

CTF WRITE-UP PORTFOLIO

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Focus Area: Digital Forensics & Steganography

Style: CTFtime (English)

This portfolio contains detailed Capture The Flag (CTF) write-ups focusing on forensic analysis, metadata inspection, encoding detection, and steganographic extraction.

Challenge 1: Riddle Registry

Category: PDF Forensics

Description: A PDF document contains a hidden flag within its metadata.

Solution:

The PDF metadata was inspected using `pdftinfo`. A Base64 encoded string was found in the Author field. Decoding the string revealed the flag.

Flag: `picoCTF{puzzl3d_m3tadata_f0und!_42440c7d}`

Challenge 2: Hidden in Plain Sight

Category: Steganography

Description: A JPG image hides a secret payload protected by layered encoding.

Solution:

Image metadata was inspected using exiftool. A Base64 encoded comment revealed a steghide hint and password. The hidden file was extracted using steghide, revealing the flag.

Flag: picoCTF{h1dd3n_1n_1m4g3_656e4d79}

Challenge 3: Flag in Flame

Category: Forensics

Description: A suspicious log file contains encoded data hiding the true payload.

Solution:

The log file was identified as Base64 encoded data. Decoding the file produced a PNG image. Within the image, a hexadecimal string was found and decoded to reveal the flag.

Flag: picoCTF{forensics_analysis_is_amazing_782e55c9}

Conclusion:

These challenges highlight common forensic techniques used in CTF competitions, including metadata analysis, encoding recognition, and steganography.