

# Challenge Name: Ciphered Nations – (350) (Steganography)

Challenge 6 Solves X

## Ciphered Nations

350

A mysterious image has arrived on your desk, whispered to contain secrets buried deep within its layers. Some say it's not just a picture, but a riddle woven in plain sight. The answers are hidden in symbols—the marks of nations, perhaps? Only the sharpest eyes and keenest minds will discern the truth buried within.

The first step is simple, but the path forward demands careful thought. Will you uncover the secrets that others have failed to see?

► View Hint

[hidden.jpg](#)

1/5 attempts

Flag Submit

We start by checking the **file** format:

```
(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$ file hidden.jpg
hidden.jpg: JPEG image data, JFIF standard 1.01, aspect ratio, density 1x1, segment length 16, comment: "fe108bc8c15307b12e5f6225f619089678b7854c", baseline, precision 8, 3840x2160, components 3
```

There's a **comment tag**—a potential hint—but no immediately readable clue.

We then ran binwalk to look for hidden files:

```
(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$ binwalk hidden.jpg
DECIMAL      HEXADECIMAL      DESCRIPTION
0            0x0          JPEG image data, JFIF standard 1.01
1367469     0x1ADDAD      Zip archive data, encrypted at least v2.0 to extract, compressed size: 176, uncompressed size: 1611, name: secret.txt
1367809     0x14DF01      End of Zip archive, footer length: 22
```

So, there's a **ZIP file hidden inside**.

We extract the contents using:

```
(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$ binwalk -e hidden.jpg
DECIMAL      HEXADECIMAL      DESCRIPTION
1367469     0x1ADDAD      Zip archive data, encrypted at least v2.0 to extract, compressed size: 176, uncompressed size: 1611, name: secret.txt
WARNING: One or more files failed to extract: either no utility was found or it's unimplemented

(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$ cd _hidden.jpg.extracted
```

Creates a folder: `_hidden.jpg.extracted/` containing `14DDAD.zip`.

We attempt to unzip it, but it asks for the password.

Let's run **StegCracker** using a popular wordlist:

```
(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$ stegcracker hidden.jpg /usr/share/wordlists/rockyou.txt
StegCracker 2.1.0 - (https://github.com/Paradoxis/StegCracker)
Copyright (c) 2025 - Luke Paris (Paradoxis)

StegCracker has been retired following the release of StegSeek, which
will blast through the rockyou.txt wordlist within 1.9 second as opposed
to StegCracker which takes ~5 hours.

StegSeek can be found at: https://github.com/RickdeJager/stegseek

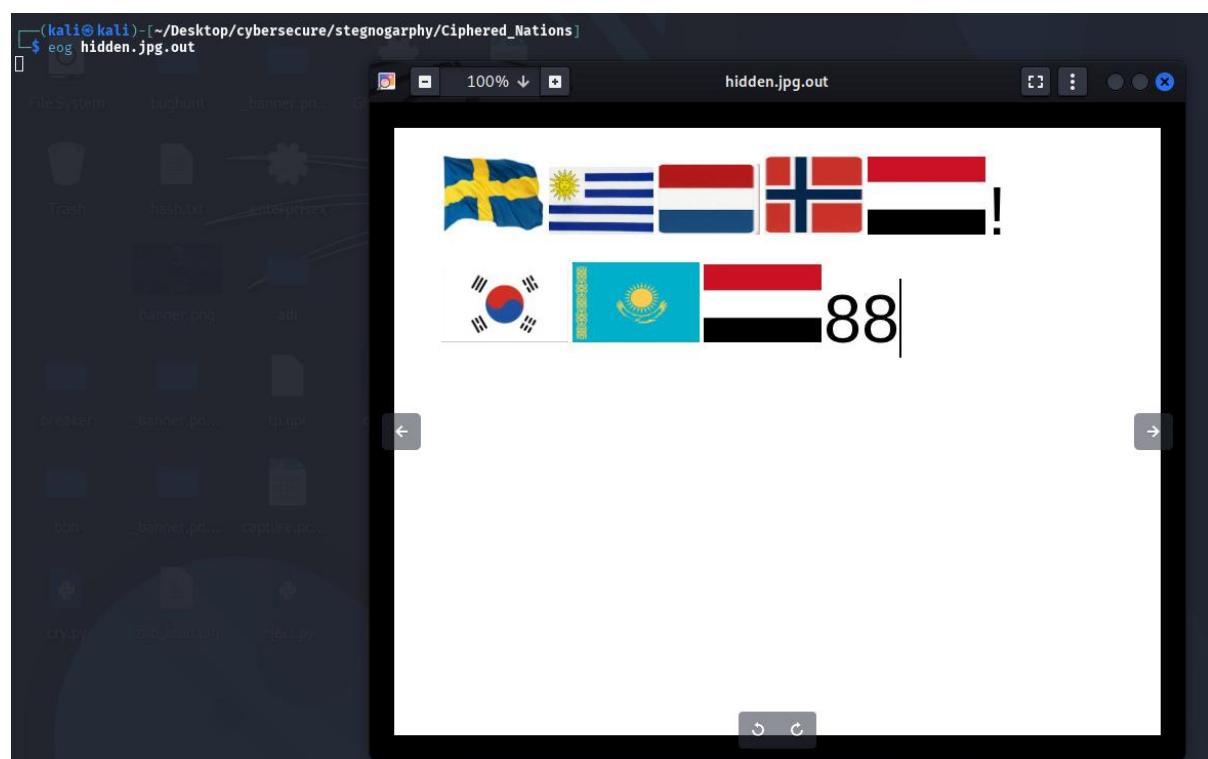
Counting lines in wordlist..
Attacking file 'hidden.jpg' with wordlist '/usr/share/wordlists/rockyou.txt' ..
Successfully cracked file with password: 1234567
Tried 967 passwords
Your file has been written to: hidden.jpg.out
1234567

(kali㉿kali)-[~/Desktop/cybersecure/stegnogarphy/Ciphered_Nations]
$
```

This extracts another image:

**hidden.jpg.out** — which visually hides a clue.

Using **eog** tool to view the image and we go this:



Identify the **first letters** of each country:

Flag	Country	Letter
SE	Sweden	S
UY	Uruguay	U
NL	Netherlands	N
NO	Norway	N
YE	Yemen	Y
!	Symbol	!
KR	South Korea	S
KZ	Kazakhstan	K
YE	Yemen	Y
88	Number	88

Password:

sunny!sky88

Now, we can unzip the zip file.

Success! Extracts: secret.txt

It contains binary values, now using cyberchef and using some decoder we got the flag.

Last build: 25 days ago - Version 10 is here! Read about the new features [here](#)

Options About / Support

Recipe	Input
<b>ROT47</b>  Amount 47	mUp{ElF`dto%vz/pej\$-lmtn)klWqsgmS2rdmQ` xmS2~vp`.<\$
<b>From Base85</b>  Alphabet ! - u  All-zero group char Z	<input checked="" type="checkbox"/> Remove non-alphabet chars
<b>From Base64</b>  Alphabet A-Za-z0-9+=  <input checked="" type="checkbox"/> Remove non-alphabet chars	<input checked="" type="checkbox"/> Remove non-alphabet chars
<input type="checkbox"/> Strict mode	Raw Bytes  LF  <b>Output</b> flag{Im_Just_a_Layered_Mess}

**FLAG: flag{1m\_Just\_a\_Layered\_Mess}**

~By Team justahacker