

The title told us this is a challenge with a **zlib** file. I connected with **netcat** to the server and I got :

```
z4que@Zemf-PC /m/c/U/Z/Desktop [SIGINT]> nc 34.89.251.121 31905
Incoming work proof!!!
eJwrzy_Kji8oys9PszW3NEpOSUtLTTXMSEnLMMlMy8hIs8ioSiw0S05LTEuzBABi7Q_a
Insert work proof:
```

After I uploaded the text on **CyherChef**, I found out that we are talking about a Base64 code, compressed with **zlib** :

The screenshot shows the CyberChef web interface. On the left, the 'From Base64' section is active, with 'Alphabet' set to 'A-Za-z0-9-_' and 'Remove non-alphabet chars' checked. Below it, the 'Zlib Inflate' section is active, with 'Start index' set to 0, 'Initial output buffer size' set to 0, and 'Buffer expansion type' set to 'Adaptive'. On the right, the input text 'eJwrzy_Kji8oys9PszW3NEpOSUtLTTXMSEnLMMlMy8hIs8ioSiw0S05LTEuzBABi7Q_a' is entered. The 'Output' section at the bottom shows the decoded result: 'work_proofy2cdf fee1hdfh4ifh hf8hzaq6cfa ff9'.

We got :

work_proofy2cdf fee1hdfh4ifh hf8hzaq6cfa ff9

But the time is very short when the server is getting closed. We have almost no time to go on CyberChef and use the decoded text, so I wrote a program in Python :

```
from pwn import *
import base64, zlib

def connect_server(ip, port) :
    remote_access = remote(ip, port)

    for i in range(1000) :
        print(remote_access.recvline())
        data = remote_access.recvline().decode("utf-8").strip()

        print("DATA : ", data)
        print("Remote Access : ", remote_access.recvline())
```

```

        decode_the_message =
zlib.decompress(base64.urlsafe_b64decode(data)).decode("utf-8")
        print("Sent : ", decode_the_message)

        remote_access.sendline(decode_the_message)

        remote_access.close()

def main() :
    connect_server("34.89.251.121", 31905)

if __name__ == "__main__" :
    main()

```

When the program is finished, we get an EOF error and also the flag

THE FLAG :

CTF{a7550246d72f8c7946a9248b3b9eee93461ac30f53ac8ca9749c9590b4ed1a2b}
~Z4que