SSL Report: **www.redhat.com** (23.56.120.155)

Summary

Overall Rating

A

Certificate						
Protocol Support						
Key Exchange						
Cipher Strength						

0   20   40   60   80   100

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

Renegotiation test has been disabled temporarily due to an Apache httpd 2.4.37 bug. MORE INFO »

Certificate #1: RSA 2048 bits (SHA256withRSA)

Server Key and Certificate #1

Subject	www.redhat.com
	Fingerprint SHA256: a6108fa62f7bc1ef3f041de71c137a9682c9daa942ab11d3c5bbf9d94b6d20e8
	Pin SHA256: F3mjDilfaScppcNA9HHR40s11eEgwBHuAouqpZceo6c=
Common names	www.redhat.com
Alternative names	www.redhat.com redhat.com
Serial Number	08a1d951069f1b58af527a4dde7254cf
Valid from	Wed, 21 Mar 2018 00:00:00 UTC
Valid until	Fri, 20 Mar 2020 12:00:00 UTC (expires in 1 year)
Key	RSA 2048 bits (e 65537)
Weak key (Debian)	No
Issuer	DigiCert SHA2 Extended Validation Server CA
	AIA: http://cacerts.digicert.com/DigiCertSHA2ExtendedValidationServerCA.crt
Signature algorithm	SHA256withRSA
Extended Validation	Yes
Certificate Transparency	Yes (certificate)
OCSP Must Staple	No
Revocation information	CRL, OCSP
	CRL: http://crl3.digicert.com/sha2-ev-server-g2.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 (3084 bytes)
Chain issues	None

#2

Subject	DigiCert SHA2 Extended Validation Server CA
	Fingerprint SHA256: 403e062a2653059113285baf80a0d4ae422c848c9f78fad01fc94bc5b87fef1a
	Pin SHA256: RRM1dGqnDFsCJXBTHky16vi1obOlCgFFn/yOhl/y+ho=
Valid until	Sun, 22 Oct 2028 12:00:00 UTC (expires in 9 years and 7 months)
Key	RSA 2048 bits (e 65537)
Issuer	DigiCert High Assurance EV Root CA
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_RSA_WITH_AES_256_GCM_SHA384 (0xc030) ECDH secp256r1 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f) ECDH secp256r1 (eq. 3072 bits RSA) FS	128
TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca8) ECDH secp256r1 (eq. 3072 bits RSA) FS	256^P
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 (0xc028) ECDH secp256r1 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc027) ECDH secp256r1 (eq. 3072 bits RSA) FS	128
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014) ECDH secp256r1 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013) ECDH secp256r1 (eq. 3072 bits RSA) FS	128
TLS_RSA_WITH_AES_256_GCM_SHA384 (0x9d) **WEAK**	256
TLS_RSA_WITH_AES_128_GCM_SHA256 (0x9c) **WEAK**	128
TLS_RSA_WITH_AES_256_CBC_SHA256 (0x3d) **WEAK**	256
TLS_RSA_WITH_AES_128_CBC_SHA256 (0x3c) **WEAK**	128
TLS_RSA_WITH_AES_256_CBC_SHA (0x35) **WEAK**	256
TLS_RSA_WITH_AES_128_CBC_SHA (0x2f) **WEAK**	128
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_256_CBC_SHA ECDH secp256r1 FS
Android 4.1.1	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
Android 4.2.2	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
Android 4.3	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
Android 4.4.2	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS

[Android 5.0.0](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
[Android 6.0](#)	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
[Android 7.0](#)	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 ECDH secp256r1 FS
[Baidu Jan 2015](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
[BingPreview Jan 2015](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Chrome 49 / XP SP3](#)	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
[Chrome 69 / Win 7](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Chrome 70 / Win 10](#)	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Firefox 31.3.0 ESR / Win 7](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
[Firefox 47 / Win 7](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 ECDH secp256r1 FS
[Firefox 49 / XP SP3](#)	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Firefox 62 / Win 7](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Googlebot Feb 2018](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[IE 7 / Vista](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_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	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
[IE 11 / Win 7](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[IE 11 / Win 8.1](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[IE 10 / Win Phone 8.0](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
[IE 11 / Win Phone 8.1](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 ECDH secp256r1 FS
[IE 11 / Win Phone 8.1 Update](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[IE 11 / Win 10](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Edge 15 / Win 10](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Edge 13 / Win Phone 10](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 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](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA ECDH secp256r1 FS
[Java 8u161](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[OpenSSL 0.9.8y](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_RSA_WITH_AES_256_CBC_SHA No FS
[OpenSSL 1.0.1l](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[OpenSSL 1.0.2e](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Safari 5.1.9 / OS X 10.6.8](#)	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
[Safari 6 / iOS 6.0.1](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[Safari 6.0.4 / OS X 10.8.4](#) R	RSA 2048 (SHA256)	TLS 1.0	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA ECDH secp256r1 FS
[Safari 7 / iOS 7.1](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[Safari 7 / OS X 10.9](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[Safari 8 / iOS 8.4](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[Safari 8 / OS X 10.10](#) R	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 ECDH secp256r1 FS
[Safari 9 / iOS 9](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Safari 9 / OS X 10.11](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Safari 10 / iOS 10](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Safari 10 / OS X 10.12](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Apple ATS 9 / iOS 9](#) R	RSA 2048 (SHA256)	TLS 1.2 > http/1.1	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[Yahoo Slurp Jan 2015](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 ECDH secp256r1 FS
[YandexBot Jan 2015](#)	RSA 2048 (SHA256)	TLS 1.2	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 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
BEAST attack	Not mitigated server-side (more info) TLS 1.0: 0xc014
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 http/1.1
NPN	Yes http/1.1 http/1.0
Session resumption (caching)	Yes
Session resumption (tickets)	Yes
OCSP stapling	**Yes**
Strict Transport Security (HSTS)	No
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)
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	secp256r1, x25519 (server preferred order)
SSL 2 handshake compatibility	Yes

HTTP Requests ⊞

1	**https://www.redhat.com/** (HTTP/1.1 301 Moved Permanently)
2	**https://www.redhat.com/en** (HTTP/1.1 200 OK)

Miscellaneous

Test date	Sat, 23 Feb 2019 19:16:39 UTC
Test duration	81.252 seconds
HTTP status code	200
HTTP server signature	Apache
Server hostname	a23-56-120-155.deploy.static.akamaitechnologies.com