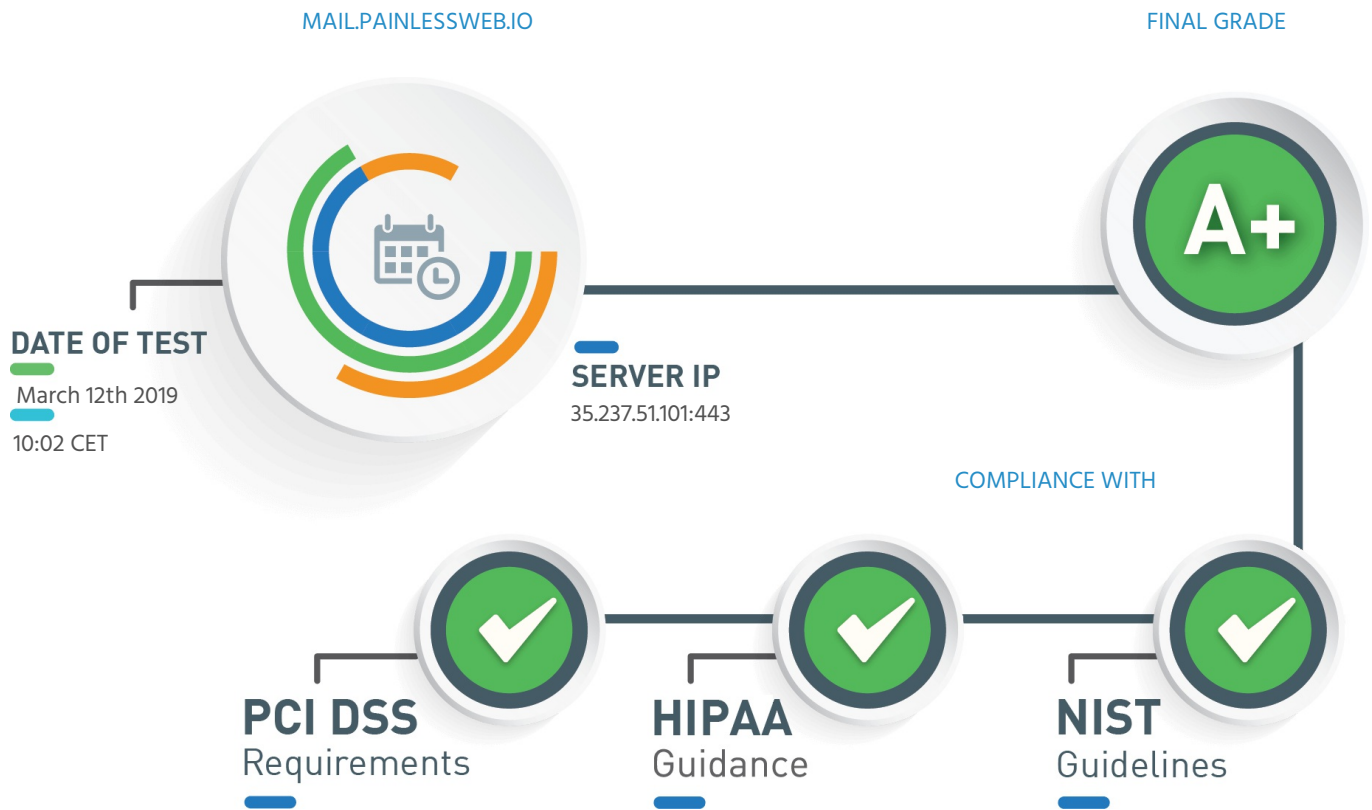


SSL Security Test

Test SSL/TLS implementation of any service on any port for compliance with PCI DSS requirements, HIPAA guidance and NIST guidelines.



Summary of mail.painlessweb.io:443 (HTTPS) SSL Security Test

- The server supports the most recent and secure TLS protocol version of TLS 1.3. Good configuration
- The server prefers cipher suites supporting Perfect-Forward-Secrecy. Good configuration

Test For Compliance With PCI DSS Requirements

Reference: PCI DSS 3.1 - Requirements 2.3 and 4.1

CERTIFICATES ARE TRUSTED

All the certificates provided by the server are trusted.

Good configuration

SUPPORTED CIPHERS

List of all cipher suites supported by the server:

TLSV1.3

TLS_AES_256_GCM_SHA384

Information

TLS_CHACHA20_POLY1305_SHA256

Information

TLS_AES_128_GCM_SHA256

Information

TLSV1.2

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLSV1.1

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

SUPPORTED PROTOCOLS

List of all SSL/TLS protocols supported by the server:

TLSv1.1

Good configuration

TLSv1.2

Good configuration

TLSv1.3

Information

DIFFIE-HELLMAN PARAMETER SIZE

Diffie-Hellman parameter size: 4096 bits

Good configuration

SUPPORTED ELLIPTIC CURVES

List of all elliptic curves supported by the server:

P-384 (secp384r1) (384 bits)

Good configuration

POODLE OVER TLS

The server is not vulnerable to POODLE over TLS.

Not vulnerable

CVE-2016-2107

The server is not vulnerable to OpenSSL padding-oracle flaw (CVE-2016-2107).

Not vulnerable

SERVER DOES NOT SUPPORT CLIENT-INITIATED INSECURE RENEGOTIATION

The server does not support client-initiated insecure renegotiation.

Good configuration

ROBOT

The server is not vulnerable to ROBOT (Return Of Bleichenbacher's Oracle Threat) vulnerability.

Not vulnerable

HEARTBLEED

The server version of OpenSSL is not vulnerable to Heartbleed attack.

Not vulnerable

CVE-2014-0224

The server is not vulnerable to CVE-2014-0224 (OpenSSL CCS flaw).

Not vulnerable

Test For Compliance With HIPAA

Reference: HIPAA of 1996, Guidance Specifying the Technologies and Methodologies that Render Protected Health Information Unusable, Unreadable, or Indecipherable to Unauthorized Individuals.

X509 CERTIFICATES ARE IN VERSION 3

All the X509 certificates provided by the server are in version 3.

Good configuration

SERVER SUPPORTS OCSP STAPLING

The server supports OCSP stapling, which allows better verification of the certificate validation status.

Good configuration

SUPPORTED PROTOCOLS

List of all SSL/TLS protocols supported by the server:

TLSv1.1

Good configuration

TLSv1.2

Good configuration

TLSv1.3

Information

SUPPORTED CIPHERS

List of all cipher suites supported by the server:

TLSV1.3

TLS_AES_256_GCM_SHA384

Information

TLS_CHACHA20_POLY1305_SHA256

Information

TLS_AES_128_GCM_SHA256

Information

TLSV1.2

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLSV1.1

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

DIFFIE-HELLMAN PARAMETER SIZE

Diffie-Hellman parameter size: 4096 bits

Good configuration

SUPPORTED ELLIPTIC CURVES

List of all elliptic curves supported by the server:

P-384 (secp384r1) (384 bits)

Good configuration

TLSV1.1 SUPPORTED

The server supports TLSv1.1 which is required minimum to comply with HIPAA guidance.

Good configuration

EC_POINT_FORMAT EXTENSION

The server supports the EC_POINT_FORMAT TLS extension.

Good configuration

Test For Compliance With NIST Guidelines

Reference: NIST Special Publication 800-52 Revision 1 - Section 3

NIST Update to Current Use and Deprecation of TDEA abrogates 3DES authorized in the NIST guidelines.

Information

X509 CERTIFICATES ARE IN VERSION 3

All the X509 certificates provided by the server are in version 3.

Good configuration

SERVER SUPPORTS OCSP STAPLING

The server supports OCSP stapling, which allows better verification of the certificate validation status.

Good configuration

SUPPORTED CIPHERS

List of all cipher suites supported by the server:

TLSV1.3

TLS_AES_256_GCM_SHA384

Information

TLS_CHACHA20_POLY1305_SHA256

Information

TLS_AES_128_GCM_SHA256

Information

TLSV1.2

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLS_RSA_WITH_AES_256_GCM_SHA384

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA256

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA256

Good configuration

TLSV1.1

TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_DHE_RSA_WITH_AES_256_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLS_RSA_WITH_AES_256_CBC_SHA

Good configuration

SUPPORTED PROTOCOLS

List of all SSL/TLS protocols supported by the server:

TLSv1.1

Good configuration

TLSv1.2

Good configuration

TLSv1.3

Information

DIFFIE-HELLMAN PARAMETER SIZE

Diffie-Hellman parameter size: 4096 bits

Good configuration

SUPPORTED ELLIPTIC CURVES

List of all elliptic curves supported by the server:

P-384 (secp384r1) (384 bits)

Good configuration

TLSV1.1 SUPPORTED

The server supports TLSv1.1 which is required minimum to comply with NIST guidelines.

Good configuration

EC_POINT_FORMAT EXTENSION

The server supports the EC_POINT_FORMAT TLS extension.

Good configuration

Test For Industry Best-Practices

DNSCAA

This domain has a Certification Authority Authorization (CAA) record.

Good configuration

issue: digicert.com

issue: globalsign.com

issue: letsencrypt.org

issuewild: comodoca.com

issuewild: digicert.com

issuewild: letsencrypt.org

issue: comodoca.com

CERTIFICATES DO NOT PROVIDE EV

The RSA certificate provided is NOT an Extended Validation (EV) certificate.

Information

TLSV1.3 SUPPORTED

The server supports TLSv1.3 which is the only version of TLS that currently has no known flaws or exploitable weaknesses.

Good configuration

SERVER HAS CIPHER PREFERENCE

The server enforces cipher suites preference.

Good configuration

SERVER PREFERRED CIPHER SUITES

Preferred cipher suite for each protocol supported (except SSLv2). Expected configuration are ciphers allowed by PCI DSS and enabling PFS:

TLSv1.1 TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

TLSv1.1 TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA

Good configuration

TLSv1.2 TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256

TLSv1.2 TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256

Good configuration

TLSv1.3 TLS_AES_256_GCM_SHA384

TLSv1.3 TLS_AES_256_GCM_SHA384

Information

SERVER PREFERS CIPHER SUITES PROVIDING PFS

For TLS family of protocols, the server prefers cipher suite(s) providing Perfect Forward Secrecy (PFS).

Good configuration

ALWAYS-ON SSL

The HTTP version of the website redirects to the HTTPS version.

Good configuration

SERVER PROVIDES HSTS WITH LONG DURATION

The server provides HTTP Strict Transport Security for more than 6 months:

15768000 seconds

Good configuration

SERVER DOES NOT PROVIDE HPKP

The server does not enforce HTTP Public Key Pinning that helps preventing man-in-the-middle attacks.

Information

TLS_FALLBACK_SCSV

The server supports TLS_FALLBACK_SCSV extension for protocol downgrade attack

Good configuration

prevention.

SERVER DOES NOT SUPPORT CLIENT-INITIATED SECURE RENEGOTIATION

The server does not support client-initiated secure renegotiation.

Good configuration

SERVER-INITIATED SECURE RENEGOTIATION

The server supports secure server-initiated renegotiation.

Good configuration

SERVER DOES NOT SUPPORT TLS COMPRESSION

TLS compression is not supported by the server.

Good configuration