SSL Report: byu.edu (128.187.16.184)

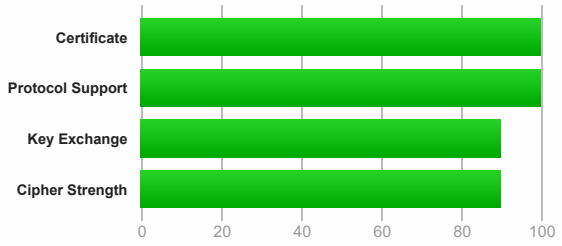
Assessed on: Fri, 22 Oct 2021 19:15:09 UTC | Hide | Clear cache

Scan Another »

Summary

Overall Rating

A



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

This server supports TLS 1.3.

Certificate #1: RSA 4096 bits (SHA256withRSA)

Server Key and Certificate #1

Subject	*.byu.edu Fingerprint SHA256: 6d46cb22682af2920fba305c5ae53c3658ac9660d73de722a8fc72e3cb1d7e8a Pin SHA256: 8T9UejqwN1t8GKob/f//FGu80ydVMksQWYDzqgdGNWg=
Common names	*.byu.edu
Alternative names	*.byu.edu byu.edu
Serial Number	01a7a88e6547453ed3861654a2ff8c6d
Valid from	Thu, 18 Feb 2021 00:00:00 UTC
Valid until	Tue, 22 Feb 2022 23:59:59 UTC (expires in 4 months)
Key	RSA 4096 bits (e 65537)
Weak key (Debian)	No
Issuer	DigiCert TLS RSA SHA256 2020 CA1 AIA: http://cacerts.digicert.com/DigiCertTLSRSASHA2562020CA1.crt
Signature algorithm	SHA256withRSA
Extended Validation	No
Certificate Transparency	Yes (certificate)
OCSP Must Staple	No
Revocation information	CRL, OCSP CRL: http://crl3.digicert.com/DigiCertTLSRSASHA2562020CA1.crl OCSP: http://ocsp.digicert.com
Revocation status	Good (not revoked)
DNS CAA	No (more info)
Trusted	Yes Mozilla Apple Android Java Windows

Additional Certificates (if supplied)

Certificates provided	2 (3109 bytes)
Chain issues	None

Additional Certificates (if supplied)

#2

Subject	DigiCert TLS RSA SHA256 2020 CA1 Fingerprint SHA256: 25768713d3b459f9382d2a594f85f34709fd2a8930731542a4146ffb246bec69 Pin SHA256: RQeZkB42znUfsDIIFWIRiYEcKl7nHwNFwWCrnMMJbVc=
Valid until	Mon, 23 Sep 2030 23:59:59 UTC (expires in 8 years and 11 months)
Key	RSA 2048 bits (e 65537)
Issuer	DigiCert Global Root CA
Signature algorithm	SHA256withRSA

Certification Paths

Click here to expand

Configuration

Protocols

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

Cipher Suites

TLS 1.3 (suites in server-preferred order)

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_AES_128_GCM_SHA256 (0x1301) ECDH x25519 (eq. 3072 bits RSA) FS	128
TLS_AES_128_CCM_SHA256 (0x1304) ECDH x25519 (eq. 3072 bits RSA) FS	128

TLS 1.2 (suites in server-preferred order)

TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f) ECDH x25519 (eq. 3072 bits RSA) FS	128
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030) ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca8) ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 (0x9e) DH 4096 bits FS	128
TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 (0x9f) DH 4096 bits FS	256
TLS_DHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xccaa) DH 4096 bits FS	256
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc027) ECDH x25519 (eq. 3072 bits RSA) FS **WEAK**	128
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_SHA384 (0xc028) ECDH x25519 (eq. 3072 bits RSA) FS **WEAK**	256
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014) ECDH x25519 (eq. 3072 bits RSA) FS **WEAK**	256
TLS_DHE_RSA_WITH_AES_128_CBC_SHA256 (0x67) DH 4096 bits FS **WEAK**	128
TLS_DHE_RSA_WITH_AES_256_CBC_SHA256 (0x6b) DH 4096 bits FS **WEAK**	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_SHA256 (0x3c) **WEAK**	128
TLS_RSA_WITH_AES_256_CBC_SHA256 (0x3d) **WEAK**	256
TLS_RSA_WITH_AES_128_CBC_SHA (0x2f) **WEAK**	128
TLS_RSA_WITH_AES_256_CBC_SHA (0x35) **WEAK**	256

Cipher Suites

TLS_RSA_WITH_3DES_EDE_CBC_SHA (0xa) **WEAK**	112

Handshake Simulation

Android 4.4.2	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Android 5.0.0	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Android 6.0	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp384r1 FS
Android 7.0	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Android 8.0	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Android 8.1	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Android 9.0	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
BingPreview Jan 2015	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Chrome 49 / XP SP3	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp384r1 FS
Chrome 69 / Win 7 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Chrome 70 / Win 10	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Chrome 80 / Win 10 R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Firefox 31.3.0 ESR / Win 7	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Firefox 47 / Win 7 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Firefox 49 / XP SP3	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Firefox 62 / Win 7 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Firefox 73 / Win 10 R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Googlebot Feb 2018	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
IE 11 / Win 7 R	RSA 4096 (SHA256)	TLS 1.2	TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 DH 4096 FS
IE 11 / Win 8.1 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 DH 4096 FS
IE 11 / Win Phone 8.1 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp384r1 FS
IE 11 / Win Phone 8.1 Update R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 DH 4096 FS
IE 11 / Win 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp384r1 FS
Edge 15 / Win 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Edge 16 / Win 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Edge 18 / Win 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
Edge 13 / Win Phone 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp384r1 FS
Java 8u161	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Java 11.0.3	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH secp256r1 FS
Java 12.0.1	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH secp256r1 FS
OpenSSL 1.0.1l R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
OpenSSL 1.0.2s R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
OpenSSL 1.1.0k R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH x25519 FS
OpenSSL 1.1.1c R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Safari 6 / iOS 6.0.1	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp521r1 FS
Safari 7 / iOS 7.1 R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp521r1 FS
Safari 7 / OS X 10.9 R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp521r1 FS
Safari 8 / iOS 8.4 R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp521r1 FS
Safari 8 / OS X 10.10 R	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp521r1 FS
Safari 9 / iOS 9 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Safari 9 / OS X 10.11 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Safari 10 / iOS 10 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Safari 10 / OS X 10.12 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Safari 12.1.2 / MacOS 10.14.6 Beta R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Safari 12.1.1 / iOS 12.3.1 R	-	TLS 1.3	TLS_AES_256_GCM_SHA384 ECDH x25519 FS
Apple ATS 9 / iOS 9 R	RSA 4096 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp521r1 FS
Yahoo Slurp Jan 2015	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp384r1 FS

Handshake Simulation

YandexBot Jan 2015	RSA 4096 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256	ECDH secp521r1 FS

 # Not simulated clients (Protocol mismatch)

Click here to expand

(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

IP Address	Port	Export	Special	Status
128.187.102.231	443	Yes	Yes	Not vulnerable
128.187.102.229	443	Yes	Yes	Not vulnerable
128.187.102.232	443	No	Yes	Not vulnerable
128.187.102.228	443	Yes	Yes	Not vulnerable
128.187.66.22	443	Yes	Yes	Not vulnerable
128.187.66.34	443	Yes	Yes	Not vulnerable

(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 incomplete
(4) We perform real-time key reuse checks, but stop checking after first confirmed vulnerability
(5) The "Special" column indicates vulnerable OpenSSL version; "Export" refers to export cipher suites

Secure Renegotiation	**Supported**
Secure Client-Initiated Renegotiation	No
Insecure Client-Initiated Renegotiation	No
BEAST attack	Mitigated server-side (more info)
POODLE (SSLv3)	No, SSL 3 not supported (more info)
POODLE (TLS)	No (more info)
Zombie POODLE	No (more info) TLS 1.2 : 0xc027
GOLDENDOODLE	No (more info) TLS 1.2 : 0xc027
OpenSSL 0-Length	No (more info) TLS 1.2 : 0xc027
Sleeping POODLE	No (more info) TLS 1.2 : 0xc027
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	**Yes (with most browsers) ROBUST** (more info)
ALPN	Yes http/1.1
NPN	No
Session resumption (caching)	Yes
Session resumption (tickets)	No
OCSP stapling	**Yes**
Strict Transport Security (HSTS)	Disabled max-age=0; preload
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)	No (more info)

Protocol Details

Long handshake intolerance	No
TLS extension intolerance	No
TLS version intolerance	No
Incorrect SNI alerts	No
Uses common DH primes	No
DH public server param (Ys) reuse	No
ECDH public server param reuse	No
Supported Named Groups	x25519, secp521r1, secp384r1, secp256r1 (server preferred order)
SSL 2 handshake compatibility	Yes
0-RTT enabled	No

HTTP Requests

1 **https://byu.edu/** (HTTP/1.1 301 Moved Permanently)

Miscellaneous

Test date	Fri, 22 Oct 2021 19:12:33 UTC
Test duration	156.162 seconds
HTTP status code	301
HTTP forwarding	**http://www.byu.edu PLAINTEXT**
HTTP server signature	Apache/2.4.37 (Red Hat Enterprise Linux) OpenSSL/1.1.1g
Server hostname	apollo.byu.edu

SSL Report v2.1.8