CERT/CC Vulnerability Note VU#120541

CERT/CC Vulnerability Note VU#120541 - Chris Taschner, kb.cert.org.

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Content

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VU#120541 - SSL and TLS protocols renegotiation vulnerability

Carnegie Mellon University

Software Engineering Institute

CERT Coordination Center

SSL and TLS protocols renegotiation vulnerability

Vulnerability Note VU#120541

Original Release Date: 2009-11-11 | Last Revised: 2011-07-22

Overview

A vulnerability exists in SSL and TLS protocols that may allow attackers to execute an arbitrary HTTP transaction.

Description

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The Secure Sockets Layer (SSL) and Transport Layer Security (TLS) protocols are commonly used to provide authentication, encryption, integrity, and non-repudiation services to network applications such as HTTP, IMAP, POP3, LDAP. A vulnerability in the way SSL and TLS protocols allow renegotiation requests may allow an attacker to inject plaintext into an application protocol

stream. This could result in a situation where the attacker may be able to issue commands to the server that appear to be coming from a legitimate source. According to the Network Working Group:

The server treats the client's initial TLS handshake as a renegotiation and thus believes that the initial data transmitted by the attacker is from the same entity as the subsequent client data.

This issue affects SSL version 3.0 and newer and TLS version 1.0 and newer.

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Impact

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A remote, unauthenticated attacker may be able to inject an arbitrary amount of chosen plaintext into the beginning of the application protocol stream. This could allow and attacker to issue HTTP requests, or take action impersonating the user, among other consequences.

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Solution

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Users should contact vendors for specific patch information.

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Vendor Information

120541

Filter by status: All Affected Not Affected Unknown

Filter by content: Additional information available

Sort by: Status Alphabetical

Expand all

View all 111 vendors View less vendors

CVSS Metrics

| Group | Score | Vector | | | Base | 0 | AV:--/AC:--/Au:--/C:--/I:--/A:-- | | | Temporal | 0 | E:ND/RL:ND/RC:ND | | | Environmental | 0 | CDP:ND/TD:ND/CR:ND/IR:ND/AR:ND | |

References

- http://extendedsubset.com/?p=8
- http://www.links.org/?p=780
- http://www.links.org/?p=786
- http://www.links.org/?p=789
- http://blogs.iss.net/archive/sslmitmiscsrf.html

- http://www.ietf.org/mail-archive/web/tls/current/msg03948.html
- https://bugzilla.redhat.com/show_bug.cgi?id=533125
- http://lists.gnu.org/archive/html/gnutls-devel/2009-11/msg00014.html
- http://cvs.openssl.org/chngview?cn=18790
- http://www.links.org/files/no-renegotiation-2.patch
- http://blog.zoller.lu/2009/11/new-sslv3-tls-vulnerability-mitm.html
- https://svn.resiprocate.org/rep/ietf-drafts/ekr/draft-rescorla-tls-renegotiate.txt
- http://www.educatedguesswork.org/2009/11/understanding_the_tls_renegoti.html

Acknowledgements

Thanks to Marsh Ray of PhoneFactor for reporting this vulnerability. This issue was also independently discovered and publicly disclosed by Martin Rex of SAP.

This document was written by Chris Taschner.

Other Information

| **CVE IDs:** | CVE-2009-3555 | | | **Date Public:** | 2009-11-05 | | | **Date First Published:** | 2009-11-11 | | | *Date Last Updated: * | 2011-07-22 12:47 UTC | | | *Document Revision: * | 38 | |

Recovery notes

Source evidence recovered on 2026-09-14. The earlier source capture (SHA-256 `249accb3069df5ff227b0af386155bddc7e8267d7d4b7c9bbc1f921da65ba7e2`) is no longer available. This publication uses a separately preserved capture of the same document recorded on 2026-08-07 (SHA-256 `cd0da09ec1a6965e9504caee3b2ac862e135eff63ef8625482559920a9b2a2d1`). The existing article text is retained. The archive journal ties this replacement source to the same extracted content; differences in the published copy are documented formatting and footer cleanup. The missing earlier capture remains documented in the archive history.