Tenet

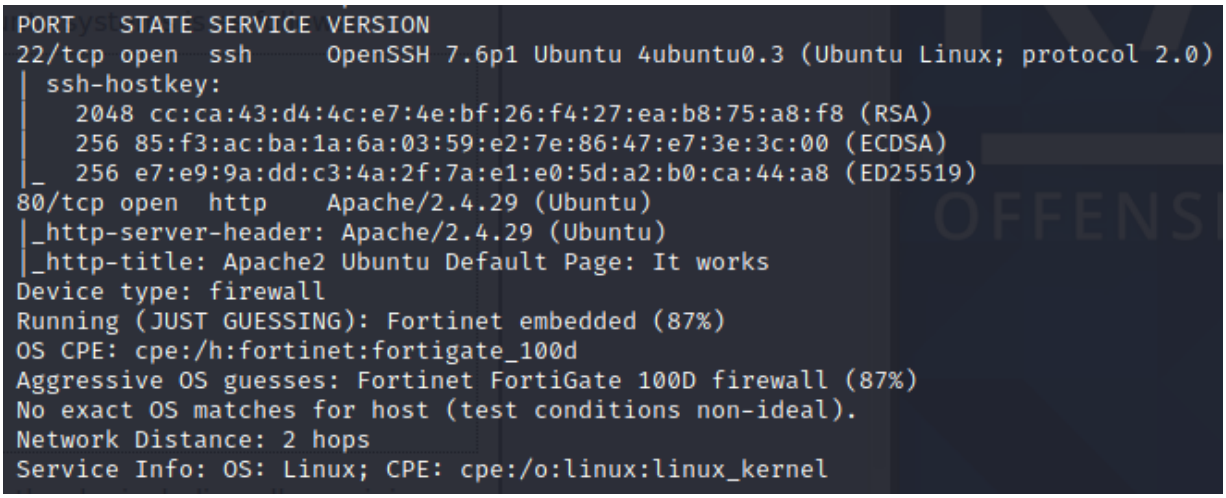
Difficulty: Medium

Machine: Linux

Nmap

Performing a basic nmap scan shows SSH and a web server are running on the target machine. The website is where I will begin enumerating

Nmap Scan



Apache Web Server

The Apache web server is a skeleton website with the standard apache front page. I need to fuzz to find other directories

Below is the fuzz scan. We see there is a wordpress site open. That is the next best place to look.

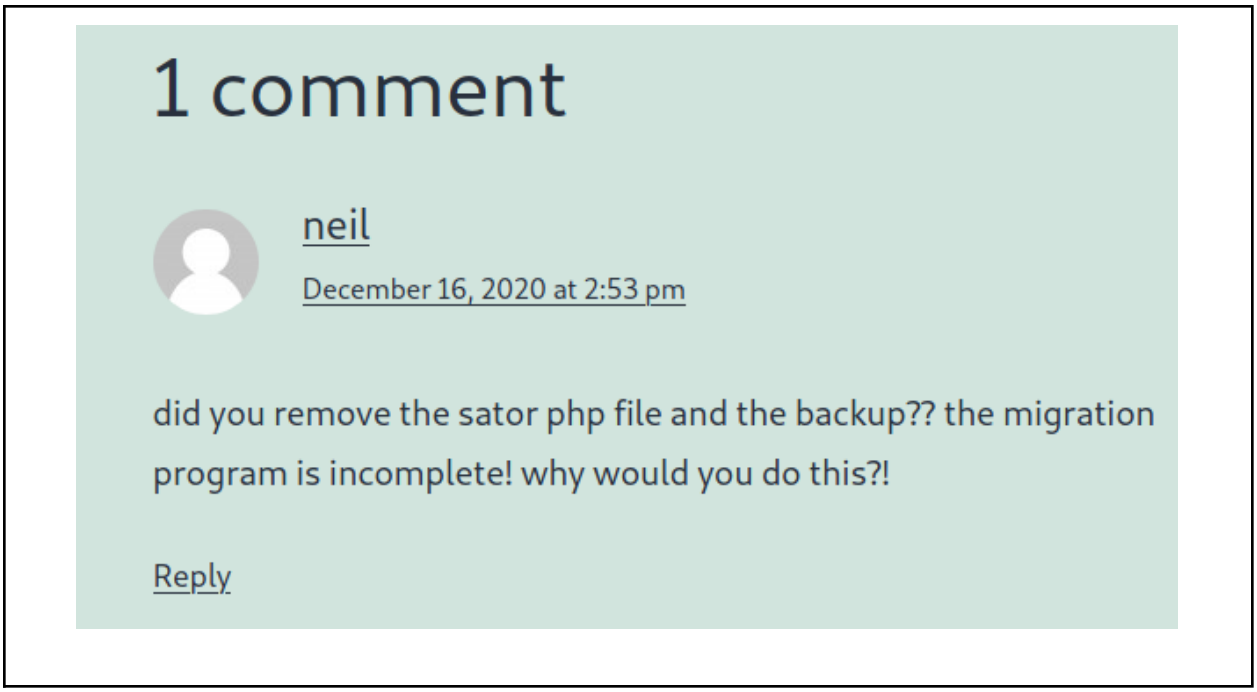
Fuzz scan

```
┌──(root💀kali)-[~/htb/tenet]
└─# ffuf -w /opt/SecLists/Discovery/Web-Content/common.txt -u http://10.10.10.223/FUZZ

.htpasswd               [Status: 403, Size: 277, Words: 20, Lines: 10]
.hta                    [Status: 403, Size: 277, Words: 20, Lines: 10]
.htaccess               [Status: 403, Size: 277, Words: 20, Lines: 10]
index.html              [Status: 200, Size: 10918, Words: 3499, Lines: 376]
server-status           [Status: 403, Size: 277, Words: 20, Lines: 10]
wordpress               [Status: 301, Size: 316, Words: 20, Lines: 10]
:: Progress: [4685/4685] :: Job [1/1] :: 487 req/sec :: Duration: [0:00:12]
```

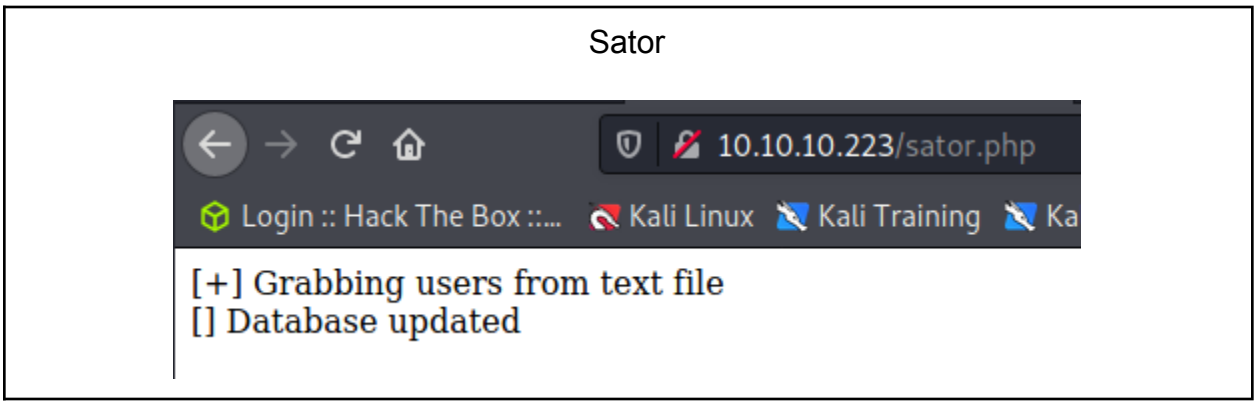
Upon investigation of this wordpress site, we see some basic pages. One page seems to give us a hint.

tenet.htb/index.php/2020/12/17/logs/
This is under the tab called “migration”



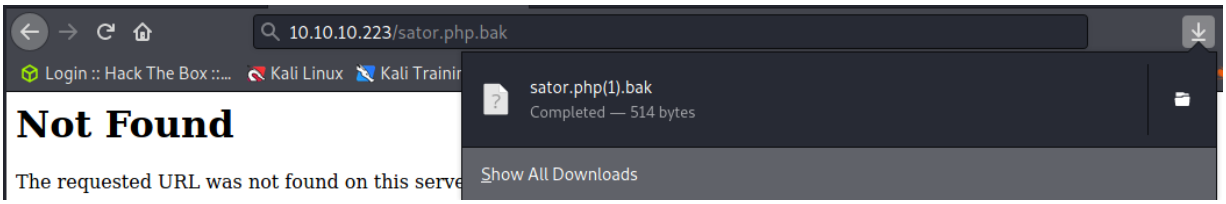
So we are looking for a file called “sator.php” and there is a potential backup of it too. I am going to try this since it is the only lead I have at the moment. All other posts on the site are not so useful.

Going back to the initial apache site, we find sator.php is an extension.



The comment we got sator from also mentioned a backup file. A common backup file extension is “.bak.” Attempting this ends up working and we download the sator.php backup

Sator.php.bak



PHP

After getting hold of sator.php.bak, we have the following php code

Sator.php.back

```
<?php

class DatabaseExport
{
        public $user_file = 'users.txt';
        public $data = '';

        public function update_db()
        {
                echo '[+] Grabbing users from text file <br>';
                $this→ data = 'Success';
        }


        public function __destruct()
        {
                file_put_contents(__DIR__ . '/' . $this →user_file, $this→data);
                echo '[] Database updated <br>';
        //      echo 'Gotta get this working properly ... ';
        }
}

$input = $_GET['arepo'] ?? '';
$databaseupdate = unserialize($input);

$app = new DatabaseExport;
$app → update_db();


?>
```

The above code looks interesting, especially the portion at the bottom with “unserialize.” After performing some research, it is possible to exploit this code, yet I think I am going to have a lot of trial and error with it. I will link some articles concerning this.

https://owasp.org/www-community/vulnerabilities/PHP_Object_Injection
https://medium.com/swlh/exploiting-php-deserialization-56d71f03282a
https://riptutorial.com/php/example/14674/security-issues-with-unserialize

The exploit in the above articles is called “object injection.” Based on what we see in the above code and with the standard sator.php site, we can possibly add our own user to the system to gain access.