

You are here: [Home](#) > [Projects](#) > [SSL Server Test](#) > [gmail.com](#) > 2607:f8b0:4005:80a:0:0:0:2005

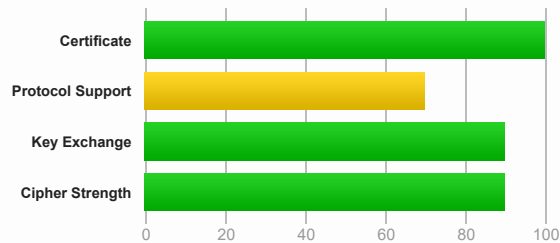
## SSL Report: [gmail.com](#) (2607:f8b0:4005:80a:0:0:0:2005)

Assessed on: Fri, 22 Oct 2021 19:15:35 UTC | [Hide](#) | [Clear cache](#)

[Scan Another »](#)

### Summary

Overall Rating



Visit our [documentation page](#) for more information, configuration guides, and books. Known issues are documented [here](#).

This server supports TLS 1.0 and TLS 1.1. Grade capped to B. [MORE INFO »](#)

This site works only in browsers with SNI support.

This server supports TLS 1.3.

Static Public Key Pinning observed for this server.

DNS Certification Authority Authorization (CAA) Policy found for this domain. [MORE INFO »](#)

### Certificate #1: EC 256 bits (SHA256withRSA)



#### Server Key and Certificate #1



|                                 |   |
|---------------------------------|---|
| <b>Subject</b>                  | gmail.com<br>Fingerprint SHA256: 6e751c6d93f87fbefdf1913ef29f695565562ca17b18cd5d1c904727386d145c<br>Pin SHA256: LRjFYPLI/t7ZlujkWb+LuPuKd/cRbH6Sf4sg32MIAwQ= |
| <b>Common names</b>             | gmail.com   |
| <b>Alternative names</b>        | gmail.com *.gmail.com   |
| <b>Serial Number</b>            | 55a53dedcd5d71e80a0000000108ad7c  |
| <b>Valid from</b>               | Mon, 04 Oct 2021 02:11:47 UTC   |
| <b>Valid until</b>              | Mon, 27 Dec 2021 02:11:46 UTC (expires in 2 months and 4 days)  |
| <b>Key</b>                      | EC 256 bits   |
| <b>Weak key (Debian)</b>        | No  |
| <b>Issuer</b>                   | GTS CA 1C3<br>AIA: http://pki.goog/repo/certs/gts1c3.der  |
| <b>Signature algorithm</b>      | SHA256withRSA   |
| <b>Extended Validation</b>      | No  |
| <b>Certificate Transparency</b> | Yes (certificate)   |
| <b>OCSP Must Staple</b>         | No  |
| <b>Revocation information</b>   | CRL, OCSP<br>CRL: http://crls.pki.goog/gts1c3/QqFxbi9M48c.crl<br>OCSP: http://ocsp.pki.goog/gts1c3  |
| <b>Revocation status</b>        | Good (not revoked)  |

Server Key and Certificate #1



|                |   |
|----------------|---|
| <b>DNS CAA</b> | <b>Yes</b><br>policy host: gmail.com<br>issue: pki.goog flags:0 |
| <b>Trusted</b> | <b>Yes</b><br><b>Mozilla Apple Android Java Windows</b>         |



Additional Certificates (if supplied)



|                              |                |
|------------------------------|----------------|
| <b>Certificates provided</b> | 3 (3982 bytes) |
| <b>Chain issues</b>          | None           |

#2

|                            |  |
|----------------------------|--|
| <b>Subject</b>             | GTS CA 1C3<br>Fingerprint SHA256: 23ecb03eec17338c4e33a6b48a41dc3cda12281bbc3ff813c0589d6cc2387522<br>Pin SHA256: zCTnfLwLKbS9S2sbp+uFz4KZOocFvXxkV06Ce9O5M2w= |
| <b>Valid until</b>         | Thu, 30 Sep 2027 00:00:42 UTC (expires in 5 years and 11 months)   |
| <b>Key</b>                 | RSA 2048 bits (e 65537)  |
| <b>Issuer</b>              | GTS Root R1  |
| <b>Signature algorithm</b> | SHA256withRSA  |

#3

|                            |  |
|----------------------------|--|
| <b>Subject</b>             | GTS Root R1<br>Fingerprint SHA256: 3ee0278df71fa3c125c4d487f01d774694e6fc57e0cd94c24efd769133918e5<br>Pin SHA256: hxqRIPTu1bMS/ODITB1SSu0vd4u/8l8TjPgfaAp63Gc= |
| <b>Valid until</b>         | Fri, 28 Jan 2028 00:00:42 UTC (expires in 6 years and 3 months)  |
| <b>Key</b>                 | RSA 4096 bits (e 65537)  |
| <b>Issuer</b>              | GlobalSign Root CA   |
| <b>Signature algorithm</b> | SHA256withRSA  |



Certification Paths



[Click here to expand](#)

Certificate #2: RSA 2048 bits (SHA256withRSA) No SNI



[Click here to expand](#)

Certificate #3: RSA 2048 bits (SHA256withRSA)



Server Key and Certificate #1



|                          |   |
|--------------------------|---|
| <b>Subject</b>           | gmail.com<br>Fingerprint SHA256: 438a6c749d2ffa40ab7262a29dfb3e3fcfb2207b4676fac11125eb7ebc79b0<br>Pin SHA256: hs2SWbuItKUMyAJb75uHW6uBv9QXJgWMZv1j5GRmtgs= |
| <b>Common names</b>      | gmail.com   |
| <b>Alternative names</b> | gmail.com *.gmail.com   |
| <b>Serial Number</b>     | 221b2aaca488c4a50a0000000108ad79  |
| <b>Valid from</b>        | Mon, 04 Oct 2021 02:11:39 UTC   |
| <b>Valid until</b>       | Mon, 27 Dec 2021 02:11:38 UTC (expires in 2 months and 4 days)  |
| <b>Key</b>               | RSA 2048 bits (e 65537)   |
| <b>Weak key (Debian)</b> | No  |
| <b>Issuer</b>            | GTS CA 1C3<br>AIA: http://pki.goog/repo/certs/gts1c3.der  |

Server Key and Certificate #1



|                          |   |
|--------------------------|---|
| Signature algorithm      | SHA256withRSA   |
| Extended Validation      | No  |
| Certificate Transparency | Yes (certificate)   |
| OCSP Must Staple         | No  |
| Revocation information   | CRL, OCSP   |
|                          | CRL: http://crls.pki.goog/gts1c3/QOvJ0N1sT2A.crl<br>OCSP: http://ocsp.pki.goog/gts1c3 |
| Revocation status        | Good (not revoked)  |
| DNS CAA                  | Yes   |
|                          | policy host: gmail.com  |
|                          | issue: pki.goog flags:0   |
| Trusted                  | Yes   |
|                          | Mozilla Apple Android Java Windows  |



Additional Certificates (if supplied)



|                       |                |
|-----------------------|----------------|
| Certificates provided | 3 (4186 bytes) |
| Chain issues          | None           |

#2

|                     |  |
|---------------------|--|
| Subject             | GTS CA 1C3   |
|                     | Fingerprint SHA256: 23ecb03eec17338c4e33a6b48a41dc3cda12281bbc3ff813c0589d6cc2387522 |
|                     | Pin SHA256: zCTnflwLkBS9S2sbp+uFz4KZOcFvXxkV06Ce9O5M2w=                              |
| Valid until         | Thu, 30 Sep 2027 00:00:42 UTC (expires in 5 years and 11 months)                     |
| Key                 | RSA 2048 bits (e 65537)  |
| Issuer              | GTS Root R1  |
| Signature algorithm | SHA256withRSA  |

#3

|                     |  |
|---------------------|--|
| Subject             | GTS Root R1  |
|                     | Fingerprint SHA256: 3ee0278df71fa3c125c4cd487f01d774694e6fc57e0cd94c24efd769133918e5 |
|                     | Pin SHA256: hxqRlPTu1bMS/ODITB1SSu0vd4u/8l8TjPgfaAp63Gc=                             |
| Valid until         | Fri, 28 Jan 2028 00:00:42 UTC (expires in 6 years and 3 months)                      |
| Key                 | RSA 4096 bits (e 65537)  |
| Issuer              | GlobalSign Root CA   |
| Signature algorithm | SHA256withRSA  |



Certification Paths



Click here to expand

Configuration



Protocols

|         |      |
|---------|------|
| TLS 1.3 | Yes  |
| TLS 1.2 | Yes* |
| TLS 1.1 | Yes  |
| TLS 1.0 | Yes* |
| SSL 3   | No   |
| SSL 2   | No   |

(\*) Experimental: Server negotiated using No-SNI

Cipher Suites



## Cipher Suites

### # TLS 1.3 (server has no preference)

|                                       |                                    |     |
|---------------------------------------|------------------------------------|-----|
| TLS_AES_128_GCM_SHA256 (0x1301)       | ECDH x25519 (eq. 3072 bits RSA) FS | 128 |
| TLS_AES_256_GCM_SHA384 (0x1302)       | ECDH x25519 (eq. 3072 bits RSA) FS | 256 |
| TLS_CHACHA20_POLY1305_SHA256 (0x1303) | ECDH x25519 (eq. 3072 bits RSA) FS | 256 |

### # TLS 1.2 (suites in server-preferred order)

|  |  |                  |
|--|--|------------------|
| TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b)       | ECDH x25519 (eq. 3072 bits RSA) FS             | 128              |
| TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca9) | ECDH x25519 (eq. 3072 bits RSA) FS             | 256 <sup>P</sup> |
| TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c)       | ECDH x25519 (eq. 3072 bits RSA) FS             | 256              |
| TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA (0xc009)          | ECDH x25519 (eq. 3072 bits RSA) FS <b>WEAK</b> | 128              |
| TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a)          | ECDH x25519 (eq. 3072 bits RSA) FS <b>WEAK</b> | 256              |
| TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)         | ECDH x25519 (eq. 3072 bits RSA) FS             | 128              |
| TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca8)   | ECDH x25519 (eq. 3072 bits RSA) FS             | 256 <sup>P</sup> |
| TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030)         | ECDH x25519 (eq. 3072 bits RSA) FS             | 256              |
| TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013)            | ECDH x25519 (eq. 3072 bits RSA) FS <b>WEAK</b> | 128              |
| TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014)            | ECDH x25519 (eq. 3072 bits RSA) FS <b>WEAK</b> | 256              |
| TLS_RSA_WITH_AES_128_GCM_SHA256 (0x9c)                 | <b>WEAK</b>                                    | 128              |
| TLS_RSA_WITH_AES_256_GCM_SHA384 (0x9d)                 | <b>WEAK</b>                                    | 256              |
| TLS_RSA_WITH_AES_128_CBC_SHA (0x2f)                    | <b>WEAK</b>                                    | 128              |
| TLS_RSA_WITH_AES_256_CBC_SHA (0x35)                    | <b>WEAK</b>                                    | 256              |
| TLS_RSA_WITH_3DES_EDE_CBC_SHA (0xa)                    | <b>WEAK</b>                                    | 112              |

### # TLS 1.1 (suites in server-preferred order)

### # TLS 1.0 (suites in server-preferred order)

(P) This server prefers ChaCha20 suites with clients that don't have AES-NI (e.g., Android devices)



## Handshake Simulation

### Android 2.3.7 No SNI<sup>2</sup>

Incorrect certificate because this client doesn't support SNI

RSA 2048 (SHA256) | TLS 1.0 | TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA

|                            |                   |                    |   |                   |
|----------------------------|-------------------|--------------------|---|-------------------|
| Android 4.0.4              | RSA 2048 (SHA256) | TLS 1.0            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| Android 4.1.1              | RSA 2048 (SHA256) | TLS 1.0            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| Android 4.2.2              | EC 256 (SHA256)   | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| Android 4.3                | EC 256 (SHA256)   | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| Android 4.4.2              | EC 256 (SHA256)   | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Android 5.0.0              | EC 256 (SHA256)   | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Android 6.0                | EC 256 (SHA256)   | TLS 1.2 > http/1.1 | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Android 7.0                | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 | ECDH x25519 FS    |
| Android 8.0                | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 | ECDH x25519 FS    |
| Android 8.1                | -                 | TLS 1.3            | TLS_CHACHA20_POLY1305_SHA256                  | ECDH x25519 FS    |
| Android 9.0                | -                 | TLS 1.3            | TLS_CHACHA20_POLY1305_SHA256                  | ECDH x25519 FS    |
| Baidu Jan 2015             | EC 256 (SHA256)   | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| BingPreview Jan 2015       | RSA 2048 (SHA256) | TLS 1.2            | TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256         | ECDH secp256r1 FS |
| Chrome 49 / XP SP3         | RSA 2048 (SHA256) | TLS 1.2 > h2       | TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256         | ECDH secp256r1 FS |
| Chrome 69 / Win 7 R        | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| Chrome 70 / Win 10         | -                 | TLS 1.3            | TLS_AES_128_GCM_SHA256                        | ECDH x25519 FS    |
| Chrome 80 / Win 10 R       | -                 | TLS 1.3            | TLS_AES_128_GCM_SHA256                        | ECDH x25519 FS    |
| Firefox 31.3.0 ESR / Win 7 | EC 256 (SHA256)   | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Firefox 47 / Win 7 R       | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Firefox 49 / XP SP3        | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| Firefox 62 / Win 7 R       | EC 256 (SHA256)   | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| Firefox 73 / Win 10 R      | -                 | TLS 1.3            | TLS_AES_128_GCM_SHA256                        | ECDH x25519 FS    |

## Handshake Simulation

|  |  |                    |   |                   |
|--|--|--------------------|---|-------------------|
| <a href="#">Googlebot Feb 2018</a>                               | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| <a href="#">IE 7 / Vista</a>                                     | EC 256 (SHA256)  | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">IE 8 / XP</a> No FS <sup>1</sup> No SNI <sup>2</sup> | Incorrect certificate because this client doesn't support SNI<br>RSA 2048 (SHA256)   TLS 1.0   TLS_RSA_WITH_3DES_EDE_CBC_SHA |                    |   |                   |
| <a href="#">IE 8-10 / Win 7</a> R                                | EC 256 (SHA256)  | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">IE 11 / Win 7</a> R                                  | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">IE 11 / Win 8.1</a> R                                | EC 256 (SHA256)  | TLS 1.2 > http/1.1 | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">IE 10 / Win Phone 8.0</a>                            | EC 256 (SHA256)  | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">IE 11 / Win Phone 8.1</a> R                          | EC 256 (SHA256)  | TLS 1.2 > http/1.1 | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">IE 11 / Win Phone 8.1 Update</a> R                   | EC 256 (SHA256)  | TLS 1.2 > http/1.1 | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">IE 11 / Win 10</a> R                                 | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Edge 15 / Win 10</a> R                               | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| <a href="#">Edge 16 / Win 10</a> R                               | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| <a href="#">Edge 18 / Win 10</a> R                               | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH x25519 FS    |
| <a href="#">Edge 13 / Win Phone 10</a> R                         | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Java 6u45</a> No SNI <sup>2</sup>                    | Incorrect certificate because this client doesn't support SNI<br>RSA 2048 (SHA256)   TLS 1.0   TLS_RSA_WITH_AES_128_CBC_SHA  |                    |   |                   |
| <a href="#">Java 7u25</a>  | EC 256 (SHA256)  | TLS 1.0            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">Java 8u161</a>                                       | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Java 11.0.3</a>                                      | -  | TLS 1.3            | TLS_AES_128_GCM_SHA256                        | ECDH secp256r1 FS |
| <a href="#">Java 12.0.1</a>                                      | -  | TLS 1.3            | TLS_AES_128_GCM_SHA256                        | ECDH secp256r1 FS |
| <a href="#">OpenSSL 0.9.8y</a>                                   | RSA 2048 (SHA256)  | TLS 1.0            | TLS_RSA_WITH_AES_128_CBC_SHA                  | No FS             |
| <a href="#">OpenSSL 1.0.1j</a> R                                 | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">OpenSSL 1.0.2s</a> R                                 | RSA 2048 (SHA256)  | TLS 1.2            | TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256         | ECDH secp256r1 FS |
| <a href="#">OpenSSL 1.1.0k</a> R                                 | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 | ECDH x25519 FS    |
| <a href="#">OpenSSL 1.1.1c</a> R                                 | -  | TLS 1.3            | TLS_AES_256_GCM_SHA384                        | ECDH x25519 FS    |
| <a href="#">Safari 5.1.9 / OS X 10.6.8</a>                       | RSA 2048 (SHA256)  | TLS 1.0            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| <a href="#">Safari 6 / iOS 6.0.1</a>                             | RSA 2048 (SHA256)  | TLS 1.2            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| <a href="#">Safari 6.0.4 / OS X 10.8.4</a> R                     | RSA 2048 (SHA256)  | TLS 1.0            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| <a href="#">Safari 7 / iOS 7.1</a> R                             | RSA 2048 (SHA256)  | TLS 1.2            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| <a href="#">Safari 7 / OS X 10.9</a> R                           | RSA 2048 (SHA256)  | TLS 1.2            | TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA            | ECDH secp256r1 FS |
| <a href="#">Safari 8 / iOS 8.4</a> R                             | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">Safari 8 / OS X 10.10</a> R                          | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA          | ECDH secp256r1 FS |
| <a href="#">Safari 9 / iOS 9</a> R                               | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Safari 9 / OS X 10.11</a> R                          | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Safari 10 / iOS 10</a> R                             | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Safari 10 / OS X 10.12</a> R                         | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Safari 12.1.2 / MacOS 10.14.6 Beta</a> R             | -  | TLS 1.3            | TLS_CHACHA20_POLY1305_SHA256                  | ECDH x25519 FS    |
| <a href="#">Safari 12.1.1 / iOS 12.3.1</a> R                     | -  | TLS 1.3            | TLS_CHACHA20_POLY1305_SHA256                  | ECDH x25519 FS    |
| <a href="#">Apple ATS 9 / iOS 9</a> R                            | EC 256 (SHA256)  | TLS 1.2 > h2       | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">Yahoo Slurp Jan 2015</a>                             | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |
| <a href="#">YandexBot Jan 2015</a>                               | EC 256 (SHA256)  | TLS 1.2            | TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256       | ECDH secp256r1 FS |

## # Not simulated clients (Protocol mismatch)

[IE 6 / XP](#) No FS<sup>1</sup> No SNI<sup>2</sup> Protocol mismatch (not simulated)

(1) Clients that do not support Forward Secrecy (FS) are excluded when determining support for it.

(2) No support for virtual SSL hosting (SNI). Connects to the default site if the server uses SNI.

(3) Only first connection attempt simulated. Browsers sometimes retry with a lower protocol version.

(R) Denotes a reference browser or client, with which we expect better effective security.

(All) We use defaults, but some platforms do not use their best protocols and features (e.g., Java 6 & 7, older IE).

(All) Certificate trust is not checked in handshake simulation, we only perform TLS handshake.



## Protocol Details

|  |   |
|--|---|
|  | No, server keys and hostname not seen elsewhere with SSLv2  |
| DROWN  | (1) For a better understanding of this test, please read <a href="#">this longer explanation</a><br>(2) Key usage data kindly provided by the <a href="#">Censys</a> network search engine; original DROWN website <a href="#">here</a><br>(3) Censys data is only indicative of possible key and certificate reuse; possibly out-of-date and not complete  |
| Secure Renegotiation                         | Supported   |
| Secure Client-Initiated Renegotiation        | No  |
| Insecure Client-Initiated Renegotiation      | No  |
| BEAST attack                                 | Not mitigated server-side ( <a href="#">more info</a> ) TLS 1.0: 0xc009   |
| POODLE (SSLv3)                               | No, SSL 3 not supported ( <a href="#">more info</a> )   |
| POODLE (TLS)                                 | No ( <a href="#">more info</a> )  |
| Zombie POODLE                                | No ( <a href="#">more info</a> ) TLS 1.2 : 0xc009   |
| GOLDENDOODLE                                 | No ( <a href="#">more info</a> ) TLS 1.2 : 0xc009   |
| OpenSSL 0-Length                             | No ( <a href="#">more info</a> ) TLS 1.2 : 0xc009   |
| Sleeping POODLE                              | No ( <a href="#">more info</a> ) TLS 1.2 : 0xc009   |
| Downgrade attack prevention                  | Yes, TLS_FALLBACK_SCSV supported ( <a href="#">more info</a> )  |
| SSL/TLS compression                          | No  |
| RC4  | No  |
| Heartbeat (extension)                        | No  |
| Heartbleed (vulnerability)                   | No ( <a href="#">more info</a> )  |
| Ticketbleed (vulnerability)                  | No ( <a href="#">more info</a> )  |
| OpenSSL CCS vuln. (CVE-2014-0224)            | No ( <a href="#">more info</a> )  |
| OpenSSL Padding Oracle vuln. (CVE-2016-2107) | No ( <a href="#">more info</a> )  |
| ROBOT (vulnerability)                        | No ( <a href="#">more info</a> )  |
| Forward Secrecy                              | With modern browsers ( <a href="#">more info</a> )  |
| ALPN   | Yes h2 http/1.1   |
| NPN  | Yes grpc-exp h2 http/1.1  |
| Session resumption (caching)                 | Yes   |
| Session resumption (tickets)                 | Yes   |
| OCSP stapling                                | No  |
| Strict Transport Security (HSTS)             | No  |
| HSTS Preloading                              | Chrome Edge Firefox IE  |
| Public Key Pinning (HPKP)                    | No ( <a href="#">more info</a> )  |
| Public Key Pinning Report-Only               | No  |
|  | Yes<br>includeSubDomains: false<br>report-uri: http://clients3.google.com/cert_upload_json<br>pin-sha256: IPMbDAjLVSGntGO3WP53X/zilCVndez5YJ2+vJvhJsA=<br>pin-sha256: YZPgTZ+woNCCCIW3LH2CxQeLzB/1m42QcCTBSdgayjs=<br>pin-sha256: hxqRiPTu1bMS/0DITB1SSu0vd4u/8I8TjPgfaAp63Gc=<br>pin-sha256: Vfd95BwDeSQo+NUYxVEEllvkOIWY2SalKK1lPhzOx78=<br>pin-sha256: QXnt2YHvdHR3tJYmQlr0Paosp6t/nggsEGD4QJZ3Q0g=<br>pin-sha256: mEfIZT5enoR1FuXLgYYGqnVEoZvmf9c2bVBpiOjYQ0c=<br>pin-sha256: iie1VXL7HzAMF+/PVPR9xzT80kQxdZeJ+zduCB3uj0=<br>pin-sha256: hxrRCWbljB5FGRZv++qAms7uX69qFC45aBhVpeGclco= (Forbidden)<br>pin-sha256: SG/sBoMjc9lgJ8+dGglHyTLvz7wyVBio7IMoDanPuRk= (Forbidden)<br>pin-sha256: LvRiGEjRqfzuraWuj8Wie2gyHMrW5Q06LspMnox7A= (Forbidden) |
| Public Key Pinning (Static)                  |   |
| Long handshake intolerance                   | No  |
| TLS extension intolerance                    | No  |
| TLS version intolerance                      | No  |
| Incorrect SNI alerts                         | No  |
| Uses common DH primes                        | No, DHE suites not supported  |
| DH public server param (Ys) reuse            | No, DHE suites not supported  |
| ECDH public server param reuse               | No  |
| Supported Named Groups                       | x25519, secp256r1 (server preferred order)  |
| SSL 2 handshake compatibility                | Yes   |
| 0-RTT enabled                                | No  |



## HTTP Requests



1 <https://gmail.com/> (HTTP/1.1 301 Moved Permanently)



## Miscellaneous

|                       |   |
|-----------------------|---|
| Test date             | Fri, 22 Oct 2021 19:12:06 UTC                               |
| Test duration         | 104.320 seconds   |
| HTTP status code      | 301   |
| HTTP forwarding       | <a href="https://www.google.com">https://www.google.com</a> |
| HTTP server signature | sffe  |
| Server hostname       | sfo07s17-in-x05.1e100.net                                   |

SSL Report v2.1.8

Copyright © 2009-2021 [Qualys, Inc.](#) All Rights Reserved.

[Terms and Conditions](#)

[Try Qualys for free!](#) Experience the award-winning [Qualys Cloud Platform](#) and the entire collection of [Qualys Cloud Apps](#), including [certificate security](#) solutions.