## **Cobalt Strike: Overview – Part 7**

blog.nviso.eu/2022/03/22/cobalt-strike-overview-part-7/

March 22, 2022



## Blogpost series: Cobalt Strike: Decrypting Traffic

This is an overview of a series of 6 blog posts we dedicated to the analysis and decryption of Cobalt Strike traffic. We include videos for different analysis methods.

In <u>part 1</u>, we explain that Cobalt Strike traffic is encrypted using RSA and AES cryptography, and that we found private RSA keys that can help with decryption of Cobalt Strike traffic

In <u>part 2</u>, we actually decrypt traffic using private keys. Notice that one of the free, open source tools that we created to decrypt Cobalt Strike traffic, <u>cs-parse-http-traffic.py</u>, was a beta release. It has now been replaced by tool <u>cs-parse-traffic.py</u>. This tool is capable to decrypt HTTP(S) and DNS traffic. For HTTP(S), it's a drop-in replacement for cs-parse-http-traffic.py.

In <u>part 3</u>, we use process memory dumps to extract the decryption keys. This is for use cases where we don't have the private keys.

In <u>part 4</u>, we deal with some specific obfuscation: data transforms of encrypted traffic, and sleep mode in beacons' process memory.

In part 5, we handle Cobalt Strike DNS traffic.

And finally, in part 6, we provide some tips to make memory dumps of Cobalt Strike beacons.

The tools used in these blog post are free and open source, and can be found here.

Here are a couple of videos that illustrate the methods discussed in this series:

- Using Known Private Keys To Decrypt Traffic
- <u>Using Process Memory To Decrypt Traffic</u>

- Dealing With Obfuscated Traffic And Process Memory
- Decrypting DNS Traffic

YouTube playlist "Cobalt Strike: Decrypting Traffic"

Blog posts in this series:

- Cobalt Strike: Using Known Private Keys To Decrypt Traffic Part 1
- Cobalt Strike: Using Known Private Keys To Decrypt Traffic Part 2
- Cobalt Strike: Using Process Memory To Decrypt Traffic Part 3
- <u>Cobalt Strike: Decrypting Obfuscated Traffic Part 4</u>
- Cobalt Strike: Decrypting DNS Traffic Part 5
- Cobalt Strike: Memory Dumps Part 6

## About the authors

Didier Stevens is a malware expert working for NVISO. Didier is a SANS Internet Storm Center senior handler and Microsoft MVP, and has developed numerous popular tools to assist with malware analysis. You can find Didier on <u>Twitter</u> and <u>LinkedIn</u>.

You can follow NVISO Labs on <u>Twitter</u> to stay up to date on all our future research and publications.

Series Navigation << Cobalt Strike: Memory Dumps – Part 6