



Vulnerabilities 24

MEDIUM SSL Certificate Cannot Be Trusted



Plugin Details

The server's X.509 certificate cannot be trusted. This situation can occur in three different ways, in which the chain of trust can be broken, as stated below:

- First, the top of the certificate chain sent by the server might not be descended from a known public certificate authority. This can occur either when the top of the chain is an unrecognized, self-signed certificate, or when intermediate certificates are missing that would connect the top of the certificate chain to a known public certificate
- Second, the certificate chain may contain a certificate that is not valid at the time of the scan. This can occur either when the scan occurs before one of the certificate's 'notBefore' dates, or after one of the certificate's 'notAfter'
- Third, the certificate chain may contain a signature that either didn't match the certificate's information or could not be verified. Bad signatures can be fixed by getting the certificate with the bad signature to be re-signed by its issuer. Signatures that could not be verified are the result of the certificate's issuer using a signing algorithm that Nessus either does not support or does not recognize.

If the remote host is a public host in production, any break in the chain makes it more difficult for users to verify the authenticity and identity of the web server. This could make it easier to carry out man-in-the-middle attacks against the remote host.

Severity:	Medium
ID:	51192
Version:	1.19
Type:	remote
Family:	General
Published: December 15, 201	
Modified:	April 27, 2020

Risk Information

Risk Factor: Medium

CVSS v3.0 Base Score 6.5

CVSS v3.0 Vector: CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:N

CVSS v2.0 Base Score: 6.4

CVSS v2.0 Vector:

CVSS2#AV:N/AC:L/Au:N/C:P/I:P/A:N

Output

The following certificate was at the top of the certificate chain sent by the remote host, but it is signed by an unknown certificate authority:

|-Subject : CN=* |-Issuer : CN=*

To see debug logs, please visit individual host

Port A

Hosts

443 / tcp / www

185.38.109.109



Vulnerabilities 24



MEDIUM TLS Version 1.0 Protocol Detection

Description

The remote service accepts connections encrypted using TLS 1.0. TLS 1.0 has a number of cryptographic design flaws. Modern implementations of TLS 1.0 mitigate these problems, but newer versions of TLS like 1.2 and 1.3 are designed against these flaws and should be used whenever possible.

As of March 31, 2020, Endpoints that aren't enabled for TLS 1.2 and higher will no longer function properly with major web browsers and major vendors.

PCI DSS v3.2 requires that TLS 1.0 be disabled entirely by June 30, 2018, except for POS POI terminals (and the SSL/TLS termination points to which they connect) that can be verified as not being susceptible to any known exploits.

Solution

Enable support for TLS 1.2 and 1.3, and disable support for TLS 1.0.

https://tools.ietf.org/html/draft-ietf-tls-oldversions-deprecate-00

Plugin Details

Severity: Medium 104743 ID: Version: 1.10 Type: Family: Service detection Published: November 22, 2017 Modified: April 19, 2023

Risk Information

Risk Factor: Medium

CVSS v3.0 Base Score 6.5

CVSS v3.0 Vector: CVSS:3.0/AV:N/AC:H/PR:N/UI:N/S:U/C:H/I:L/A:N CVSS v2.0 Base Score: 6.1 CVSS v2.0 Vector:

CVSS2#AV:N/AC:H/Au:N/C:C/I:P/A:N

itput		Vulnerability Information
TLSv1 is enabled and the server supports at least one cipher.		Asset Inventory: True
To see debug logs	, please visit individual host	Reference Information
Port .	Hosts	CWE: 327
443 / tcp / www	185.38.109.109 [©]	

Vulnerability Name: SSL Medium Strength Cipher Suites Supported (SWEET32)

Risk: High

CWE: (CWE-326)

This CWE ID is used to classify weaknesses related to the use of cryptographic algorithms and cipher suites that may be susceptible to attacks due to their insufficient strength or improper configuration.

Description:

SWEET32 refers specifically to the vulnerability where an attacker can exploit the use of 64-bit block ciphers in SSL/TLS cipher suites, leading to the possibility of collision attacks and information leakage.

OWASP:

SWEET32 is not explicitly listed in the OWASP Top Ten, it falls under the broader category of "Insecure Cryptographic Storage," which is a common concern addressed by OWASP.

Business Impact:

The business impact of the SWEET32 vulnerability can be significant. If exploited, it can lead to the compromise of sensitive data that is transmitted over SSL/TLS connections. This includes financial information, login credentials, personal data, or any other confidential information. Such a breach can result in reputational damage, legal consequences, and financial losses.

Remediation:

- > Disable 64-bit Block Ciphers
- > Update and Reconfigure
- > Periodic Key Rotation

>Monitoring and Alerting >Consider TLS 1.2 or Higher >Use Security Best Practices

<u>Vulnerability Name:</u> SSL Certificate Cannot Be Trusted

Risk: Medium

<u>CWE: (CWE-295)</u>

This CWE ID is used to classify weaknesses related to SSL certificate issues, including expired certificates, self-signed certificates, or certificates signed by untrusted or unknown certificate authorities.

Description:

The SSL certificate cannot be trusted vulnerability occurs when a web server presents an SSL/TLS certificate that is either expired, self-signed, or signed by an untrusted or unknown certificate authority (CA). This means that the authenticity and security of the SSL/TLS connection cannot be verified, potentially exposing users to security risks.

<u>OWASP</u>: The issue of untrusted SSL certificates aligns with the broader category of "Broken Authentication" in the OWASP Top Ten. While OWASP does not specifically list SSL certificate trust issues, they emphasize the importance of secure authentication, which includes the use of valid and trusted SSL certificates to establish secure connections.

<u>Business Impact:</u> The business impact of the SSL certificate cannot be trusted vulnerability can be significant. It can erode user trust, lead to data breaches, and compromise sensitive information. Users may avoid using the affected website or application due to security concerns, resulting in a loss of reputation, potential legal consequences, and financial losses.

Remediation:

- > Renew or Replace Certificates: Ensure that SSL/TLS certificates are valid and up to date. Renew or replace expired certificates promptly.
- > Use Certificates from Trusted CAs.

Implement Certificate Monitoring: Set up a certificate monitoring system to proactively track certificate expiration dates and receive alerts for renewal.
Regularly Update CA Trust Stores: Keep the list of trusted certificate authorities up to date on the server to ensure trust in the certificates presented.
Implement HSTS (HTTP Strict Transport Security): Enable HSTS to ensure that browsers only connect to your site using HTTPS and avoid potential downgrade attacks.
Implement OCSP Stapling: Use OCSP stapling to improve the verification of certificate validity and reduce reliance on the CA's online status check.
Use Security Best Practices: Follow security best practices in configuring and managing SSL/TLS certificates and ensure their proper installation and configuration.