.207.3/includes/
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
==> DIRECTORY: http://192.156.207.3/javascript/
+ http://192.156.207.3/LICENSE (CODE:200|SIZE:10273)
==> DIRECTORY: http://192.156.207.3/passwords/
+ http://192.156.207.3/phpinfo.php (CODE:200|SIZE:82106)
==> DIRECTORY: http://192.156.207.3/phpmyadmin/
+ http://192.156.207.3/robots.txt (CODE:200|SIZE:190)
 + http://192.156.207.3/server-status (CODE:403|SIZE:293)
 => DIRECTORY: http://192.156.207.3/styles/
```

Step 7: Run the dirb scan while ignoring 403 status code directories and run the scan in non-recursive mode.

Command: dirb http://192.156.207.3 -r -N 403

Note: -N flag is used to ignore the specified response code directories.

```
root@attackdefense:~# dirb http://192.156.207.3 -r -N 403
DIRB v2.22
By The Dark Raver
START TIME: Tue May 19 18:59:21 2020
URL_BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/dirb/wordlists/common.txt
OPTION: Ignoring NOT FOUND code -> 403
OPTION: Not Recursive
GENERATED WORDS: 4612
 ---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/.git/HEAD (CODE:200|SIZE:23)
==> DIRECTORY: http://192.156.207.3/ajax/
==> DIRECTORY: http://192.156.207.3/classes/
==> DIRECTORY: http://192.156.207.3/config/
==> DIRECTORY: http://192.156.207.3/data/
==> DIRECTORY: http://192.156.207.3/documentation/
==> DIRECTORY: http://192.156.207.3/images/
==> DIRECTORY: http://192.156.207.3/includes/
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
==> DIRECTORY: http://192.156.207.3/javascript/
+ http://192.156.207.3/LICENSE (CODE:200|SIZE:10273)
==> DIRECTORY: http://192.156.207.3/passwords/
```

Step 8: Run the dirb scan with a custom wordlist while ignoring the 403 status code directories and run the scan in non-recursive mode.

Command: dirb http://192.156.207.3 /usr/share/wordlists/dirb/big.txt -r -N 403

+ http://192.156.207.3/phpinfo.php (CODE:200|SIZE:82106)

==> DIRECTORY: http://192.156.207.3/phpmyadmin/

Note: The full path of wordlist will be passed in the dirb command with URL and other required flags.

```
root@attackdefense:~# dirb http://192.156.207.3 /usr/share/wordlists/dirb/big.txt -r -N 403
DIRB v2.22
By The Dark Raver
START_TIME: Tue May 19 18:59:42 2020
URL_BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/wordlists/dirb/big.txt
OPTION: Ignoring NOT_FOUND code -> 403
OPTION: Not Recursive
GENERATED WORDS: 20458
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/LICENSE (CODE:200|SIZE:10273)
==> DIRECTORY: http://192.156.207.3/ajax/
==> DIRECTORY: http://192.156.207.3/classes/
 ==> DIRECTORY: http://192.156.207.3/config/
==> DIRECTORY: http://192.156.207.3/data/
 ==> DIRECTORY: http://192.156.207.3/documentation/
 ==> DIRECTORY: http://192.156.207.3/images/
==> DIRECTORY: http://192.156.207.3/includes/
==> DIRECTORY: http://192.156.207.3/javascript/
==> DIRECTORY: http://192.156.207.3/passwords/
==> DIRECTORY: http://192.156.207.3/phpmyadmin/
+ http://192.156.207.3/robots.txt (CODE:200|SIZE:190)
==> DIRECTORY: http://192.156.207.3/styles/
==> DIRECTORY: http://192.156.207.3/test/
 ==> DIRECTORY: http://192.156.207.3/webservices/
```

Step 9: Run the dirb scan for the specific file extension (.txt) while ignoring the 403 status-code files.

Command: dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .txt -w -N 403

END_TIME: Tue May 19 18:59:50 2020
DOWNLOADED: 20458 - FOUND: 2
root@attackdefense:~#

Note: The -X flag is used with the type of extension to be looked up by the dirb in the scan. -w flag is used to suppress the warnings and continue the scan.

```
root@attackdefense:~# dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .txt -w -N 403
DIRB v2.22
By The Dark Raver
START_TIME: Tue May 19 19:00:37 2020
URL BASE: http://192.156.207.3/
WORDLIST FILES: /usr/share/wordlists/dirb/common.txt
OPTION: Ignoring NOT_FOUND code -> 403
OPTION: Not Stopping on warning messages
EXTENSIONS LIST: (.txt) | (.txt) [NUM = 1]
GENERATED WORDS: 4612
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/robots.txt (CODE:200|SIZE:190)
                                                         I
END TIME: Tue May 19 19:00:39 2020
DOWNLOADED: 4612 - FOUND: 1
root@attackdefense:~#
```

Step 10: Enumerate the password directory and find a text file while ignoring the files which have 403 as status-code.

Command: dirb http://192.156.207.3/passwords /usr/share/wordlists/dirb/common.txt -X .txt -w -N 403

Note: Modify the target URL and append '/passwords' in it. The dirb will start scanning from the passwords directory.

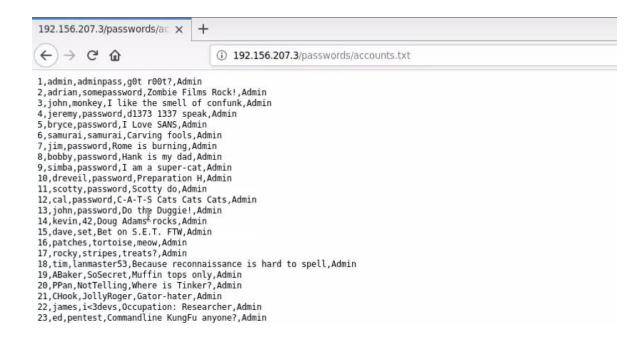
Found a account.txt file inside the passwords directory.

END_TIME: Tue May 19 19:03:51 2020

DOWNLOADED: 4612 - FOUND:

Step 11: Navigate to the URL of accounts.txt in the firefox to check the contents of the file.

URL: http://192.156.207.3/passwords/accounts.txt



These are the login credentials.

Step 12: Find the scripts on the target website while ignoring the files which have 403 status code.

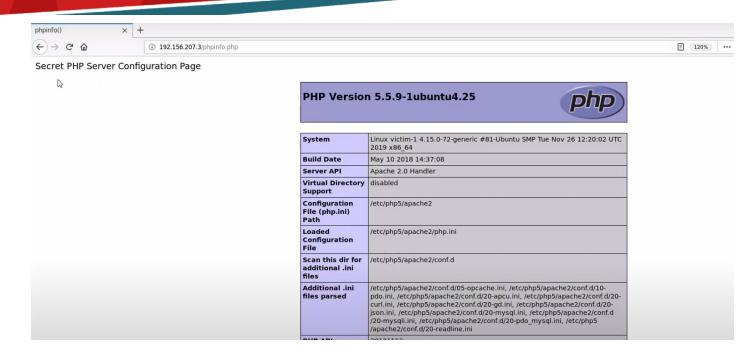
Command: dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .php -w -N 403

Note: Place ".php" with the -X flag to search for PHP scripts at the target.

```
root@attackdefense:~# dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .php -w -N 403
DIRB v2.22
By The Dark Raver
START_TIME: Tue May 19 19:04:25 2020
URL_BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/wordlists/dirb/common.txt
OPTION: Ignoring NOT_FOUND code -> 403
OPTION: Not Stopping on warning messages
EXTENSIONS_LIST: (.php) | (.php) [NUM = 1]
GENERATED WORDS: 4612
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/credits.php (CODE:500|SIZE:30)
+ http://192.156.207.3/home.php (CODE:500|SIZE:46)
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
+ http://192.156.207.3/installation.php (CODE:200|SIZE:7701)
+ http://192.156.207.3/login.php (CODE:500|SIZE:1205)
+ http://192.156.207.3/page-not-found.php (CODE:200|SIZE:241)
+ http://lp2.156.207.3/phpinfo.php (CODE:200|SIZE:82106)
 + http://192.156.207.3/phpmyadmin.php (CODE:200|SIZE:157)
+ http://192.156.207.3/register.php (CODE:500|SIZE:0)
END_TIME: Tue May 19 19:04:27 2020
DOWNLOADED: 4612 - FOUND: 9
root@attackdefense:~#
```

Step 13: Open the PHP info page in firefox.

URL: http://192.156.207.3/phpinfo.php

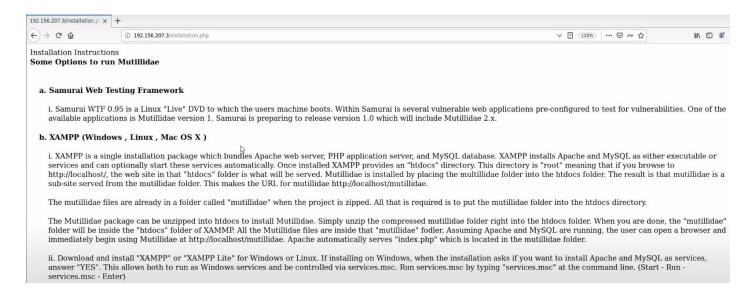


Note: This page displays the information about the server and its configurations.

Step 14: Open the installation page in the firefox.

URL: http://192.156.207.3/installation.php

Open the page in firefox.



This is the installation page of the web application. This page can be used to re-install the application.

Step 15: Navigate to the data directory which was revealed from the initial dirb scan.

```
GENERATED WORDS: 20458
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/LICENSE (CODE:200|SIZE:10273)
==> DIRECTORY: http://192.156.207.3/ajax/
 => DIRECTORY: http://192.156.207.3/classes/
==> DIRECTORY: http://192.156.207.3/config/
==> DIRECTORY: http://192.156.207.3/data/
==> DIRECTORY: http://192.156.207.3/documentation/
==> DIRECTORY: http://192.156.207.3/images/
==> DIRECTORY: http://192.156.207.3/includes/
==> DIRECTORY: http://192.156.207.3/javascript/
==> DIRECTORY: http://192.156.207.3/passwords/
==> DIRECTORY: http://192.156.207.3/phpmyadmin/
+ http://192.156.207.3/robots.txt (CODE:200|SIZE:190)
 => DIRECTORY: http://192.156.207.3/styles/
==> DIRECTORY: http://192.156.207.3/test/
==> DIRECTORY: http://192.156.207.3/webservices/
END TIME: Tue May 19 18:59:50 2020
DOWNLOADED: 20458 - FOUND: 2
root@attackdofonso.
```

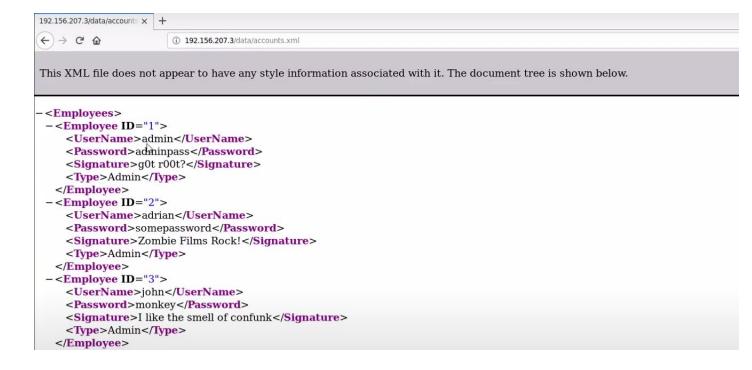
URL: http://192.156.207.3/data/



Found "accounts.xml" file in the data directory.

Step 16: Open the accounts.xml file.

URL: http://192.156.207.3/accounts.xml



The login credentials have been revealed in the accounts.xml file.

Step 17: Perform a recursive scan on the target while suppressing the warnings as well as ignoring the directories with 403 status code.

Command: dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -w -N 403

```
root@attackdefense:~# dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -w -N 403
DIRB v2.22
By The Dark Raver
START_TIME: Tue May 19 19:06:49 2020
URL BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/wordlists/dirb/common.txt
OPTION: Ignoring NOT FOUND code -> 403
OPTION: Not Stopping on warning messages
GENERATED WORDS: 4612
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/.git/HEAD (CODE:200|SIZE:23)
==> DIRECTORY: http://192.156.207.3/ajax/
==> DIRECTORY: http://192.156.207.3/classes/
==> DIRECTORY: http://192.156.207.3/config/
==> DIRECTORY: http://192.156.207.3/data/
==> DIRECTORY: http://192.156.207.3/documentation/
==> DIRECTORY: http://192.156.207.3/images/
==> DIRECTORY: http://192.156.207.3/includes/
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
==> DIRECTORY: http://192.156.207.3/javascript/
+ http://192.156.207.3/LICENSE (CODE:200|SIZE:10273)
==> DIRECTORY: http://192.156.207.3/passwords/
+ http://192.156.207.3/phpinfo.php (CODE:200|SIZE:82105)
==> DIRECTORY: http://192.156.207.3/phpmyadmin/
+ http://192.156.207.3/robots.txt (CODE:200|SIZE:190)
 ==> DIRECTORY: http://192.156.207.3/styles/
```

Step 18: Stop the running scan while it's still running.

Command: q

```
097 097
```

```
---- Entering directory: http://192.156.207.3/phpmyadmin/locale/uk/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/phpmyadmin/locale/zh_CN/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
---- Entering directory: http://192.156.207.3/phpmyadmin/locale/zh_TW/ ----
(!) WARNING: Directory IS LISTABLE. No need to scan it.
    (Use mode '-w' if you want to scan it anyway)
+ Dumping session state and Quitting.

END_TIME: Tue May 19 19:07:54 2020

DOWNLOADED: 259262 - FOUND: 14
root@attackdefense:~#
```

Step 19: Save the output of the scan in a file named as "dirb.output". Run the scan to find all php scripts available on the server.

Command: dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .php -w -N 403 -o dirb.output

Note: the -o flag is used to specify the file where the output will be saved.

```
root@attackdefense:~# dirb http://192.156.207.3 /usr/share/wordlists/dirb/common.txt -X .php -w -N 403 -o dirb.output
DIRB v2.22
By The Dark Raver
OUTPUT_FILE: dirb.output
START_TIME: Tue May 19 19:09:53 2020
URL_BASE: http://192.156.207.3/
WORDLIST_FILES: /usr/share/wordlists/dirb/common.txt
OPTION: Ignoring NOT_FOUND code -> 403
OPTION: Not Stopping on warning messages
EXTENSIONS_LIST: (.php) | (.php) [NUM = 1]
GENERATED WORDS: 4612
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/credits.php (CODE:500|SIZE:30)
+ http://192.156.207.3/home.php (CODE:500|SIZE:46)
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
+ http://192.156.207.3/installation.php (CODE:200|SIZE:7701)
```

Check the content of "dirb.output" file.

```
root@attackdefense:~# cat dirb.output
DIRB v2.22
By The Dark Raver
OUTPUT_FILE: dirb.output
START TIME: Tue May 19 19:09:53 2020
URL BASE: http://192.156.207.3/
WORDLIST FILES: /usr/share/wordlists/dirb/common.txt
OPTION: Ignoring NOT FOUND code -> 403
OPTION: Not Stopping on warning messages
EXTENSIONS LIST: (.php) | (.php) [NUM = 1]
GENERATED WORDS: 4612
---- Scanning URL: http://192.156.207.3/ ----
+ http://192.156.207.3/credits.php (CODE:500|SIZE:30)
+ http://192.156.207.3/home.php (CODE:500|SIZE:46)
+ http://192.156.207.3/index.php (CODE:200|SIZE:52794)
+ http://192.156.207.3/installation.php (CODE:200|SIZE:7701)
+ http://192.156.207.3/login.php (CODE:500|SIZE:1205)
+ http://192.156.207.3/page-not-found.php (CODE:200|SIZE:241)
+ http://192.156.207.3/phpinfo.php (CODE:200|SIZE:82106)
+ http://192.156.207.3/phpmyadmin.php (CODE:200|SIZE:157)
+ http://192.156.207.3/register.php (CODE:500|SIZE:0)
END TIME: Tue May 19 19:09:54 2020
```

References:

- 1. Dirb (https://manpages.debian.org/unstable/dirb/dirb.1.en.html)
- 2. Mutillidae (https://sourceforge.net/projects/mutillidae/)