RFC 8997
Deprecation of TLS 1.1 for Email Submission and Access

Abstract
This specification updates the current recommendation for the use of the Transport Layer Security (TLS) protocol to provide confidentiality of email between a Mail User Agent (MUA) and a Mail Submission Server or Mail Access Server. This document updates RFC 8314.

Status of This Memo
This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 7841.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at https://www.rfc-editor.org/info/rfc8997.

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1. Introduction

[RF8314] defines the minimum recommended version of TLS as version 1.1. Due to the deprecation of TLS 1.1 in [RFC8996], this recommendation is no longer valid. Therefore, this document updates [RF8314] so that the minimum version for TLS is TLS 1.2.

2. Conventions Used in This Document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

3. Updates to RFC 8314

OLD:

4.1. Deprecation of Services Using Cleartext and TLS Versions Less Than 1.1

NEW:
4.1. Deprecation of Services Using Cleartext and TLS Versions Less Than 1.2

OLD:

As soon as practicable, MSPs currently supporting Secure Sockets Layer (SSL) 2.x, SSL 3.0, or TLS 1.0 SHOULD transition their users to TLS 1.1 or later and discontinue support for those earlier versions of SSL and TLS.

NEW:

As soon as practicable, MSPs currently supporting Secure Sockets Layer (SSL) 2.x, SSL 3.0, TLS 1.0, or TLS 1.1 SHOULD transition their users to TLS 1.2 or later and discontinue support for those earlier versions of SSL and TLS.

In Section 4.1 of [RFC8314], the text should be revised from:

OLD:

One way is for the server to refuse a ClientHello message from any client sending a ClientHello.version field corresponding to any version of SSL or TLS 1.0.

NEW:

One way is for the server to refuse a ClientHello message from any client sending a ClientHello.version field corresponding to any version of SSL or TLS earlier than TLS 1.2.

OLD:

It is RECOMMENDED that new users be required to use TLS version 1.1 or greater from the start. However, an MSP may find it necessary to make exceptions to accommodate some legacy systems that support only earlier versions of TLS or only cleartext.

NEW:
It is **RECOMMENDED** that new users be required to use TLS version 1.2 or greater from the start. However, an MSP may find it necessary to make exceptions to accommodate some legacy systems that support only earlier versions of TLS or only cleartext.

**OLD:**

If, however, an MUA provides such an indication, it **MUST NOT** indicate confidentiality for any connection that does not at least use TLS 1.1 with certificate verification and also meet the minimum confidentiality requirements associated with that account.

**NEW:**

If, however, an MUA provides such an indication, it **MUST NOT** indicate confidentiality for any connection that does not at least use TLS 1.2 with certificate verification and also meet the minimum confidentiality requirements associated with that account.

**OLD:**

MUAs **MUST** implement TLS 1.2 [RFC5246] or later. Earlier TLS and SSL versions **MAY** also be supported, so long as the MUA requires at least TLS 1.1 [RFC4346] when accessing accounts that are configured to impose minimum confidentiality requirements.

**NEW:**

MUAs **MUST** implement TLS 1.2 [RFC5246] or later, e.g., TLS 1.3 [RFC8446]. Earlier TLS and SSL versions **MAY** also be supported, so long as the MUA requires at least TLS 1.2 [RFC5246] when accessing accounts that are configured to impose minimum confidentiality requirements.

**OLD:**

The default minimum expected level of confidentiality for all new accounts **MUST** require successful validation of the server’s certificate and **SHOULD** require negotiation of TLS version 1.1 or greater. (Future revisions to this specification may raise these requirements or impose additional requirements to address newly discovered weaknesses in protocols or cryptographic algorithms.)
NEW:

The default minimum expected level of confidentiality for all new accounts **MUST** require successful validation of the server's certificate and **SHOULD** require negotiation of TLS version 1.2 or greater. (Future revisions to this specification may raise these requirements or impose additional requirements to address newly discovered weaknesses in protocols or cryptographic algorithms.)

### 4. IANA Considerations

This document has no IANA actions.

### 5. Security Considerations

The purpose of this document is to document updated recommendations for using TLS with email services. Those recommendations are based on [RFC8996].

### 6. References

#### 6.1. Normative References


#### 6.2. Informative References

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