

# D4RK PROGR4MS

Technology, Hacks.

Written By Rahul Dixit

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## TRYHACKME- ADVENTOFCYBER4 WRITEUP



*Dear readers,*

*Today's write-up is on AdventOfCyber4, TryHackMe. It was launched on 01 December 2022. AdventOfCyber4 is a 24-day beginner-friendly security challenge every day leading up to Christmas. This Write-up covers Day1, Day2, Day3 and will be updated as days go on. So, let's start hacking.*

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Task 6	✓	[Day 1]	Frameworks	Someone's coming to town!	📅	▼
Task 7	✓	[Day 2]	Log Analysis	Santa's Naughty & Nice Log	📋	▼
Task 8	✓	[Day 3]	OSINT	Nothing escapes detective McRed		▼

Fig. 1 Day1, Day2, Day3 of The Challenge.

## [Day 1] Frameworks

### Files Provided

*No files were provided.*

### Tools Needed

*No Tools Are Required*

*To solve the Day 1 problems, you must go through the paragraphs written about the Security Framework, NIST Security Framework, ISO 27000 Series, MITRE ATT&CK Framework these give you an idea that how securities are implemented in organizations, and Cyber Kill Chain, Unified Kill Chain these frameworks describe the structure of an attack.*

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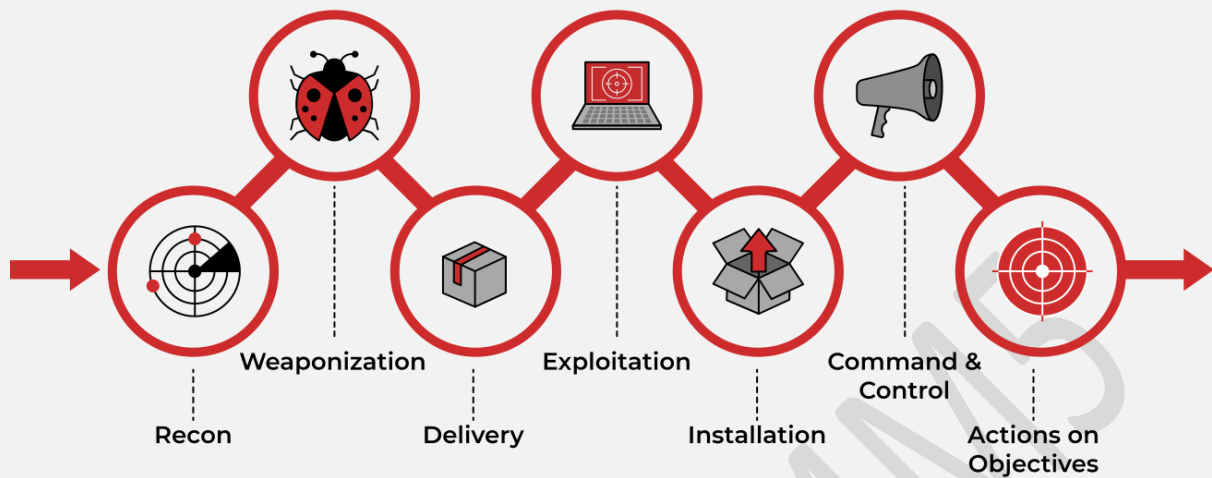


Fig. 2 Cyber Kill Chain

Now to solve the challenge you must visit the website that is on the top right.

Task 6 [Day 1] Frameworks Someone's coming to town!

## The Story

[View Site](#)

John Hammond is kicking off the Advent of Cyber 2022 with a video premiere at 2pm BST! Once the video becomes available, you'll be able to see a sneak peek of the other tasks and a walkthrough of this day's challenge!

Check out John Hammond's video walkthrough for day 1 [here!](#)

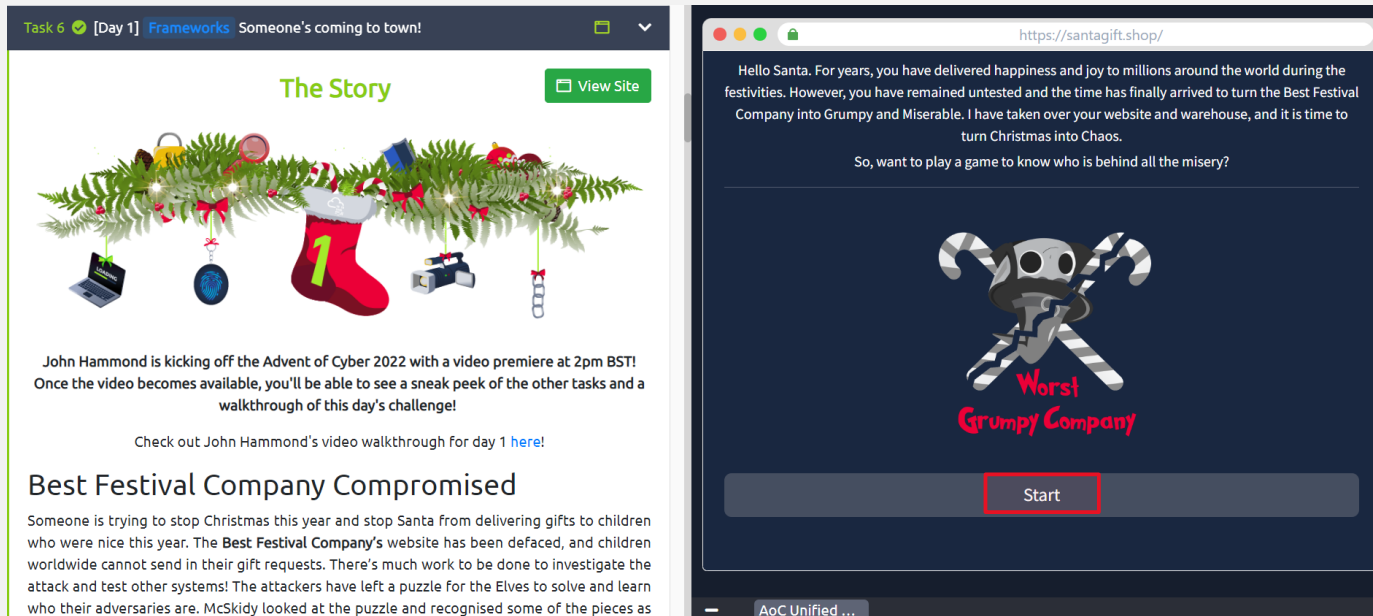
### Best Festival Company Compromised

Someone is trying to stop Christmas this year and stop Santa from delivering gifts to children who were nice this year. The **Best Festival Company's** website has been defaced, and children worldwide cannot send in their gift requests. There's much work to be done to investigate the attack and test other systems! The attackers have left a puzzle for the Elves to solve and learn who their adversaries are. McSkidy looked at the puzzle and recognised some of the pieces as the phases of the **Unified Kill Chain**, a security framework used to understand attackers. She has reached out to you to assist them in recovering their website, identifying their attacker, and helping save Christmas.

Fig3. Visiting The Site

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After you click on the view website your screen will split into two halves and you will see a screen as shown below in the figure:



Now click on start to start the challenge. As you click on start a screen appears which asks you to solve 1/3 puzzles to proceed further.

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Puzzle 1: -

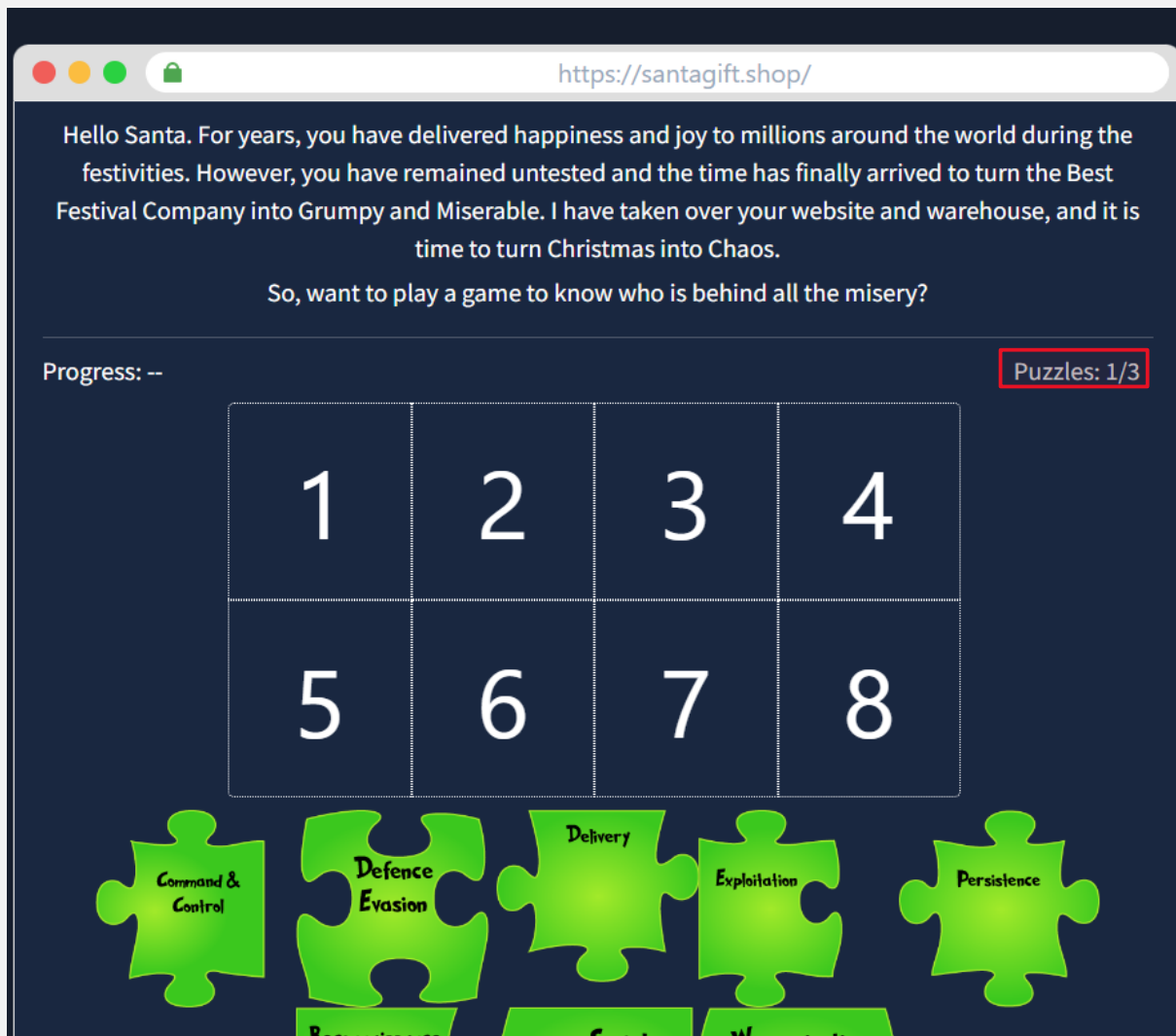


Fig3. Puzzle 1 out of 3

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Solution: -

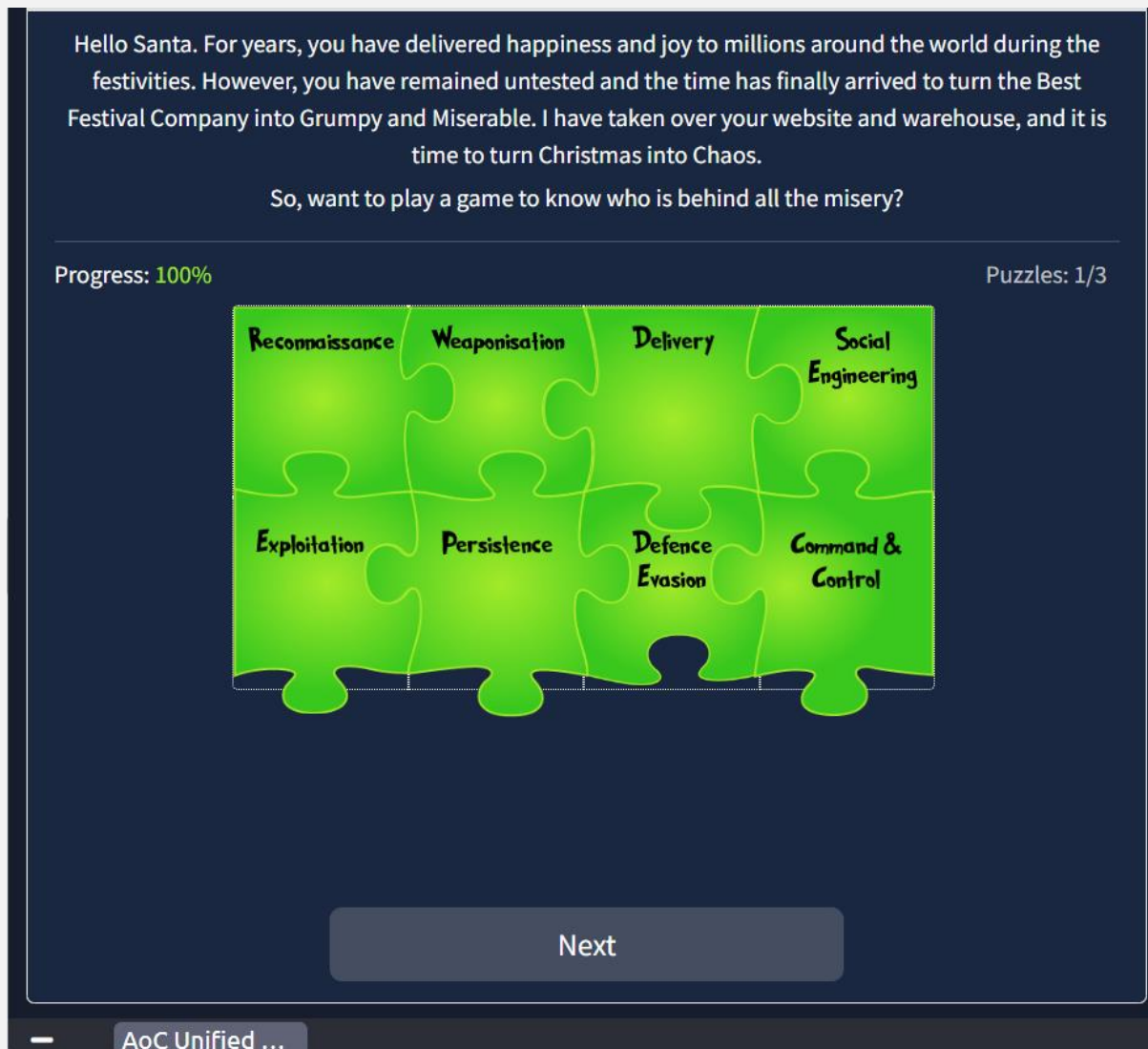


Fig4. Solved Puzzle 1 out of 3

This puzzle highlights the critical steps of gaining access to a system or network.

Unified Kill Chain

Cycle 1: In

- Reconnaissance
- Weaponisation
- Delivery
- Social Engineering
- Exploitation
- Persistence
- Defence Evasion
- Command & Control



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For Puzzle 2/3 click next

Puzzle 2: -



Fig5. Puzzle 2 out of 3

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Solution: -

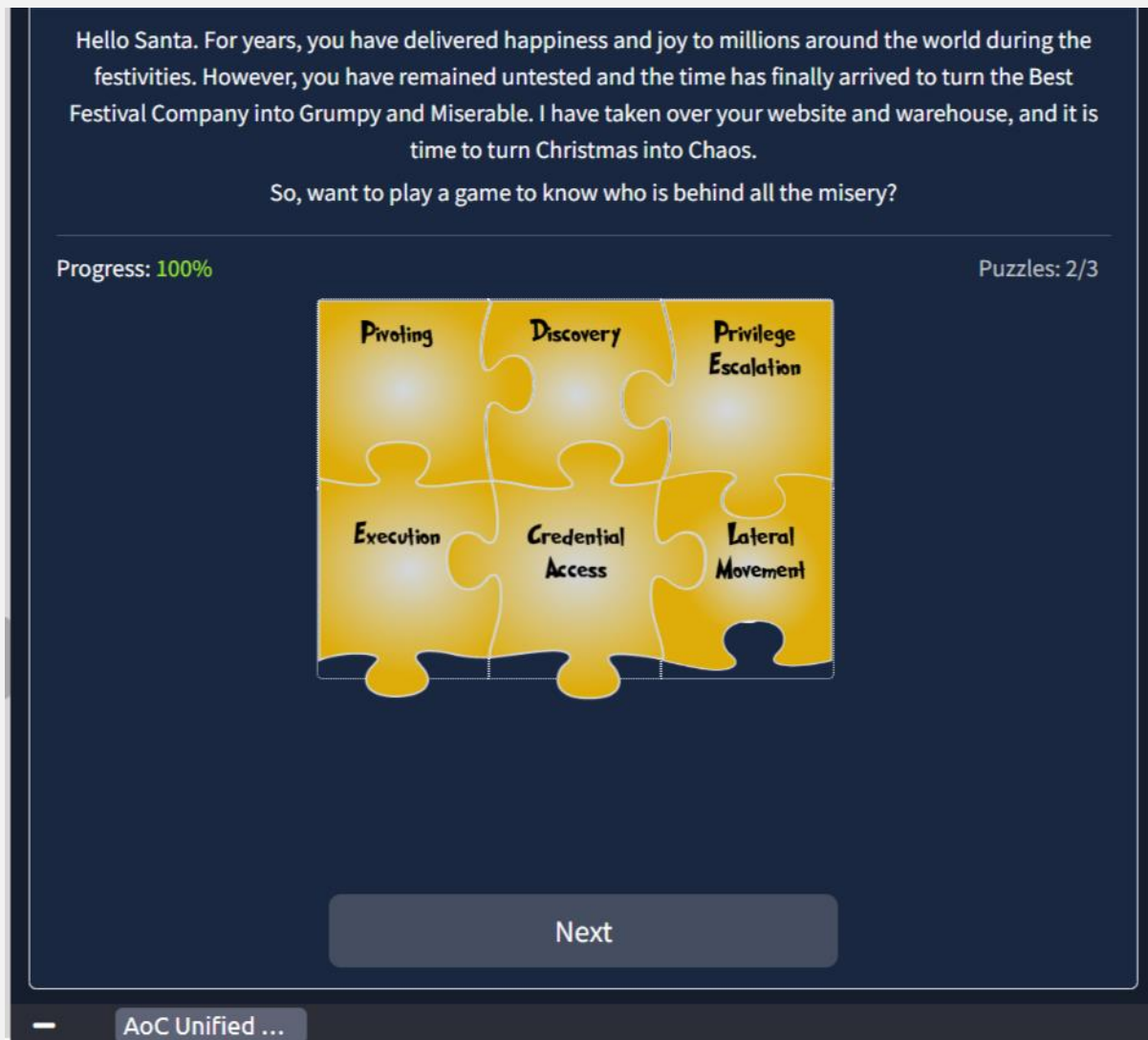


Fig. 6 Solved Puzzle 2 out of 3

This puzzle highlights how an attacker accesses your system/network and tries to bypass restrictions imposed to access data by a particular user.

Unified Kill Chain

Cycle 2: Through

- Pivoting
- Discovery
- Privilege Escalation
- Execution
- Credential Access
- Lateral Movement



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For Puzzle 3/3 click next

Puzzle 3: -

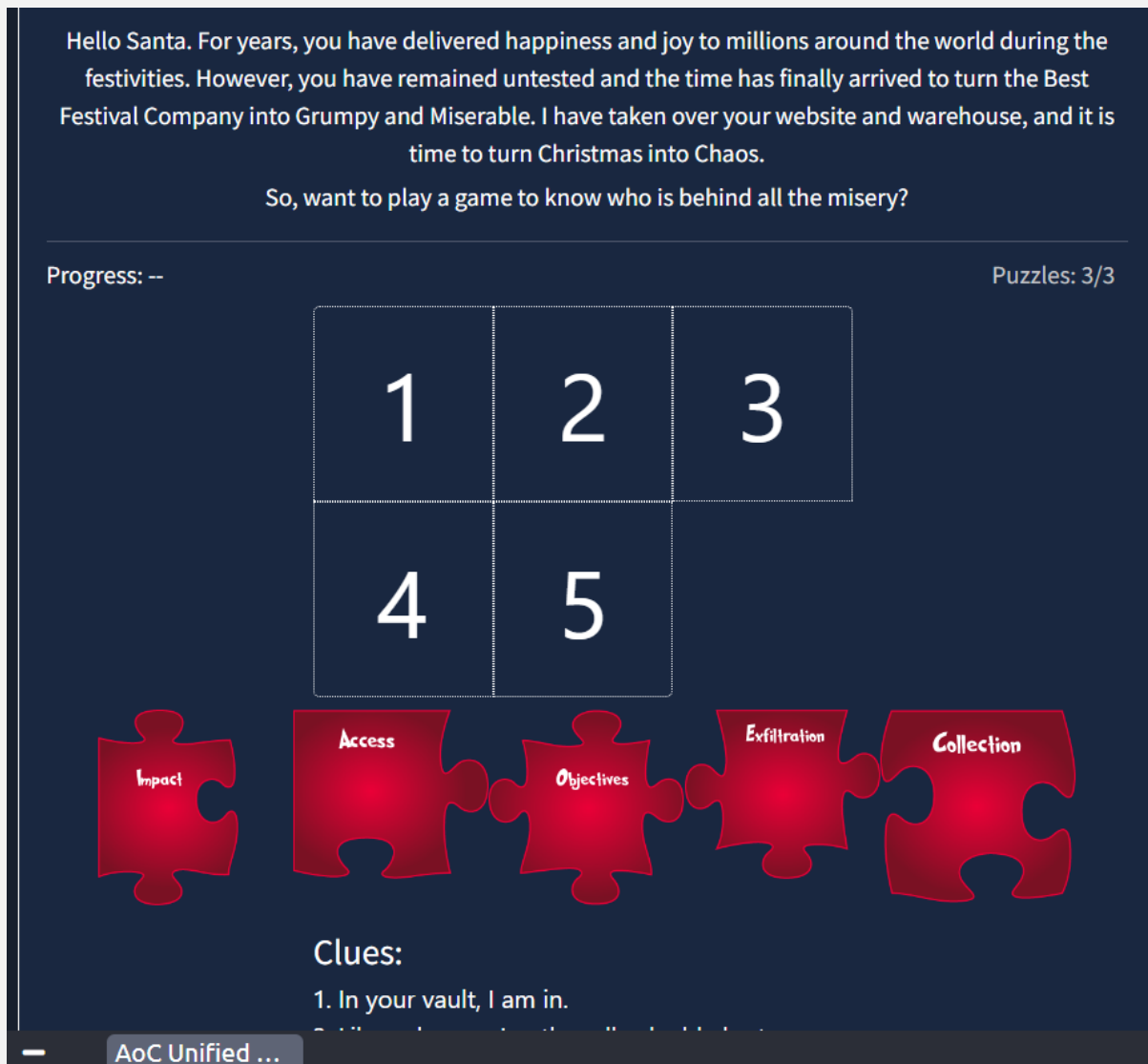


Fig. 7 Puzzle 3 out of 3

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Solution: -

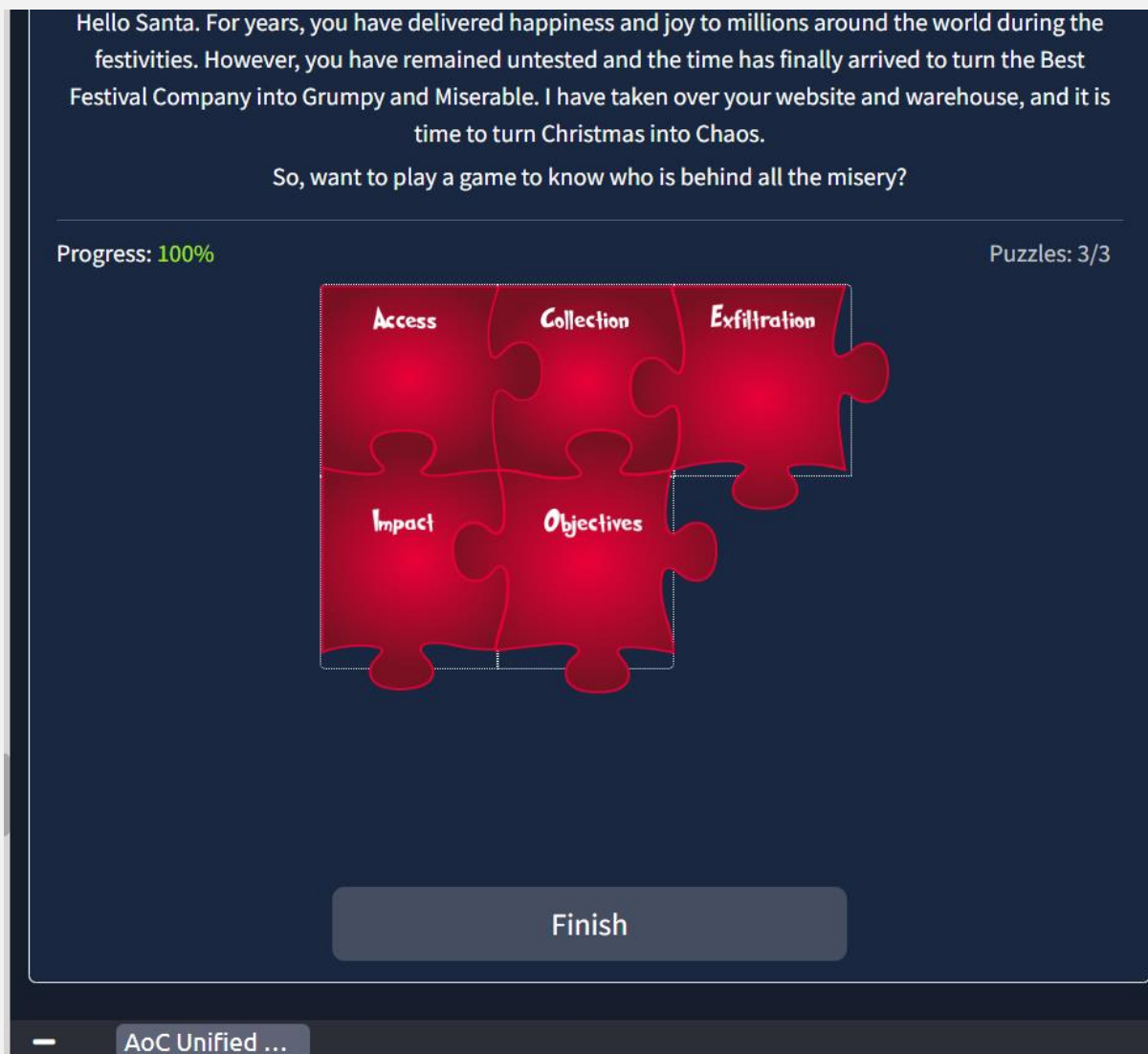


Fig. 8 Solved Puzzle 3 out of 3

This puzzle conveys how attackers executes its attack and gathers the information for which he executed the attack and cause as much as damage possible and leaves without being tracked.

Unified Kill Chain

Cycle 3: Out

- Collection
- Exfiltration
- Impact
- Objectives

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After finishing the puzzles, you will come across a screen which gives you the flag as well as the answer to the questions asked in the tasks

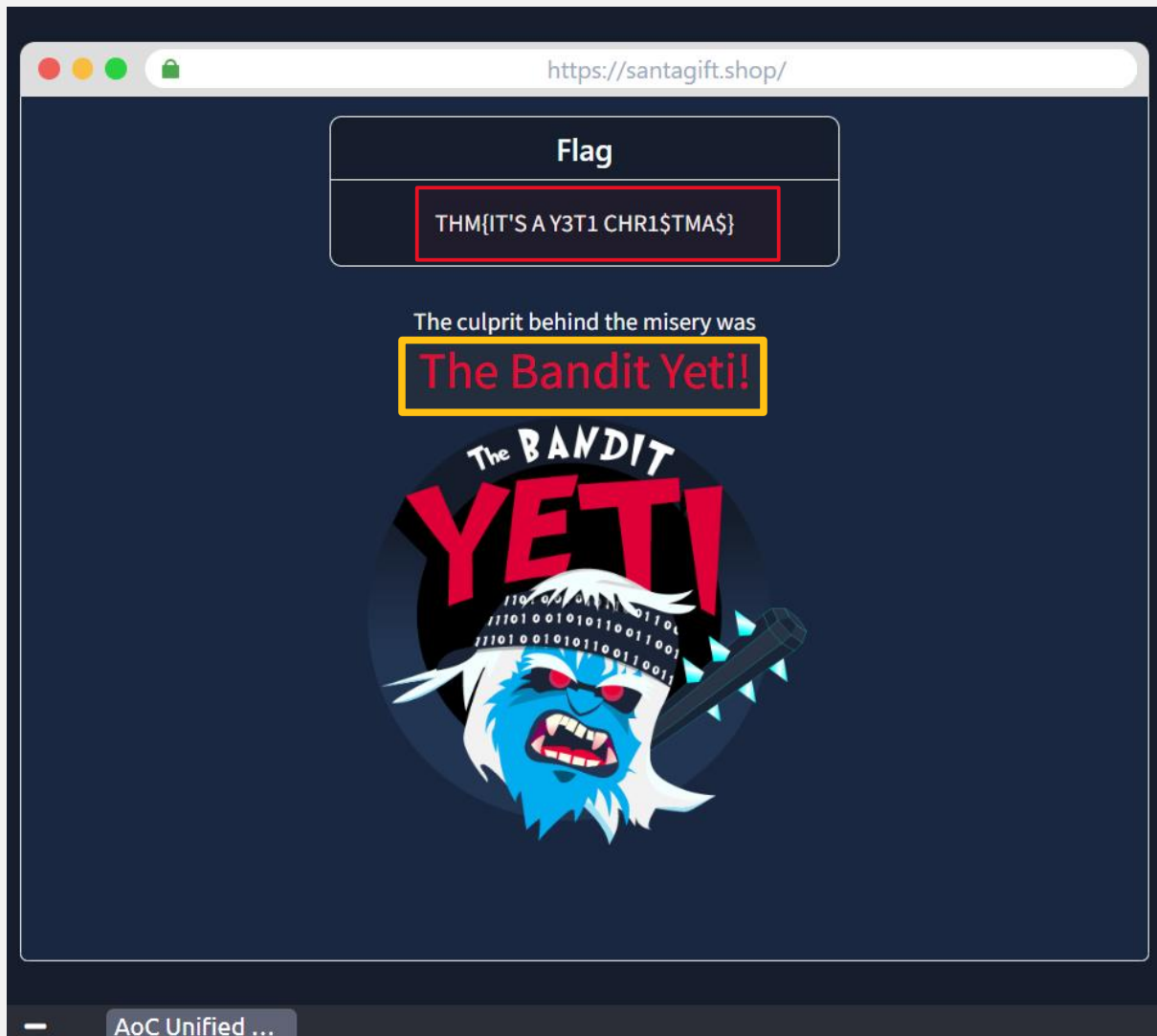


Fig. 9 The Flag

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Now let's solve the questions that are asked: -

Question 1: -

Who is the adversary that attacked Santa's network this year?

Answer: - The Bandit Yeti

[Hint: - The webpage that appears after solving the puzzle states the name of culprit]

Question 2: -

What is the root flag that they left behind?

Answer: - THM{IT'S A Y3T1 CHR1\$TMA\$}

[Hint: - The webpage that appears after solving the puzzle contains the Flag]

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## *[Day 2] Log Analysis*

### *Files Provided*

*No files were provided.*

### *Tools Needed*

*grep*

*grep is a command-line utility for searching plain-text data sets for lines that match a regular expression.*

*To solve Day 2, you must have knowledge about the log files.*

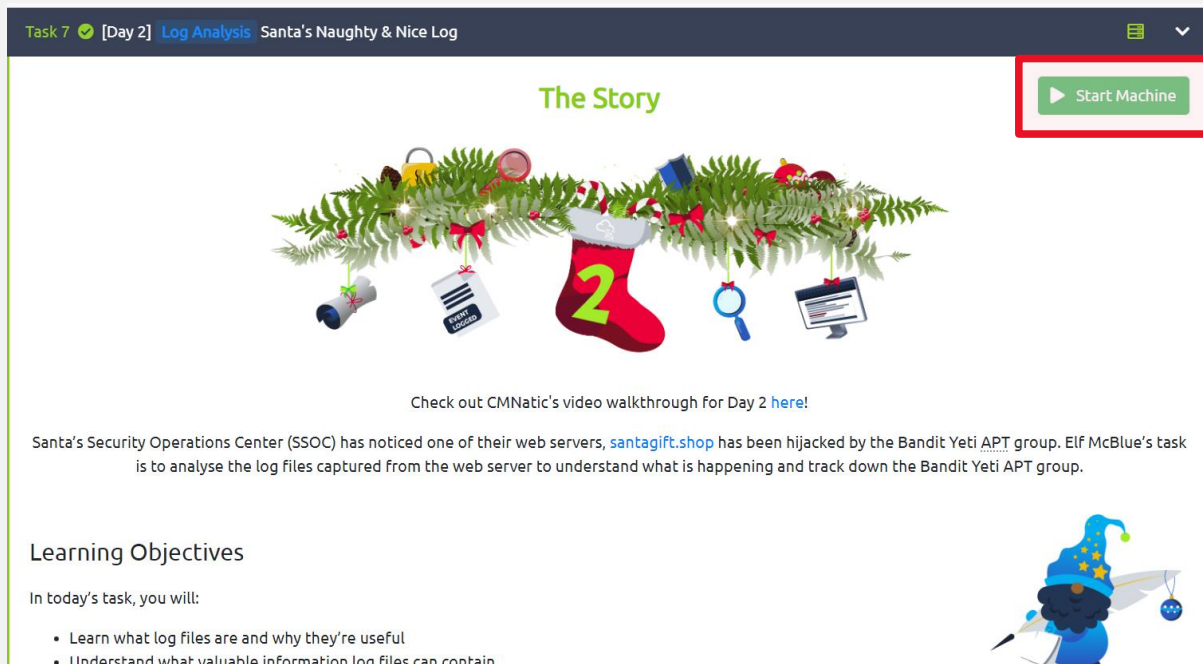
*Log Files: - Log files are files that contain historical records of events and other data from an application.*

*Some common examples of events that you may find in a log file:*

- *Login attempts or failures*
- *Traffic on a network*
- *Things (website URLs, files, etc.) that have been accessed*
- *Password changes*
- *Application errors (used in debugging)*

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*Now let's solve the challenge,*



**Fig. 1 Start the challenge**

*As soon as you start the machine your screen will split in two halves, and you will have a Linux terminal in half of your screen via which you are going to solve this challenge.*

**Let's Hack...**



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```
welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-1029-aws x86_64)

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

System information as of Sun Dec 11 05:39:04 UTC 2022

System load:  0.0               Processes:    112
Usage of /:   5.8% of 29.02GB   Users logged in: 1
Memory usage: 22%              IPv4 address for ens5: 10.10.115.194
Swap usage:   0%

1 update can be installed immediately.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Sun Dec 11 05:26:21 2022 from 10.100.1.242
elfmcblue@day-2-log-analysis:~$ ls
SSHD.log  webserver.log
elfmcblue@day-2-log-analysis:~$
```

**Fig. 2 Analysing the log files**

*In your terminal go and type `ls` [command for listing the files in the current working directory] as you type `ls` in the command line you will see two files that appear on your screen*

1. `SSHD.log`
2. `webserver.log`

*Now let's analyse these log files for the answers and flag:*

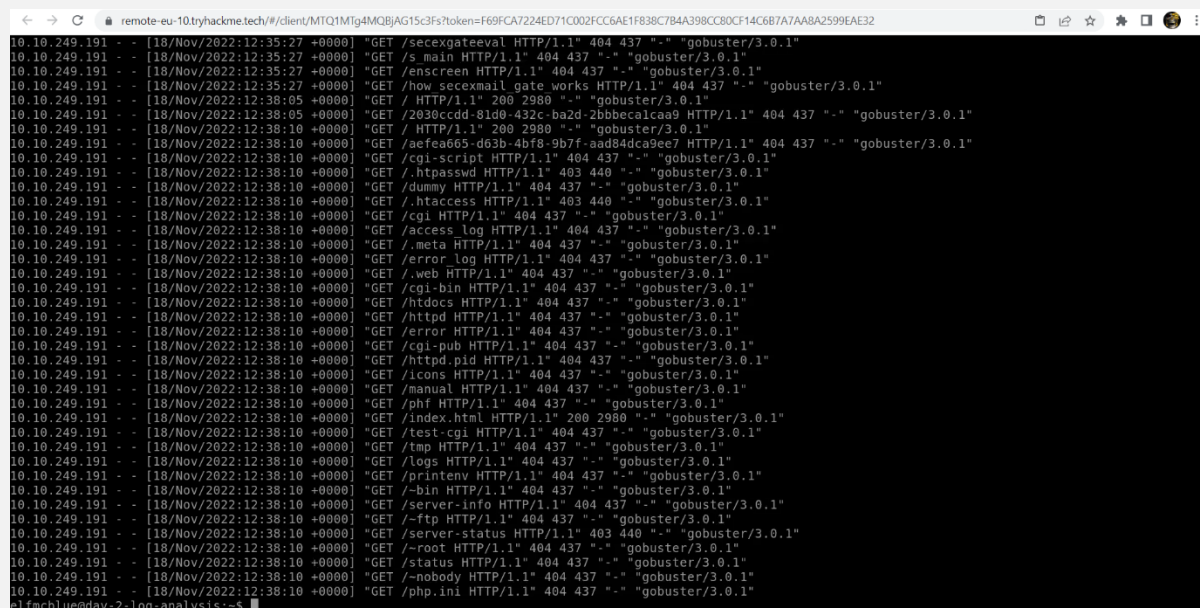
*For reading these log files we can type the following command: -*

`elfmcblue@day-2-log-analysis: ~$ cat webserver.log`

`elfmcblue@day-2-log-analysis: ~$ cat SSHD.log`

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*These commands will show you the data inside the log files, but we will use grep to search pattern inside these log files as they contain a huge amount of data.*



```

10.10.249.19 - - [18/Nov/2022:12:35:27 +0000] "GET /secegateeval HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:35:27 +0000] "GET /s_main HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:35:27 +0000] "GET /enscreen HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:35:27 +0000] "GET /how seceemail gate works HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:05 +0000] "GET / HTTP/1.1" 200 2980 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:05 +0000] "GET /2030ccdd-81d0-432c-ba2d-2bbbecalca9 HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET / HTTP/1.1" 200 2980 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /aefea665-d63b-4bf8-9b7f-aad84dca9ee7 HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /cgi-script HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /.htpasswd HTTP/1.1" 403 440 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /dummy HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /.htaccess HTTP/1.1" 403 440 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /cgi HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /access_log HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /.meta HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /error_log HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /.web HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /cgi-bin HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /htdocs HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /httdc HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /error HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /cgi-pub HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /httdc.pid HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /icons HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /manual HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /phf HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /index.html HTTP/1.1" 200 2980 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /test.cgi HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /tmp HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /logs HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /printenv HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /-bin HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /server-info HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /-ftp HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /server-status HTTP/1.1" 403 440 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /-root HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /status HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /-nobody HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.19 - - [18/Nov/2022:12:38:10 +0000] "GET /php.ini HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
  
```

**Fig. 3 Data inside webserver.log**

*After analysing the webserver.log you will come to know that the attack was initiated on 18/Nov/2022 Friday and attackers IP Address is 10.10.249.19 as the request codes are 404 means that the attacker was unable to access the file from the webserver.*

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```
Dec 10 11:04:30 LabS2 sshd[25521]: pam_unix(sshd:auth): check pass; user unknown
Dec 10 11:04:30 LabS2 sshd[25521]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=103.99.0.122
Dec 10 11:04:32 LabS2 sshd[25523]: Failed password for root from 183.62.140.253 port 34100 ssh2
Dec 10 11:04:32 LabS2 sshd[25523]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:32 LabS2 sshd[25521]: Failed password for invalid user cisco from 103.99.0.122 port 50890 ssh2
Dec 10 11:04:32 LabS2 sshd[25525]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:33 LabS2 sshd[25521]: error: Received disconnect from 103.99.0.122: 14: No more user authentication methods available. [preauth]
Dec 10 11:04:34 LabS2 sshd[25527]: Invalid user test from 103.99.0.122
Dec 10 11:04:34 LabS2 sshd[25527]: input userauth request: invalid user test [preauth]
Dec 10 11:04:34 LabS2 sshd[25527]: pam_unix(sshd:auth): check pass; user unknown
Dec 10 11:04:34 LabS2 sshd[25527]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=103.99.0.122
Dec 10 11:04:35 LabS2 sshd[25525]: Failed password for root from 183.62.140.253 port 34642 ssh2
Dec 10 11:04:35 LabS2 sshd[25525]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:35 LabS2 sshd[25530]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:36 LabS2 sshd[25527]: Failed password for invalid user test from 103.99.0.122 port 51592 ssh2
Dec 10 11:04:37 LabS2 sshd[25527]: error: Received disconnect from 103.99.0.122: 14: No more user authentication methods available. [preauth]
Dec 10 11:04:37 LabS2 sshd[25530]: Failed password for root from 183.62.140.253 port 35101 ssh2
Dec 10 11:04:37 LabS2 sshd[25532]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:37 LabS2 sshd[25532]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:38 LabS2 sshd[25534]: Invalid user guest from 103.99.0.122
Dec 10 11:04:38 LabS2 sshd[25534]: input userauth request: invalid user guest [preauth]
Dec 10 11:04:38 LabS2 sshd[25534]: pam_unix(sshd:auth): check pass; user unknown
Dec 10 11:04:38 LabS2 sshd[25534]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=103.99.0.122
Dec 10 11:04:40 LabS2 sshd[25532]: Failed password for root from 183.62.140.253 port 35545 ssh2
Dec 10 11:04:40 LabS2 sshd[25532]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:40 LabS2 sshd[25534]: Failed password for invalid user guest from 103.99.0.122 port 52172 ssh2
Dec 10 11:04:40 LabS2 sshd[25537]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:41 LabS2 sshd[25534]: error: Received disconnect from 103.99.0.122: 14: No more user authentication methods available. [preauth]
Dec 10 11:04:41 LabS2 sshd[25537]: Failed password for root from 183.62.140.253 port 36027 ssh2
Dec 10 11:04:41 LabS2 sshd[25537]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:41 LabS2 sshd[25541]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:42 LabS2 sshd[25539]: Invalid user user from 103.99.0.122
Dec 10 11:04:42 LabS2 sshd[25539]: input userauth request: invalid user user [preauth]
Dec 10 11:04:42 LabS2 sshd[25539]: pam_unix(sshd:auth): check pass; user unknown
Dec 10 11:04:42 LabS2 sshd[25539]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=103.99.0.122
Dec 10 11:04:43 LabS2 sshd[25541]: Failed password for root from 183.62.140.253 port 36300 ssh2
Dec 10 11:04:43 LabS2 sshd[25541]: Received disconnect from 183.62.140.253: 11: Bye Bye [preauth]
Dec 10 11:04:43 LabS2 sshd[25544]: pam_unix(sshd:auth): authentication failure; logname= uid=0 euid=0 tty=ssh ruser= rhost=183.62.140.253 user=root
Dec 10 11:04:45 LabS2 sshd[25539]: Failed password for invalid user user from 103.99.0.122 port 52683 ssh2
elfmcblue@day-2-log-analysis:~$
```

**Fig. 4 Data inside SSHD.log**

**After analysing SSHD.log you notice one thing this log file deals with the login information or authentication.**

**Now as we analysed both the log files, we are going to answer the questions asked and find the root flag for the completion of the challenge.**

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*Let's Begin...*

**Question 1: -**

*Use the ls command to list the files present in the current directory. How many log files are present?*

**Answer: - 2**

**Question 2: -**

*Elf McSkidy managed to capture the logs generated by the web server. What is the name of this log file?*

**Answer: - webserver.log**

*[Hint: - This log files contains all the history of the events that happened on the webserver.]*

**Question 3: -**

*On what day was Santa's naughty and nice list stolen?*

**Answer: - Friday**

*[Hint: - The webserver.log contains the date on which the attack was initiated on the webserver.]*

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**Question 4: -**

***What is the IP address of the attacker?***

**Answer: - 10.10.249.191**

***[Hint: - webserver.log shows the IP Address of the attacker who tried to access the files on the webserver.]***

**Question 5: -**

***What is the name of the important list that the attacker stole from Santa?***

**Answer: - For this we must investigate the webserver.log file that which file has got 200 request OK in response to the attacker's request. For this we will use grep.**

**Command: -**

***elfmcblue@day-2-log-analysis: ~\$ grep -i "Santa" webserver.log***

***This command will look after all the words containing pattern Santa and return the output on the console. As mentioned in the question that it was a list so it must be in the format of txt and we got a file named "santalist.txt"***

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```

remote-eu-10.tryhackme.tech/#/client/MTQ1MjA0NzY3fz?token=CB8D973E19108E81B005F344CB0098724A0B1F366B09631F8FCDE6808239914A
elfmcbblue@day-2-log-analysis:~$ grep -i "Santa" webserver.log
10.10.249.191 - - [18/Nov/2022:12:28:16 +0000] "GET /santa HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:28:17 +0000] "GET /santa.claus HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:28:17 +0000] "GET /evilsanta HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:28:18 +0000] "GET /santana HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:28:18 +0000] "GET /santaslist.txt HTTP/1.1" 200 133872 "-" "Wget/1.19.4 (linux-gnu)"
10.10.249.191 - - [18/Nov/2022:12:34:39 +0000] "GET /santa HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /Santa-Fe-Springs HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /santafe HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /jasonsantamar-20 HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /santa maria maggiore HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /Santa Maria degli Angeli church HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /SANTA MARIA DELLE GRAZIE HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:18 +0000] "GET /santa-clara-county HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:19 +0000] "GET /California SantaBarbara HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:19 +0000] "GET /California SantaCruz HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:19 +0000] "GET /California SantaRosa HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:19 +0000] "GET /NewMexico SantaFe HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:20 +0000] "GET /texas-santa-barbara HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:21 +0000] "GET /topicsantafe HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:22 +0000] "GET /jasonsantamaria HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:23 +0000] "GET /SANTA MARIA DELLE GRAZIE WITH LEONARDO DA VINCI S LAST SUPPER HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:23 +0000] "GET /SANTA MARIA DEGLI ANGIOLI CHURCH HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
10.10.249.191 - - [18/Nov/2022:12:35:27 +0000] "GET /carlossantana_75 HTTP/1.1" 404 437 "-" "gobuster/3.0.1"
elfmcbblue@day-2-log-analysis:~$

```

**Fig. 5 Data after filtration of webserver.log**



# D4RK PR0GR4MS

**Question 6: -**

**Look through the log files for the flag. The format of the flag is: THM{}**

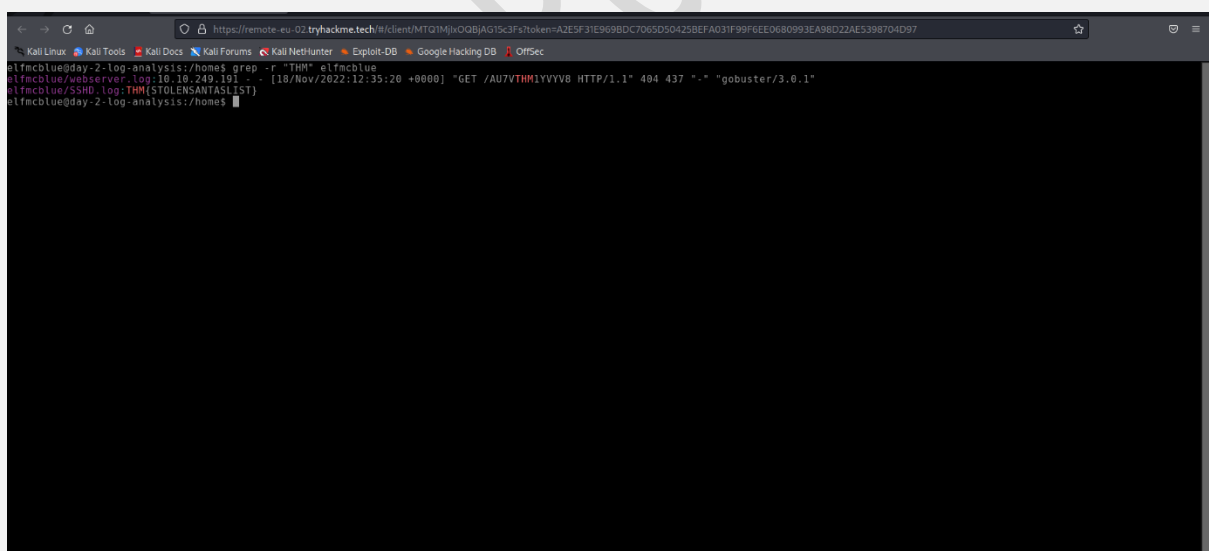
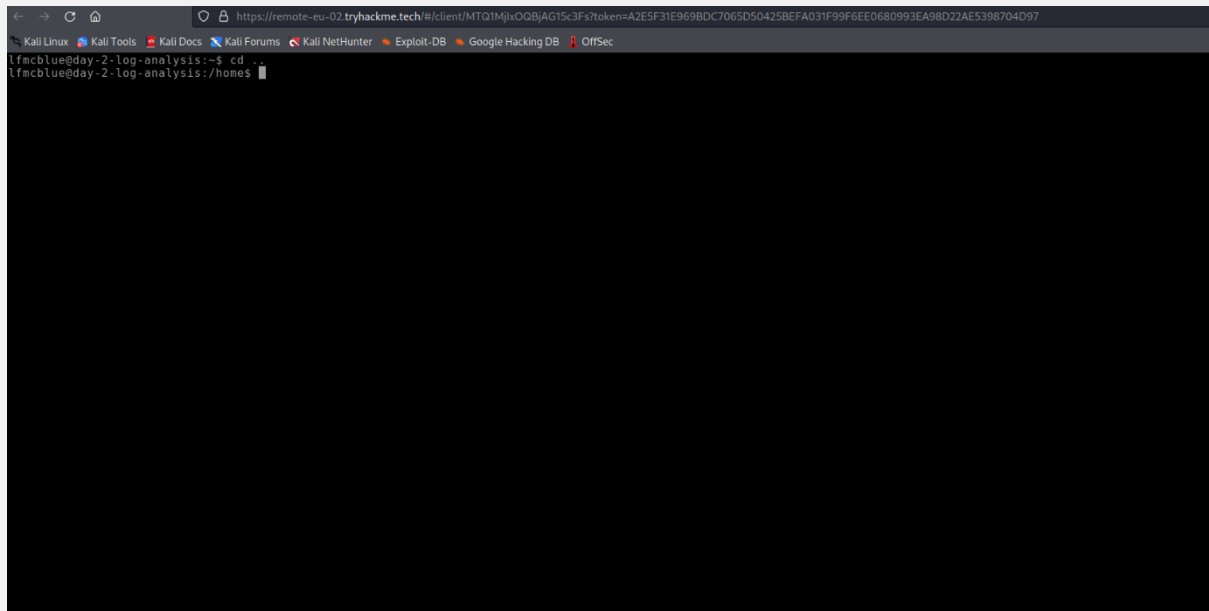
**Answer: - As the question states the format of the log file for finding the flag, we will use recursive searching method of grep. But for that you must come back one directory because the current directory in which we are working is /home/elfmcblue and the recursive search works on a file of a directory hence we have to type the following commands to achieve our goal**

**Commands: -**

**elfmcblue@day-2-log-analysis: ~\$ cd ..**

**elfmcblue@day-2-log-analysis: ~\$ grep -r "THM" elfmcblue**

# D4RK PR0GR4MS



**Root Flag: - THM{STOLENSANTALIST}**