## ezuri unpack

github.com/f0wl/ezuri\_unpack

f0wl

go report A+

A simple unpacking script for the Ezuri ELF Crypter. Based on the analysis done by Ofer Caspi and Fernando Martinez of AT&T Alien Labs: <a href="https://cybersecurity.att.com/blogs/labs-research/malware-using-new-ezuri-memory-loader">https://cybersecurity.att.com/blogs/labs-research/malware-using-new-ezuri-memory-loader</a>

## How does it work?

The payload is encrypted with AES CFB and will be decrypted and run via memfd\_create by the stub. Key and IV are stored in the binary.

```
0021:7530 2F 69 6F 75 74 69 6C 2E 69 6E 69 74 00 6D 61 69 /ioutil.init.mai
0021:7540 6E 2E 72 75 6E 46 72 6F 6D 4D 65 6D 6F 72 79 00 n.runFromMemory.
0021:7550 6D 61 69 6E 2E 6D 61 65 73 44 65 63 00 6D 61 69 6E main.main.main.init.
0021:7560 2E 6D 61 69 6E 00 6D 61 69 6E 2E 69 6E 69 74 00 main.main.main.init.
0021:7570 72 40 61 39 51 75 41 4B 77 73 35 79 55 40 57 6D r@a9QuAKws5yU@Wm
0021:7580 65 44 6D 53 31 7A 6C 67 38 66 4E 7A 61 72 56 45 eD021:7580 65 44 6D 53 31 7A 6C 67 38 66 4E 7A 61 72 56 45 eD021:7580 DA 38 3B D7 03 49 0C A9 DA D6 D7 1B CA 8E 78 3F ÜB; x. I. @ÜÖx. Ē.x?
0021:7580 74 6B 82 16 7D 82 37 0B A0 6A EB F4 12 20 7D 6B 0 0 ct.}²7. jeò. jk
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 7B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 7B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 58 70 3B 70 C7 92 C1 E9 0A F4 B2 B7 47 9B § Xp;pC, Aé.ô² G.
0021:7560 A7 2E 5
```

## **Testing the script**

- 1. Build the test payload gcc test.c -o test
- 2. Build and run guitmz/ezuri
- 3. To unpack it again: go run ezuri\_unpack.go packed.bin

I also tested it with the packed Linux.Cephei sample mentioned in the report. <u>Link to</u> Virustotal