

Pico ctf challenges

Matroyshka doll

An image with name dolls.jpg was to be downloaded. Binwalk -e dolls.jpg was done and new folder was created which had another image. Again binwalk was used, it also produced another folder with a folder named base_images and with a zip file. The folder was opened and found another image. This command was used multiple times and finally got a file with name flag.txt from which the flag was obtained.

```
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf$ cd "Matroyshka doll"
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll$ ls
dolls.jpg
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll$ binwalk -e dolls.jpg
```

DECIMAL	HEXADECIMAL	DESCRIPTION
0	0x0	PNG image, 594 x 1104, 8-bit/color RGBA, non-interlaced
3226	0xC9A	TIFF image data, big-endian, offset of first image directory: 8
272492	0x4286C	Zip archive data, at least v2.0 to extract, compressed size: 378954, uncompressed size: 383940, name: base_images/2_c.jpg
651612	0x9F15C	End of Zip archive, footer length: 22

```
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll$ ls
dolls.jpg
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll$ cd dolls.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted$ ls
4286C.zip base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted$ cd base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images$ ls
2_c.jpg
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images$ binwalk -e 2_c.jpg
```

DECIMAL	HEXADECIMAL	DESCRIPTION
0	0x0	PNG image, 526 x 1106, 8-bit/color RGBA, non-interlaced
3226	0xC9A	TIFF image data, big-endian, offset of first image directory: 8
187707	0x2DD3B	Zip archive data, at least v2.0 to extract, compressed size: 196045, uncompressed size: 201447, name: base_images/3_c.jpg
383807	0x5DB3F	End of Zip archive, footer length: 22
383918	0x5DBAE	End of Zip archive, footer length: 22

```
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images$ ls
2_c.jpg 3_c.jpg
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images$ cd 2_c.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted$ ls
2DD3B.zip base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted$ cd base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images$ ls
3_c.jpg
```

```

hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images$ binwalk -e 3_c.jpg
DECIMAL      HEXADECIMAL  DESCRIPTION
-----
0             0x0          PNG image, 428 x 1104, 8-bit/color RGBA, non-interlaced
3226         0xC9A        TIFF image data, big-endian, offset of first image directory: 8
123606       0x1E2D6      Zip archive data, at least v2.0 to extract, compressed size: 77653, uncompressed size: 79808, name: base_images/4_c.jpg
201425       0x312D1      End of Zip archive, footer length: 22

hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images$ ls
3_c.jpg  4_c.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images$ cd 3_c.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted$ ls
1E2D6.zip  base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted$ cd base_images
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ ls
4_c.jpg
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ binwalk -e 4_c.jpg
DECIMAL      HEXADECIMAL  DESCRIPTION
-----
0             0x0          PNG image, 320 x 768, 8-bit/color RGBA, non-interlaced
3226         0xC9A        TIFF image data, big-endian, offset of first image directory: 8
79578        0x136DA      Zip archive data, at least v2.0 to extract, compressed size: 64, uncompressed size: 81, name: flag.txt
79786        0x137AA      End of Zip archive, footer length: 22

hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ ls
4_c.jpg  flag.txt
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ cd 4_c.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images/_4_c.jpg.extracted$ ls

```

```

ted/base_images$ binwalk -e 4_c.jpg
DECIMAL      HEXADECIMAL  DESCRIPTION
-----
0             0x0          PNG image, 320 x 768, 8-bit/color RGBA, non-interlaced
3226         0xC9A        TIFF image data, big-endian, offset of first image directory: 8
79578        0x136DA      Zip archive data, at least v2.0 to extract, compressed size: 64, uncompressed size: 81, name: flag.txt
79786        0x137AA      End of Zip archive, footer length: 22

hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ ls
4_c.jpg  flag.txt
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images$ cd 4_c.jpg.extracted
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images/_4_c.jpg.extracted$ ls
136DA.zip  flag.txt
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images/_4_c.jpg.extracted$ cat flag.txt
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images/_4_c.jpg.extracted$ cat flag.txt
picoCTF{e3f378fe6c1ea7f6bc5ac2c3d6801c1f}
hari@LAPTOP-3T5BPK6I:/mnt/c/Users/harip/Desktop/ctf/Matroyshka doll/_dolls.jpg.extracted/base_images/_2_c.jpg.extracted/base_images/_3_c.jpg.extracted/base_images/_4_c.jpg.extracted$

```