

# BiaSciLab 2019 Cyber Olympics Steganography Challenge

This year Warlok of Games Inc. asked me if I could do a CTF challenge for the 2019 Cyber Olympics, and of course I said yes! A few days of thinking about what I could do as a fun, and hard challenge, it hit me; I should make a steganography challenge! I decided to twist things up and make the challenge like an onion - with MANY layers! Each layer is different so it tests many skills, don't believe me? Here is a walkthrough!

My Avatar!



In the top left corner I put a series of dots. These relate to the alphabet... A=1 B=2 etc.



Translating this give you the first password: **rainbowcats**

I used steghide to embed my flag. So when you run  
**steghide extract -sf BiaSciLab\_Avatar.jpg**

and enter the password: **rainbowcats**

It extracts flag.wav

flag.wav is an audio file of morse code. When you run that through a morse code translator you get:

**YOU THOUGHT IT WOULD BE THIS EASY TRY HARDER**

The flag.wav file also has a file embeded in it...

When you run

```
steghide extract -sf flag.wav
```

and enter the password: try harder

It extracts the file: token.txt

cating this file gives the result:

th3 t0k3n y0u s33k is: B!a\$ciLa6\_pwns