

Matei Vlad Cristian
321 CC

Laborator

1.

Algoritmul folosit pentru semnarea certificatului :

sha256WithRSAEncryption

Entitatea care a eliberat certificatul :

Issuer: C = US, O = Google Trust Services, CN = GTS CA 1O1

Intervalul de timp in care certificatul e valid :

Validity

Not Before: May 3 09:02:30 2021 GMT

Not After : Jul 26 09:02:29 2021 GMT

Cheia publica :

Subject Public Key Info:

Public Key Algorithm: id-ecPublicKey

Public-Key: (256 bit)

pub:

04:f7:f7:de:4d:af:d6:b4:ca:b5:49:1f:df:90:71:
cd:f6:cb:b7:fd:7a:d9:db:39:e4:93:68:2c:9d:55:
fb:1f:30:4e:75:e0:ef:58:29:4c:ac:66:3e:02:63:
f5:e2:3f:bc:2c:e1:55:3d:ae:d8:54:95:84:03:7c:
3f:7b:d5:2f:25

ASN1 OID: prime256v1

NIST CURVE: P-256

2.

Activities Applications Wireshark Sun May 30 2013

*wlo1

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
813	3.175531394	192.168.1.101	34.118.48.238	HTTP	418	GET /favicon.ico HTTP/1.1
824	3.219463528	34.118.48.238	192.168.1.101	HTTP	688	HTTP/1.1 404 Not Found (text/html)
6716	22.671250751	192.168.1.101	34.118.48.238	HTTP	502	GET /api/v1/dummy?asasa=sasa2 HTTP/1.1
6818	22.118106669	34.118.48.238	192.168.1.101	HTTP	468	HTTP/1.1 304 Not Modified
7119	22.748670799	192.168.1.101	34.118.48.238	HTTP	502	GET /api/v1/dummy?asasa=sasa2 HTTP/1.1
7169	22.794699191	34.118.48.238	192.168.1.101	HTTP	468	HTTP/1.1 304 Not Modified
7319	23.158992616	192.168.1.101	34.118.48.238	HTTP	502	GET /api/v1/dummy?asasa=sasa2 HTTP/1.1
7363	23.197304269	34.118.48.238	192.168.1.101	HTTP	468	HTTP/1.1 304 Not Modified
7482	23.436902884	192.168.1.101	34.118.48.238	HTTP	502	GET /api/v1/dummy?asasa=sasa2 HTTP/1.1
7512	23.483155706	34.118.48.238	192.168.1.101	HTTP	468	HTTP/1.1 304 Not Modified
7593	23.761270094	192.168.1.101	34.118.48.238	HTTP	502	GET /api/v1/dummy?asasa=sasa2 HTTP/1.1
7630	23.740728032	34.118.48.238	192.168.1.101	HTTP	468	HTTP/1.1 304 Not Modified
21206	51.369740337	192.168.1.101	103.7.8.233	HTTP	393	GET / HTTP/1.1
21523	51.927186688	103.7.8.233	192.168.1.101	HTTP	71	HTTP/1.1 301 Moved Permanently (text/html) (text/html)
32437	77.938929688	192.168.1.101	216.58.214.195	OCSP	451	Request
32471	77.999495313	216.58.214.195	192.168.1.101	OCSP	767	Response
32570	78.116407369	192.168.1.101	216.58.214.195	OCSP	451	Request
32599	78.180766587	216.58.214.195	192.168.1.101	OCSP	767	Response
33267	79.221895545	192.168.1.101	18.192.172.30	HTTP	447	GET /login.php HTTP/1.1
33297	79.259419763	18.192.172.30	192.168.1.101	HTTP	2814	HTTP/1.1 200 OK (text/html)
33309	79.296635950	192.168.1.101	18.192.172.30	HTTP	374	GET /style.css HTTP/1.1
33336	79.326549587	18.192.172.30	192.168.1.101	HTTP	2692	HTTP/1.1 200 OK (text/css)
33344	79.334439140	192.168.1.101	18.192.172.30	HTTP	376	GET /images/logo.gif HTTP/1.1
33363	79.375289134	18.192.172.30	192.168.1.101	HTTP	1014	HTTP/1.1 200 OK (GIF89a)
33366	79.378243068	192.168.1.101	18.192.172.30	HTTP	372	GET /favicon.ico HTTP/1.1
33382	79.417924911	18.192.172.30	192.168.1.101	HTTP	960	HTTP/1.1 200 OK (image/x-icon)
35240	83.105683729	192.168.1.101	18.192.172.30	HTTP	593	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
35286	83.140963276	18.192.172.30	192.168.1.101	HTTP	342	HTTP/1.1 302 Found (text/html)
35288	83.148897932	192.168.1.101	18.192.172.30	HTTP	460	GET /login.php HTTP/1.1
35295	83.180810314	18.192.172.30	192.168.1.101	HTTP	2814	HTTP/1.1 200 OK (text/html)

[Expert Info (Chat/Sequence): GET /login.php HTTP/1.1v\r\n]
Request Method: GET
Request URI: /login.php
Request Version: HTTP/1.1
Host: testphp.vulnweb.com\r\nUser-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:88.0) Gecko/20100101 Firefox/88.0\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\nAccept-Language: en-US,en;q=0.5\r\nAccept-Encoding: gzip, deflate\r\nReferer: https://www.google.com/\r\nConnection: keep-alive\r\nUpgrade-Insecure-Requests: 1\r\n\r\n[Full request URI: http://testphp.vulnweb.com/login.php]
[HTTP request 1/2]
Response in frame 33297
[Next request in frame: 33309]

0000 08 de d0 f9 82 56 c5 05 e5 76 65 88 06 45 00P...ve E
0010 01 b1 b0 2f 40 00 40 06 08 2c c9 a8 81 65 12 c0 .../0...e-
0020 ac 1e c3 be 00 50 2e 34 26 1c 9b a7 af 68 80 18P 4 & c- h-
0030 01 f6 a8 81 00 00 01 01 08 0a 13 63 f9 91 e9 06 00c 7-
0040 50 11 47 45 54 29 2f 6c 6f 67 69 6e 2e 70 68 70 P GET /login.php
0050 20 40 54 50 2f 31 31 38 2e 34 38 2e 32 33 38 3a 38 30 38 30 4.118.48.238:8080
0060 20 74 65 73 74 70 68 70 2e 76 75 0c 6e 77 65 62 testphp.vulnweb
0070 26 63 0f 6d 90 6a 55 73 65 72 2d 41 67 65 6e 74 .com Us er-Agent: M
0080 3a 28 4d 6f 7a 69 6c 6c 6f 2f 35 2e 38 29 28 58 Mozilla/5.0 (X11; Ubuntu; Linu
0090 31 31 3b 2b 55 62 75 6e 74 75 2b 2d 4c 69 66 75 ;

wireshark_wlo1_2021053021022_6Hf3TC.pcapng Packets: 39416 · Displayed: 32 (0.1%) · Dropped: 0 (0.0%) Profile: Default

Activities Applications Wireshark Sun May 30 2014

*wlo1

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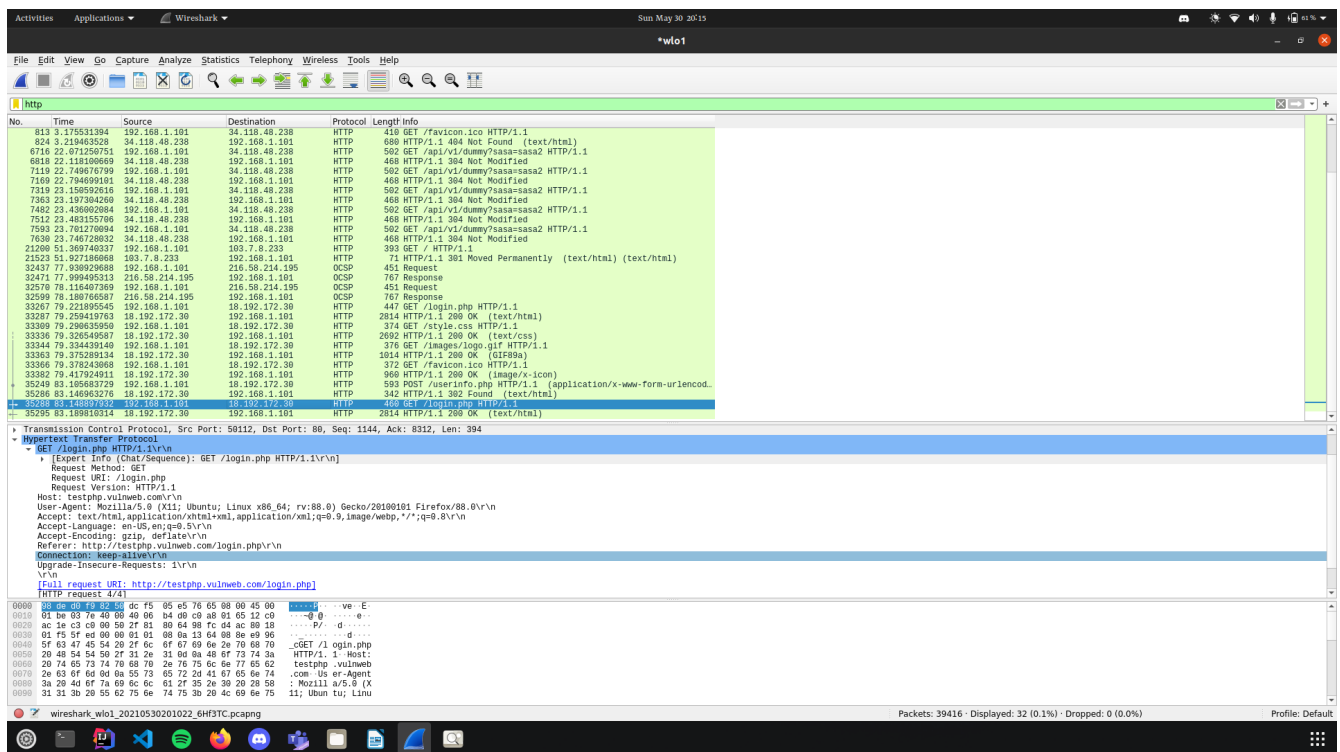
http

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35295	83.180810314	18.192.172.30	192.168.1.101	HTTP	2814	HTTP/1.1 200 OK (text/html)

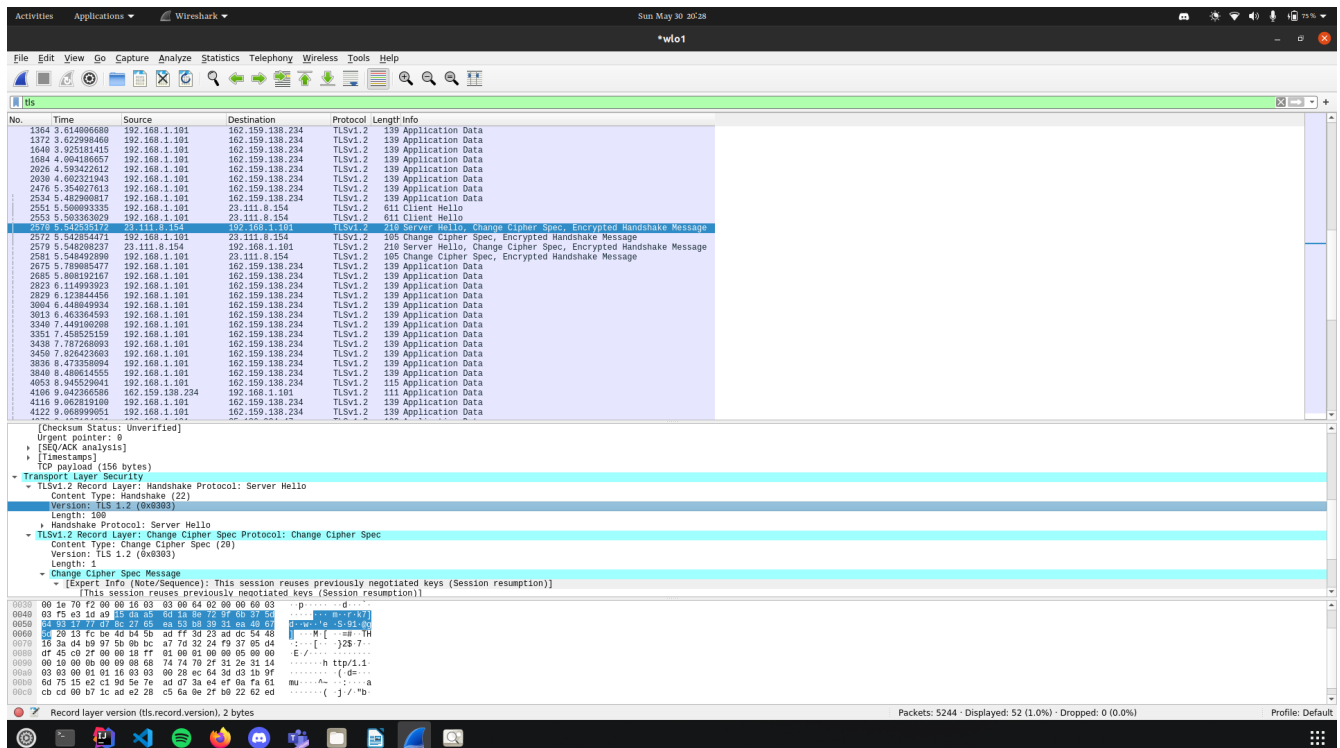
[Expert Info (Chat/Sequence): GET /api/v1/dummy?asasa=sasa2 HTTP/1.1v\r\n]
Request Method: GET
Request URI: /api/v1/dummy?asasa=sasa2
Request Version: HTTP/1.1
Host: 34.118.48.238:8080\r\nUser-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:88.0) Gecko/20100101 Firefox/88.0\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8\r\nAccept-Language: en-US,en;q=0.5\r\nAccept-Encoding: gzip, deflate\r\nConnection: keep-alive\r\nUpgrade-Insecure-Requests: 1\r\nIf-None-Match: W/"c-aanL5C22098NLTVr1v4pW0hniQ"\r\nCache-Control: max-age=0\r\n\r\n[Full request URI: http://34.118.48.238:8080/api/v1/dummy?asasa=sasa2]
[HTTP request 5/5]

0000 08 de d0 f9 82 56 c5 05 e5 76 65 88 06 45 00P...ve E
0010 01 e8 4d 25 40 00 40 06 08 2c c9 a8 81 65 12 c0 .../0...e-
0020 38 ee e4 26 1f 99 31 81 64 7e e6 44 2d 38 80 19 0& 1 0-D-8-
0030 01 f5 cf b1 00 00 01 01 08 0a 13 63 f9 91 e9 06 00D (0-
0040 4b 57 47 45 54 29 2f 61 70 68 2f 76 31 2f 64 75 0MGET /a pi/v1/du
0050 60 6d 70 3f 73 61 73 61 34 73 61 73 61 32 20 40 mmy?asasa=sasa2 H
0060 54 54 50 2f 31 31 38 2e 34 38 2e 32 33 38 3a 38 30 38 30 TTP/1.1 Host: 3
0070 34 2e 31 31 38 2e 34 38 2e 32 33 38 3a 38 30 38 30 4.118.48.238:8080
0080 30 9d 0a 55 73 65 72 2d 41 67 65 74 3a 29 40 0 User-Agent: M
0090 67 7a 69 6c 6c 6f 2f 35 2e 38 29 28 58 Mozilla/5.0 (X11;

wireshark_wlo1_2021053021022_6Hf3TC.pcapng Packets: 39416 · Displayed: 32 (0.1%) · Dropped: 0 (0.0%) Profile: Default



3.



Activities Applications Wireshark Sun May 30 20:30

*wlo1

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11s

No.	Time	Source	Destination	Protocol	Length	Info
1364	3.614006680	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1372	3.622998466	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1640	3.925181415	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1684	4.004186657	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2026	4.593422612	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2030	4.602219143	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2476	5.354927613	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2534	5.482908817	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2551	5.508093335	192.168.1.101	23.111.8.154	TLSv1.2	611	Client Hello
2553	5.503363929	192.168.1.101	23.111.8.154	TLSv1.2	611	Client Hello
2570	5.542535172	23.111.8.154	192.168.1.101	TLSv1.2	210	Server Hello, Change Cipher Spec, Encrypted Handshake Message
2572	5.542554771	23.111.8.154	192.168.1.101	TLSv1.2	105	Change Cipher Spec, Encrypted Handshake Message
2579	5.548208237	23.111.8.154	192.168.1.101	TLSv1.2	210	Server Hello, Change Cipher Spec, Encrypted Handshake Message
2581	5.548492890	192.168.1.101	23.111.8.154	TLSv1.2	105	Change Cipher Spec, Encrypted Handshake Message
2675	5.789885477	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2685	5.808192167	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2823	6.114939323	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2829	6.123844456	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
3004	6.448849934	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data

Version: 1.2 (0x0303)

- Random: 77350f7283e53c75d7c532175cab76b4590d328707c3886.
- Session ID Length: 32
- Session ID: 13fcb4eb4b5badff3d23ad0c5448163ad4b975b0bbca77d.
- Cipher Suites Length: 36
- Cipher Suites (18 suites)
 - Cipher Suite: TLS_AES_128_GCM_SHA256 (0x1301)
 - Cipher Suite: TLS_CHACHA20_POLY1305_SHA256 (0x1303)
 - Cipher Suite: TLS_AES_256_GCM_SHA384 (0x1302)
 - Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b)
 - Cipher Suite: TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 (0xc0a9)
 - Cipher Suite: TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xc0ac)
 - Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c)
 - Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030)
 - Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a)
 - Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA (0xc009)
 - Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013)
 - Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014)
 - Cipher Suite: TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c)
 - Cipher Suite: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)
 - Cipher Suite: TLS_RSA_WITH_AES_128_CBC_SHA (0x0003)
 - Cipher Suite: TLS_RSA_WITH_AES_256_CBC_SHA (0x0005)
 - Cipher Suite: TLS_RSA_WITH_3DES_EDE_CBC_SHA (0x000a)
- Compression Methods Length: 1
- Compression Methods (1 method)
 - 0
- Extensions Length: 439
 - Extension: server_name (len=19)

0000 08 00 f0 32 50 dc f5 05 e5 76 65 00 00 45 00 ... p ... ve E

0010 02 50 8c 5f 40 00 00 06 ca 20 c9 a8 01 05 17 0f ... U ... e o

0020 00 9a e1 04 01 a8 a2 f7 96 65 42 64 7a 5b 10 ... B ...

0030 01 fe cd 71 00 00 16 03 01 02 28 01 00 02 24 03 ... q ... (...

0040 03 77 35 07 92 83 e5 3c 75 07 c5 32 17 5c a0 76 ... u ... u 2 \ v

0050 04 50 0d 32 87 07 c3 38 00 c8 f0 02 03 c2 f0 ... Y 2 - 8 - p

0060 00 20 13 fc be 4d b4 5b ad ff 3d 23 ad dc 54 40 ... M [... sa TH

0070 15 3a 04 b9 97 5b 0b bc a7 70 32 f4 2f 05 04 ... [...] 28 7

0080 0f 45 00 24 13 01 13 03 13 02 c9 2b c9 2f cc a9 ... E S ... /

0090 cc a0 c0 2c c0 38 c0 0a c0 09 c0 13 c0 14 00 9c ... 0 ...

Transport Layer Security: Protocol Packets: 5244 · Displayed: 52 (1.0%) · Dropped: 0 (0.0%) Profile: Default

Cea aleasa de server:

Activities Applications Wireshark Sun May 30 20:31

*wlo1

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11s

No.	Time	Source	Destination	Protocol	Length	Info
1364	3.614006680	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1372	3.622998466	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1640	3.925181415	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
1684	4.004186657	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
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2030	4.602219143	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2476	5.354927613	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2534	5.482908817	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
2551	5.508093335	192.168.1.101	23.111.8.154	TLSv1.2	611	Client Hello
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2675	5.789885477	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data
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3004	6.448849934	192.168.1.101	162.159.138.234	TLSv1.2	139	Application Data

[Checksum Status: Unverified]

Urgent pointer: 0

- [SEQ/ACK analysis]
- [Timestamps]

Transport Layer Security

- TLSv1.2 Record Layer: Handshake Protocol: Server Hello
 - Content Type: Handshake (22)
 - Version: TLS 1.2 (0x0303)
 - Length: 100
 - Handshake Protocol: Server Hello
 - Handshake Type: Server Hello (2)
 - Length: 96
 - Version: TLS 1.2 (0x0303)
 - Random: f5e31da9f5da5d01a8e729f0b375064931777d78c2765ea.
 - Session ID Length: 32
 - Session ID: 13fcb4eb4b5badff3d23ad0c5448163ad4b975b0bbca77d.
 - Cipher Suites: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)
 - Compression Method: null (0)
 - Extensions Length: 24
 - Extension: renegotiation_info (len=1)
 - Extension: status_request (len=0)
 - Extension: application_layer_protocol_negotiation (len=11)
- TLSv1.2 Record Layer: Change Cipher Spec Protocol: Change Cipher Spec
 - Content Type: Change Cipher Spec (20)
 - Version: TLS 1.2 (0x0303)
 - Length: 1
 - Change Cipher Spec Message
 - Expert Info (Note/Sequence): This session reuses previously negotiated keys (Session resumption)!

0040 08 f0 e3 1d a9 15 da a5 6d 1a 8e 72 9f 6b 37 5d ... m r k7

0050 64 93 17 77 47 8c 27 45 e3 38 39 31 01 4a 07 ... w * e s 94 00

0060 50 20 13 fc be 4d b4 5b ad ff 3d 23 ad dc 54 40 ... M [... sa TH

0070 15 3a 04 b9 97 5b 0b bc a7 70 32 f4 2f 05 04 ... [...] 28 7

0080 0f 45 00 24 13 01 13 03 13 02 c9 2b c9 2f cc a9 ... E S ... /

0090 00 20 13 fc be 4d b4 5b ad ff 3d 23 ad dc 54 40 ... M [... sa TH

00a0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ... (...)

00b0 03 03 00 01 01 15 e3 03 00 00 28 e6 54 6d c3 3b 14 ... h ttp/1.1

00c0 6d 75 e2 c1 0d 5e 7e ad d7 3a e4 e7 0a fa 01 ... mu ... : ... a

00d0 cb 00 07 1c ad e2 28 c5 6a 0e 2f 0b 22 62 01 ... (...) / " b

00e0 1c 0e

Cipher Suite (tls.handshake.ciphersuite), 2 bytes Packets: 5244 · Displayed: 52 (1.0%) · Dropped: 0 (0.0%) Profile: Default