

## Q: How to decrypt HTTPS packets with Wireshark?

A: Please refer to the blog <https://jimshaver.net/2015/02/11/decrypting-tls-browser-traffic-with-wireshark-the-easy-way/>

If you follow the guide step by step, you should be able to get the packet information like this:

| No. | Time     | Source | Src port | Destination | Dest port | Protocol | Length | Info                                       |
|-----|----------|--------|----------|-------------|-----------|----------|--------|--|
| 15  | 0.004302 | :::1   | 8443     | :::1        | 50392     | TLSv1.2  | 230    | Server Hello, Change Cipher Spec, Finishe  |
| 16  | 0.004341 | :::1   | 50392    | :::1        | 8443      | TCP      | 76     | 50392->8443 [ACK] Seq=219 Ack=155 Win=4076 |
| 17  | 0.004562 | :::1   | 50392    | :::1        | 8443      | TLSv1.2  | 127    | Change Cipher Spec, Finished               |
| 18  | 0.004594 | :::1   | 8443     | :::1        | 50392     | TCP      | 76     | 8443->50392 [ACK] Seq=155 Ack=270 Win=4075 |
| 19  | 0.004801 | :::1   | 50392    | :::1        | 8443      | HTTP2    | 253    | Magic, SETTINGS, WINDOW_UPDATE, PRIORITY,  |
| 20  | 0.004820 | :::1   | 50392    | :::1        | 8443      | HTTP2    | 427    | HEADERS, WINDOW_UPDATE                     |
| 21  | 0.004829 | :::1   | 8443     | :::1        | 50392     | TCP      | 76     | 8443->50392 [ACK] Seq=155 Ack=447 Win=4073 |
| 22  | 0.004835 | :::1   | 8443     | :::1        | 50392     | TCP      | 76     | 8443->50392 [ACK] Seq=155 Ack=798 Win=4069 |
| 23  | 0.005162 | :::1   | 8443     | :::1        | 50392     | HTTP2    | 120    | SETTINGS                                   |
| 24  | 0.005189 | :::1   | 50392    | :::1        | 8443      | TCP      | 76     | 50392->8443 [ACK] Seq=798 Ack=199 Win=4075 |
| 25  | 0.005305 | :::1   | 50392    | :::1        | 8443      | HTTP2    | 114    | SETTINGS                                   |
| 26  | 0.005325 | :::1   | 8443     | :::1        | 50392     | TCP      | 76     | 8443->50392 [ACK] Seq=199 Ack=836 Win=4069 |
| 27  | 0.022443 | :::1   | 8443     | :::1        | 50392     | HTTP2    | 166    | SETTINGS, HEADERS, DATA                    |

In practice, Wireshark may not decrypt packets correctly at the first time you visit an URL. When conducting the experiment, please follow the following procedures:

1. Visit the URL (i.e. <https://localhost:8443>) in your browser
2. Open Wireshark and listen on the interface
3. Force reload the page in your browser (avoid cache)