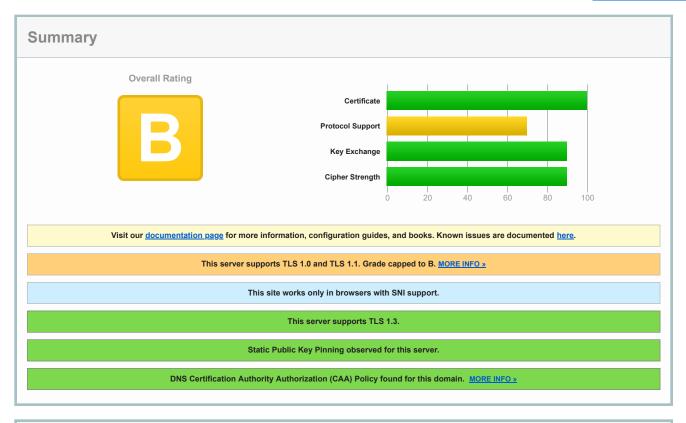


You are here: <u>Home > Projects > SSL Server Test > gmail.com</u> > 172.217.6.69

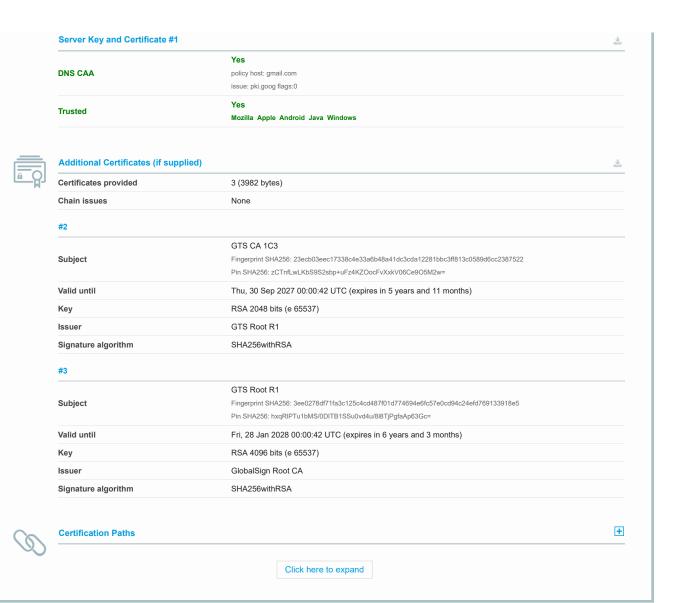
## SSL Report: gmail.com (172.217.6.69)

Assessed on: Fri, 22 Oct 2021 19:15:35 UTC | Hide | Clear cache

## Scan Another »



Server Key and Certificate #1		
Subject	gmail.com Fingerprint SHA256: 6e751c6d93f87ffbefd1913ef29f695565562ca17b18cd5d1c904727386d145c Pin SHA256: LRjFYPLI/t7ZiujkWb+LuPuKd/cRbH6Sf4sg32MIAwQ=	
Common names	gmail.com	
Alternative names	gmail.com *.gmail.com	
Serial Number	55a53dedcd5d71e80a000000108ad7c	
Valid from	Mon, 04 Oct 2021 02:11:47 UTC	
Valid until	Mon, 27 Dec 2021 02:11:46 UTC (expires in 2 months and 4 days)	
Key	EC 256 bits	
Weak key (Debian)	No	
Issuer	GTS CA 1C3  AIA: http://pki.goog/repo/certs/gts1c3.der	
Signature algorithm	SHA256withRSA	
Extended Validation	No	
Certificate Transparency	Yes (certificate)	
OCSP Must Staple	No	
Revocation information	CRL, OCSP CRL: http://crls.pki.goog/gts1c3/QqFxbi9M48c.crl OCSP: http://ocsp.pki.goog/gts1c3	
Revocation status	Good (not revoked)	





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# Certificate #3: RSA 2048 bits (SHA256withRSA)



Server Key and Certificate #1		±
Subject	gmail.com Fingerprint SHA256: 438a6c749d2ffa40ab7262a29dffb3e3fcfbb2207b4676fac11125eb7ebc79b0 Pin SHA256: hs2SWbultKUMyAJb75uHW6uBv9QXJgWMZv1j5GRmtgs=	
Common names	gmail.com	
Alternative names	gmail.com *.gmail.com	
Serial Number	221b2aaca488c4a50a0000000108ad79	
Valid from	Mon, 04 Oct 2021 02:11:39 UTC	
Valid until	Mon, 27 Dec 2021 02:11:38 UTC (expires in 2 months and 4 days)	
Key	RSA 2048 bits (e 65537)	
Weak key (Debian)	No	
Issuer	GTS CA 1C3 AIA: http://pki.goog/repo/certs/gts1c3.der	

Server Key and Certificate #1		<u>±</u>	
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 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)

4

Certificates provided	3 (4186 bytes)
Chain issues	None

#### #2

Subject	GTS CA 1C3 Fingerprint SHA256: 23ecb03eec17338c4e33a6b48a41dc3cda12281bbc3ff813c0589d6cc2387522 Pin SHA256: zCTnfLwLKbS9S2sbp+uFz4KZOocFvXxkV06Ce905M2w=
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/0DITB1SSu0vd4u/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** 

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# 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**



#### -# 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 WEAK 128 TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CBC\_SHA (0xc00a) ECDH x25519 (eq. 3072 bits RSA) FS WEAK 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 WEAK 128 TLS\_ECDHE\_RSA\_WITH\_AES\_256\_CBC\_SHA (0xc014) ECDH x25519 (eq. 3072 bits RSA) FS WEAK 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)





#### **Handshake Simulation**

Android 2.3.7 No SNI <sup>2</sup>		e because this client of	doesn't support SNI 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

Googlebot Feb 2018	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
E 7 / Vista	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
E 8 / XP No FS <sup>1</sup> No SNI <sup>2</sup>		e because this client of the transfer of the because this client of the because the because this client of the because this client of the because this client of the because t	doesn't support SNI 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
<u>E 11 / Win 7</u> R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
E 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
E 10 / Win Phone 8.0	EC 256 (SHA256)	TLS 1.0	TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
E 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
E 11 / Win Phone 8.1 Update	EC 256 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
E 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 16 / Win 10 R	EC 256 (SHA256)	TLS 1.2 > h2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Edge 18 / 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 <sup>2</sup>	Incorrect certificate	e because this client of	doesn't support SNI
			WITH_AES_128_CBC_SHA
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
Java 11.0.3	-	TLS 1.3	TLS_AES_128_GCM_SHA256 ECDH secp256r1 FS
Java 12.0.1	-	TLS 1.3	TLS_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 1.0.1I R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
OpenSSL 1.0.2s R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
OpenSSL 1.1.0k R	EC 256 (SHA256)	TLS 1.2	TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 ECDH x25519 FS
OpenSSL 1.1.1c R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 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
Safari 12.1.2 / MacOS 10.14.6 Beta R	-	TLS 1.3	TLS_CHACHA20_POLY1305_SHA256 ECDH x25519 FS
Safari 12.1.1 / iOS 12.3.1 R	-	TLS 1.3	TLS_CHACHA20_POLY1305_SHA256 ECDH x25519 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

#### # Not simulated clients (Protocol mismatch)

YandexBot Jan 2015

<u>IE 6 / XP</u> 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.

 $(3) \ {\hbox{Only first connection attempt simulated. Browsers sometimes retry with a lower protocol version.}$ 

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

EC 256 (SHA256)

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

TLS 1.2

TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_GCM\_SHA256 ECDH secp256r1 FS

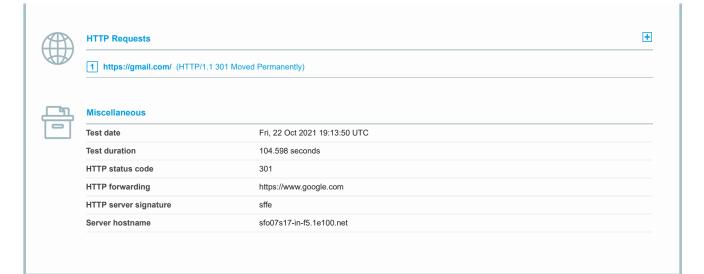
-

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



#### **Protocol Details**

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 ( <u>more info</u> )			
Zombie POODLE	No (more info) TLS 1.2: 0xc009			
GOLDENDOODLE	No (more info) TLS 1.2: 0xc009			
OpenSSL 0-Length	No (more info) TLS 1.2: 0xc009			
Sleeping POODLE	No (more info) TLS 1.2: 0xc009			
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)	No			
HSTS Preloading	Chrome Edge Firefox IE			
Public Key Pinning (HPKP)	No (more info)			
Public Key Pinning Report-Only	No			
Public Key Pinning (Static)	includeSubDomains: false report-uri: http://clients3.google.com/cert_upload_json pin-sha256: IPMbDAjLVSGntGO3WP53X/ziiCVndez5YJ2+vJvhJsA= pin-sha256: YZPgTZ+woNCCCIW3LH2CxQeLzB/1m42QcCTBSdgayjs= pin-sha256: hxqRIPTu1bMS/0DITB1SSu0vd4w/8l8TJPgfaAp63Gc= pin-sha256: Vfd95BwDeSQo+NUYxVEEIIvkOlWY2SalKK1IPhzOx78= pin-sha256: QXnt2YHvdHR3tJYmQIr0Paosp6t/nggsEGD4QJZ3Q0g= pin-sha256: mEfiZT5enoR1FuXLgYYGqnVEoZvmf9c2bVBpiOJYQ0c= pin-sha256: iie1VXtL7HzAMF+/PVPR9xzT80kQxdZeJ+zduCB3uj0= pin-sha256: hxrRCWbljB5FGRZv++qAms7uX69qFC45aBhVpeGclco= (Forbidden) pin-sha256: Sg/sBoMJc9lgJ8+dGglHyTLvz7wyVBio7IMoDanPuRk= (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			
0-RTT enabled	No			



SSL Report v2.1.8

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