Qualys. SSL Labs

SSL Report: www.google.com (172.217.0.36)

Assessed on: Tue, 16 Oct 2018 08:36:45 UTC | **HIDDEN** | Clear cache

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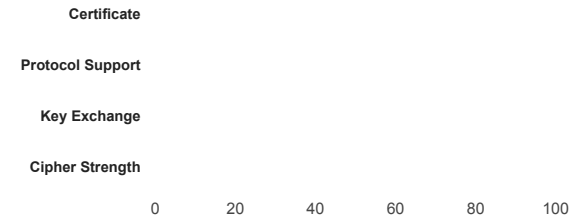
Summary

Overall Rating

A



Visit our documentation page for more information, configuration guides, and books. Known issues are documented here.

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

Subject	www.google.com Fingerprint SHA256: f350631ac4d7544d6f7ea2fd4f622deeb22401aa40f002fbd6e7e44682c78fff Pin SHA256: WX7S1qpP2/eBuTV/bL7+K/6MxXYzg0gxJjlcF1ez2PM=
Common names	www.google.com
Alternative names	www.google.com
Serial Number	32734d44256e73c2
Valid from	Tue, 25 Sep 2018 07:43:00 UTC
Valid until	Tue, 18 Dec 2018 07:43:00 UTC (expires in 2 months and 1 day)
Key	EC 256 bits
Weak key (Debian)	No
Issuer	Google Internet Authority G3 AIA: http://pki.goog/gsr2/GTSGIAG3.crt
Signature algorithm	SHA256withRSA
Extended Validation	No
Certificate Transparency	Yes (TLS extension)
OCSP Must Staple	No
Revocation information	CRL, OCSP CRL: http://crl.pki.goog/GTSGIAG3.crl OCSP: http://ocsp.pki.goog/GTSGIAG3
Revocation status	Good (not revoked)
DNS CAA	Yes policy host: google.com issue: pki.goog flags:0
Trusted	Yes Mozilla Apple Android Java Windows

Additional Certificates (if supplied)

Certificates provided	2 (2091 bytes)
Chain issues	None

#2

Subject	Google Internet Authority G3 Fingerprint SHA256: be0ccd54d4cecda1bd5e5d9ecc85a04c2c1f93a5220d77fde88fe9ad081f641b Pin SHA256: f8NnEFZxQ4ExFOhSN7EiFWtiudZQVD2oY60uauV/n78=
Valid until	Wed, 15 Dec 2021 00:00:42 UTC (expires in 3 years and 1 month)
Key	RSA 2048 bits (e 65537)
Issuer	GlobalSign
Signature algorithm	SHA256withRSA

Certification Paths

Click here to expand

Certificate #2: RSA 2048 bits (SHA256withRSA)

Server Key and Certificate #1

Subject	www.google.com Fingerprint SHA256: bc43902d51294fde39490caa38cb3515d1a69f2fec4dde33fd3fb3968d12e794 Pin SHA256: 4mavcGpZ8Z2rJFNB2sEcWYKWpaxlDGkHvwWa6uGKb2k=
Common names	www.google.com
Alternative names	www.google.com
Serial Number	1115f878410d727e
Valid from	Tue, 25 Sep 2018 07:43:00 UTC
Valid until	Tue, 18 Dec 2018 07:43:00 UTC (expires in 2 months and 1 day)
Key	RSA 2048 bits (e 65537)
Weak key (Debian)	No
Issuer	Google Internet Authority G3 AIA: http://pki.goog/gsr2/GTSGIAG3.crt
Signature algorithm	SHA256withRSA
Extended Validation	No
Certificate Transparency	Yes (TLS extension)
OCSP Must Staple	No
Revocation information	CRL, OCSP CRL: http://crl.pki.goog/GTSGIAG3.crl OCSP: http://ocsp.pki.goog/GTSGIAG3
Revocation status	Good (not revoked)
DNS CAA	Yes policy host: google.com issue: pki.goog flags:0
Trusted	Yes Mozilla Apple Android Java Windows

Additional Certificates (if supplied)

Certificates provided	2 (2278 bytes)
Chain issues	None

#2

Subject	Google Internet Authority G3 Fingerprint SHA256: be0ccd54d4cecda1bd5e5d9ecc85a04c2c1f93a5220d77fde88fe9ad081f641b Pin SHA256: f8NnEFZxQ4ExFOhSN7EiFWtiudZQVD2oY60uauV/n78=
Valid until	Wed, 15 Dec 2021 00:00:42 UTC (expires in 3 years and 1 month)

Additional Certificates (if supplied)

Key	RSA 2048 bits (e 65537)
Issuer	GlobalSign
Signature algorithm	SHA256withRSA

Certification Paths

Click here to expand

Configuration

Protocols

TLS 1.3	No
TLS 1.2	Yes
TLS 1.1	Yes
TLS 1.0	Yes
SSL 3	No
SSL 2	No

For TLS 1.3 tests, we only support RFC 8446.

Cipher Suites

 # 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(P)
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	128
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a) ECDH x25519 (eq. 3072 bits RSA) FS	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(P)
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	128
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014) ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_RSA_WITH_AES_128_GCM_SHA256 (0x9c) **WEAK**	128
TLS_RSA_WITH_AES_256_GCM_SHA384 (0x9d) **WEAK**	256
TLS_RSA_WITH_AES_128_CBC_SHA (0x2f) **WEAK**	128
TLS_RSA_WITH_AES_256_CBC_SHA (0x35) **WEAK**	256
TLS_RSA_WITH_3DES_EDE_CBC_SHA (0xa) **WEAK**	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 [2]	RSA 2048 (SHA256)	TLS 1.0	TLS_RSA_WITH_AES_128_CBC_SHA No FS
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

Handshake Simulation

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
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	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_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
Googlebot Feb 2018	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
IE 7 / Vista	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
IE 8 / XP No FS [1] No SNI [2]	RSA 2048 (SHA256)	TLS 1.0	TLS_RSA_WITH_3DES_EDE_CBC_SHA
IE 8-10 / Win 7 R	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
IE 11 / Win 7 R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
IE 11 / Win 8.1 R	EC 256 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
IE 10 / Win Phone 8.0	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
IE 11 / Win Phone 8.1 R	EC 256 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
IE 11 / Win Phone 8.1 Update R	EC 256 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
IE 11 / Win 10 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Edge 15 / Win 10 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Edge 13 / Win Phone 10 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Java 6u45 No SNI [2]	RSA 2048 (SHA256)	TLS 1.0	TLS_RSA_WITH_AES_128_CBC_SHA No FS
Java 7u25	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Java 8u161	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
OpenSSL 0.9.8y	RSA 2048 (SHA256)	TLS 1.0	TLS_RSA_WITH_AES_128_CBC_SHA No FS
OpenSSL 1.0.1l R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
OpenSSL 1.0.2e R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Safari 5.1.9 / OS X 10.6.8	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 6 / iOS 6.0.1	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 6.0.4 / OS X 10.8.4 R	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 7 / iOS 7.1 R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 7 / OS X 10.9 R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 8 / iOS 8.4 R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 8 / OS X 10.10 R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
Safari 9 / iOS 9 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Safari 9 / OS X 10.11 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Safari 10 / iOS 10 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Safari 10 / OS X 10.12 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Apple ATS 9 / iOS 9 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
Yahoo Slurp Jan 2015	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
YandexBot Jan 2015	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 [1] No SNI [2]	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

DROWN	No, server keys and hostname not seen elsewhere with SSLv2 **(1) For a better understanding of this test, please read this longer explanation** (2) Key usage data kindly provided by the Censys network search engine; original DROWN website here (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 (more info) TLS 1.0: 0xc009
POODLE (SSLv3)	No, SSL 3 not supported (more info)
POODLE (TLS)	No (more info)
Downgrade attack prevention	**Yes, TLS_FALLBACK_SCSV supported** (more info)
SSL/TLS compression	No
RC4	No
Heartbeat (extension)	No
Heartbleed (vulnerability)	No (more info)
Ticketbleed (vulnerability)	No (more info)
OpenSSL CCS vuln. (CVE-2014-0224)	No (more info)
OpenSSL Padding Oracle vuln. (CVE-2016-2107)	No (more info)
ROBOT (vulnerability)	No (more info)
Forward Secrecy	With modern browsers (more info)
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)	**Yes** **TOO SHORT (less than 180 days)** max-age=604800
HSTS Preloading	**Not in: Chrome Edge Firefox IE**
Public Key Pinning (HPKP)	No (more info)
Public Key Pinning Report-Only	No
Public Key Pinning (Static)	**Yes** includeSubDomains: false report-uri: http://clients3.google.com/cert_upload_json pin-sha256: IPMbDAjLVSGntGO3WP53X/zilCVndez5YJ2+vJvhJsA= pin-sha256: 7HIpactkIAq2Y49orFOOQKurWxmmSFZhBCoQYcRhJ3Y= pin-sha256: f8NnEFZxQ4ExFOhSN7EiFWtiudZQVD2oY60uauV/n78= pin-sha256: YZPgTZ+woNCCCIW3LH2CxQeLzB/1m42QcCTBSdgayjs= pin-sha256: iie1VXtL7HzAMF+/PVPR9xzT80kQxdZeJ+zduCB3uj0= pin-sha256: K87oWBWM9UZfyddvDfoxL+8lpNyoUB2ptGtn0fv6G2Q= (Forbidden) pin-sha256: hxrRCWbIjB5FGRZv++qAms7uX69qFC45aBhVpeGclco= (Forbidden) pin-sha256: SG/sBoMJc9IgJ8+dGgIHyTLvz7wyVBio7IMoDanPuRk= (Forbidden) pin-sha256: LvRiGEjRqfzurezaWuj8Wie2gyHMrW5Q06LspMnox7A= (Forbidden)
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

HTTP Requests

1 **https://www.google.com/** (HTTP/1.1 200 OK)

Miscellaneous

Test date	Tue, 16 Oct 2018 08:33:57 UTC
Test duration	84.99 seconds
HTTP status code	200
HTTP server signature	gws
Server hostname	lga15s43-in-f4.1e100.net

SSL Report v1.32.6